**Bridges to affordability: Adopting a university OAER mandate with local implementation**

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Title Page

Bridges to affordability: Adopting a university OAER mandate with local implementation

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Abstract (250 words total)

Purpose (mandatory) - This paper describes a case study of the open and affordable educational resources (OAER) initiatives led by Penn State University Libraries (UL) and implemented at its many campuses which are designed to address the challenges students experience accessing and funding their course materials.

Design/methodology/approach (mandatory) - This case study will show how a broad administrative mandate for high-level OAER initiatives created the environment for Penn State (PSU) to evolve from individual pioneering units into coordinated university-wide initiatives. This shift, spearheaded by administration with strong UL involvement, allowed for customized and targeted initiatives at its many campuses. By employing UL’s centralized, but geographically dispersed structure, library faculty and staff have been supported in their efforts to expand OAER from the ground up in order to meet individual contexts and campus needs.

Findings (mandatory) - As a result of its many open and affordable initiatives, UL has been able to demonstrate both savings and increased access for students across PSU’s many campuses and World Campus. Broad administrative support has created an environment which enabled UL faculty and staff to lead various initiatives.

Originality/value (mandatory) - UL has long been a leader and partner in open and affordability initiatives at PSU due to their core mission of providing access. By sharing the process and logistics of how a large research institution with many campuses of various sizes implemented a wide variety of library-driven open and affordability initiatives through a centralized but geographically dispersed structure, academic libraries will be able to replicate similar initiatives in their unique contexts.

Keywords Academic libraries, affordability, open educational resources, library services, library resources

Paper type Case study
Introduction

Successful and transformative Open and Affordable Educational Resources (OAER) initiatives cannot thrive within the vacuum of a single program, department, or unit. For more than a decade, Penn State University colleges, libraries, and campuses have built and iterated on individual OAER programs with the potential to realize millions of dollars in savings to students. Through expansion of these programs across the entire university, and therefore across the Commonwealth of Pennsylvania, the opportunity for impact has become even greater. This case study will detail the coordinated initiatives and show how a broad administrative mandate and support for high-level OAER initiatives at the University allowed for the development and implementation of customized and targeted initiatives across all of the commonwealth campuses, many of which Penn State University Libraries (UL) faculty, staff, and resources have been instrumental in implementing.

History of OAER at Penn State

Penn State has a long history of engaging with Open Educational Resources (OER) and addressing affordability barriers. Dating back nearly 13 years to 2007, various units of the University undertook significant work to address affordability in education. The John A. Dutton e-Education Institute in the College of Earth and Mineral Sciences, the eLearning Institute in the College of Arts and Architecture, the Department of Chemistry, and the College of Information Sciences and Technology, in partnership with the Teaching and Learning with Technology (TLT) unit of Information Technology Services (ITS), created individually significant projects around the development of open textbooks, courseware, and/or ancillary learning materials. These early initiatives were born out of efforts to improve distance education, but it quickly became clear that open and affordable educational resources benefit all students, whether residential or distance learners.

Likewise, UL had a long tradition of providing affordable access to course materials through course reserves, including both physical textbook and e-reserves, which was bolstered by the establishment of a Textbook Fund in order meet increased student demand for course reserves that is driven by the rising costs of higher education and textbooks in particular.

In 2014, newly-appointed Penn State President Eric Barron recognized access and affordability as essential goals that were present in both Penn State’s Mission Statement and Strategic Plan. These goals are particularly critical because of the university’s land-grant designation and its reach across the Commonwealth of Pennsylvania through its 24 campuses. President Barron declared that supporting educational access, with specific emphasis on making a Penn State degree affordable for Pennsylvania residents, was one of his six imperatives alongside excellence, student engagement, diversity, economic impact, and capitalizing on technology (Penn State Office of the President, 2014). In support of those efforts, Penn State charged its first OER Task Force in 2015. Although this was a university-wide task force that was charged by
the Provost, UL, which operates as one unit dispersed across all of the campuses, helped to steer the task force and lead the initiative along with TLT, which supports innovative teaching across the university. The following year, the task force released a report (2016) which highlighted OER initiatives already underway at Penn State, benchmarked the university against peer institutions and programs including BC Campus Open Textbook Project (https://bccampus.ca/topics-of-practice/open-education/), Tidewater’s Community College Textbook-Free Degree (https://help.tcc.edu/s/article/Textbook-Free-Degree), the University of Maryland University College (https://www.umgc.edu/academic-programs/open-educational-resources.cfm), and the North Dakota Open Educational Resources Initiative (Spilovoy and Seaman, 2015) and highlighted the support necessary for Penn State to programmatically scale up OER adoption and creation.

As a result of the task force, Penn State took key steps in support of the programmatic advancement of OER adoption and creation within the university. UL created a tenure-line Open Education Librarian position to work in close partnership with the Open Education Coordinator from TLT to develop systematic OER and affordable course content initiatives across units and campuses and serve as a point of contact for all library units in support of OER. In addition to leveraging its existing membership in the Scholarly Publishing and Academic Resources Coalition (SPARC), the University pursued new partnerships with peer institutions and OER-focused consortia, including Unizin, OERu, the Open Textbook Network, and Affordable Learning PA. In 2017, World Campus, Penn State’s online learning campus, partnered with UL to launch an e-book program to fund library-licensed e-textbooks embedded directly into online courses. One year later, the University launched the Affordable Course Transformation (ACT@PSU) grant to support faculty in transitioning their courses to OER or affordable course content (Penn State University, 2018).

Affordability Definition

Penn State recognizes both Open Educational Resources and Affordable Course Content using the Congressional definition detailed in the Affordable College Textbook Act (2019). More specifically, Penn State defines affordable educational resources as “Any required course material that students purchase for less than $50. This may include low-cost or no-cost options and library materials that do not have an open license” (Penn State University OER Task Force, 2016). $50 is a common threshold for defining low-cost across institutions (https://openoregon.org/estimated-2017-18-student-savings/). In practice at Penn State, affordable content takes many forms, from a $30 per-student access fee within the College of Arts and Architecture for frequently updated media-driven course content that replaces a traditional textbook to traditional course reserves at the UL locations. Librarians, instructional designers, and faculty work together to determine available and appropriate resources that make courses more affordable for Penn State students.
This definition of affordable allows the university to underscore that there are still costs involved with open and/or affordable content – for instance, human resources are needed to find, tailor, and update course content and make it accessible -- but that this cost can still be more reasonable and sustainable than traditional textbooks. In surveys conducted in some of the Penn State open and affordable pilot programs, the majority of participating students indicated a preference for the OER textbook over a traditional textbook (65%) and agreed that the OER used for their course were of “great or moderate aid to their learning (73%)” (PSU OER Task Force Report, 2016).

The inclusion of “affordable” within the parameters of open educational resources reflects the understanding that there can never be a single approach that will work for all Penn State campuses, nor for all subjects. This understanding is an important factor in the success of OAER at each location and across the University, as demographics and programs of study vary widely across the campuses. While University Park serves more than 46,000 students in baccalaureate and graduate programs, the Commonwealth Campuses additionally serve nearly 28,000 students in associate, baccalaureate, transfer, and graduate programs. Commonwealth Campus enrollments are also highly variable across locations, with the smallest campus serving 402 students, and the largest serving almost 5,000. In addition to physical campuses, another 15,000 students attend Penn State online through World Campus. Within these populations, the Commonwealth Campuses and World Campus serve higher proportions of adult learners than the University Park campus. While the Commonwealth Campuses generally serve more students with financial need, World Campus serves a large number of active-duty Military students who have challenges accessing traditional course textbooks, especially if they are stationed overseas.

These campus contexts allow creativity to thrive as University units work together to address affordability and expand access to OAER. No single approach or program will address the soaring cost of course materials, but with broad administrative support for the mandate rather than a one-size-fits-all edict, as well as collaborative efforts and benchmarking with peer institutions, individuals across Penn State campuses and within specific programs are empowered to innovate and make changes that will best address the educational needs of their own faculty and students.

Literature Review

The Role of the Academic Library in OAER

Academic libraries share many of the same values that open education does and thus are natural partners in the development and support of open education initiatives in institutions of higher education. With access to course materials and information, student engagement, and access to information as some of the key priorities for open education in North America (West, 2017), it should be of no surprise to find academic libraries leading, supporting, or influencing OAER both intra- and inter-institutionally. This access and influence create a role for the
academic library to influence the policy and strategy of their institutions to embrace open initiatives more broadly (Corrall, 2015). The scale and coordination of efforts may vary largely. In a 2016 survey of ARL members, less than 40% of responding institutions indicated that there was a formal committee or governing body overseeing OAER efforts across their campuses (Walz, Jensen, and Salem, 2016).

Regardless of institution size or configuration, there are many paths for librarian involvement in OAER initiatives, including managing adoption grants, faculty development programs, consulting on licensing, and even running large state-wide programs (Walz, 2017). Overall, Braddlee and VanScy (2019) identified 14 common themes for librarian OAER involvement from the literature. They surveyed a large group of community college faculty about their awareness and favorability of librarians acting in these roles. The faculty were most aware of librarians supporting OAER through advocacy, discovery, adoption, information literacy, and curation; they felt the librarian’s expertise was most appropriate in the areas of discovery, curation, cataloging/metadata, information literacy, and advocacy. The respondents were least aware and least favorable of librarians in the OAER areas of content development, policy development, funding, publishing, recognition, and professional development. The lesser known and less favorably viewed areas have been identified by others within the literature, and in practice at PSU, as vitally important to increasing faculty awareness and adoption of OAER.

On a large scale, libraries are responsible for many of the open textbook consortiums that provide content for courses, while on a more local level, libraries provide monetary incentive programs to encourage faculty creation or adoption of OAER and provide the professional development necessary to help faculty improve their understanding of OAER (Salem, 2017.) While outreach to teaching faculty is critical to increasing awareness and adoption of OAER, collaboration and community support for librarians are central to successfully building and deploying open and affordable initiatives. Spontaneous or intentional communities of practice help librarians develop their knowledge and skills related to specific programs or areas of interest; an OAER community of practice can raise awareness of resources and adoption while lowering the burden on individual librarians’ workloads (Smith and Lee, 2017). At Penn State, there are several formal and informal communities of practice for instruction, reference, and other service areas. The Open Liaison program is an extension of this philosophy, allowing librarians at each campus to gain more expertise in OER, share successes, and address challenges collaboratively.

The following sections are examples of specific UL-driven open and affordable services, support, initiatives, and partnerships that have come into fruition as a result of the University’s and UL’s administrative commitment to ensuring students have affordable access to their course materials. These initiatives combine university-wide efforts with campus-specific programs, and each provides an opportunity for librarians to engage with several of the 14 key areas for librarian support of OAER.

Providing Students Direct Access to Course Materials
World Campus eBook Program

Nearly 25% of Penn State World Campus students actively serve in the military and may be stationed overseas. Students in these circumstances may not be able to order traditional textbooks in a timely manner for their courses and face challenges in receiving mail-ordered library materials. The Association for College and Research Libraries Distance Learning Section emphasizes the idea of Entitlement Access for distance learners (Association of College & Research Libraries, 2016). In practice, this means that online and distance students need equivalent access to library resources because they typically do not have access to physical course reserves due to lack of geographic proximity and restrictions on loan times.

To address this significant barrier to student access to course materials, in 2016 UL convened an expert team consisting of the course reserves manager, the assistant head of acquisitions, the online learning librarian, the IT trainer, the quality assurance manager, and an instructional designer to address the issue. This team initiated an eBook program (Penn State World Campus and Penn State Online, 2020) as a partnership between UL and World Campus, which replaces traditional print textbooks with unlimited-user eBooks licensed by UL, a model inspired by the Required Reading Pilot Project at the University of Minnesota (Riha and LeMay, 2016). The funding for this program initially came through a three-year memorandum of agreement through World Campus. Once that agreement expired, funding support was transferred to the Provost’s office. The pilot program successfully increased equitable access for distance students and reduced their textbook cost burden. It proved so popular that the program has expanded to include two residential colleges at University Park and some Commonwealth Campus programs. In addition to the core expert team, the group has grown to include rotating membership from subject librarians and department instructional designers.

The full process took a semester to plan and create and is now a mix between automated and manual processes. The most labor-intensive part of the process falls to the course reserves team, who manually place each text into Canvas, the University’s learning management system (LMS), using Springshare’s learning technology interoperability (LTI); the rest of the process is automated. The basic process is as follows: World Campus provides a list of all required course texts and uploads it to a shared folder. Given a four-week lead time, the acquisitions team runs the list through UL’s currently-held titles and through titles UL can possibly acquire. After the review, the finalized list that removes all titles UL cannot acquire is placed back in the shared folder, and the IT trainer then notifies all instructional design shops of the availability of one or more eBooks for courses they design. Instructional designers then notify the faculty they work with about the possibility of adding an eBook into Canvas, and faculty then have two weeks to opt-out of the program. Four weeks ahead of the start of the semester, the course reserves team begins adding the eBooks to Canvas. The online learning librarian receives a report from the analytics unit that provides course-level and instructor names for sections using eBooks, and both academic advisors and course instructors are then notified of the availability of an eBook for one or more classes under their purview. Both groups receive a message regarding course eBooks that they can share with students, as well as the contact information of the online learning librarian, who they can contact if they have any questions about the process of including eBooks within the course. Finally, assessment data is gathered from both course
faculty and students regarding the use and inclusion of eBooks within the course. Students receive a survey link via Canvas, and faculty receive an email with links to the faculty survey for their completion, and links to the student survey to be shared as a reminder within the course.

Through this program, UL has been able to provide students access to approximately 16 to 20 percent of all required course materials. The eBook initiative reduces the number of texts that students need to purchase and allows for more equitable access for distance learners to library materials by integrating the eBooks directly into the LMS. Although Library-driven e-book programs like this require bringing strategic teams together, they complement traditional OERs and have a direct impact on cost-savings for students and provide a simple process by which students can access their course materials (Raish et al., 2018; Rokusek & Cooke, 2019; Celik & Peck, 2015).

Funding Courses Reserves

Academic libraries have a longstanding tradition of providing course reserves, ensuring access to materials for students that are unable to purchase their own copies (Christie, Pollitz, & Middleton, 2019). Previously, they were often obtained by requesting that faculty submit extra teaching copies to the library to serve as reserve copies. The rising cost of textbooks and higher education costs, as well as the increased prevalence of digital access codes and subscription-based learning content, demands that libraries be proactive in procuring and funding course reserves to meet both rising student demand and the changing textbook landscape. The UL Office of Development and Alumni Relations created a Textbook and Educational Resource Fund (Textbook Fund), an endowment that targets community donations and matching gifts from individual supporters, “to provide textbooks for loan to every student who needs one, or to provide low-cost or free electronic resources where they are needed” (Penn State News, 2017). The goal of these grants is to support and enhance the development of OER, fund the purchase of textbooks for reserve, and provide for the acquisition of other important educational resources for student use. The fund is promoted as part of Giving Tuesday, a heavily-publicized day of charitable giving following Thanksgiving each year; the Textbook Fund was also a recipient of the Class of 2018 Class Gift, demonstrating administrative, student, and alumni understanding of the importance of free access to course reserves.

Penn State Harrisburg Library is a case study in success for the Textbook Fund. In 2018, Harrisburg Library received a $3,000 grant from the Textbook Fund to purchase engineering and science textbooks for course reserves. STEM textbooks are very costly and teaching faculty generally require students use the most up-to-date editions, making student affordability a true concern. Grant funds provided fourteen new editions for the highly-enrolled science and engineering courses which are common pre-requisites for the most popular majors on campus. To highlight the gift of textbook funds from donors, each textbook purchased with endowment money bears a bookplate acknowledging the generous support of the Textbook Fund. Textbook Fund grants are extremely beneficial in assisting individual library efforts to reduce students’ high textbook costs while increasing each library’s ability to provide access to course materials.
Following the success of the initial Textbook Fund, in 2018, UL established the Richard and Anne Janiak Textbook and the Open Educational Resources Fund, a portion of the Textbook and Educational Resource Fund, to fund textbook purchases for course reserves at all PSU campuses to help ensure affordability. In fall 2019, almost 25,000 books, DVDs, CDs and other items were placed on course reserve to support more than 15,000 course sections across 28 PSU libraries. Based on the number of checkouts and the average cost of the items, UL estimates more than $516,000 in potential savings to students last year alone.

**Library-Driven Faculty OER Programs**

**Affordable Course Transformation (ACT)**

Beyond funding course reserves, Penn State offers a university-wide grant to support and fund faculty in the development of highly-customized affordability solutions that address unique programs, contexts, and challenges for their course and campus. The Affordable Course Transformation (ACT) program, a program funded by the provost-charged (OAER) Working Group is a competitive grant open to any Penn State faculty who want to transform a course by replacing traditional, high-cost course materials with affordable or free alternatives. The program is jointly sponsored by TLT and UL and is a core responsibility of the Open Education Librarian position. Selected faculty agree to three stipulations in order to receive their grant, portions of which are disbursed when each stipulation is met. These requirements include participation in the ACT faculty development program, completion of adapting or authoring open/affordable content, revising their course to accommodate the open/affordable content, and delivering the revised course. In addition to funding, ACT grantees receive one-on-one support from the library, multimedia center, and instructional designers, as well as assistance in production of open or affordable content. In two rounds of ACT, 22 courses on 15 campuses delivered by 36 faculty were selected to be transformed.

In practice, ACT grants can lead to huge savings for students and flexibility for faculty. In ACT Round One, a Penn State Harrisburg School of Science, Engineering, and Technology faculty member was awarded a grant to transform a physical geology course (Gosálvez, 2019). In traditional delivery of the course, each student had been required to purchase a brand-new, $146.65 rock kit from the campus bookstore for use throughout the semester. Using ACT funds and support, the faculty member and colleagues created 3D scans of the rocks to ultimately replace the costly physical rock kits with the digital models. With the creation of the digital rock kits, the physical rock kit is now only a recommended material for the course. This amounts to a potential savings of $14,958.30 for the 102 students across four sections of the course in spring 2020, based on the cost of the previously required rock kit. Additionally, this same faculty member also replaced the traditional course textbook, which cost $300, with a free and open text. The changes supported by the ACT grant fueled student engagement in the course and provided customizable options for the rocks utilized in each assignment. Open copyright attributions allow instructors at Harrisburg, other campuses, and institutions to also use these 3D models for instruction, thereby extending the educational and savings impact. Without the
encouragement and support that the ACT grant provided, this course transformation may not have been possible and these achievements and savings would not have been realized.

**Affordable Course Content Faculty Fellowship at Penn State Abington**

In addition to the university-wide ACT grant, the broad administrative support for affordability initiatives has allowed library faculty and staff at commonwealth campuses to lead initiatives that fit their campus faculty needs. The Affordable Course Content Faculty Fellowship (ACCFF) at Penn State Abington campus is one such example (Broscius, 2019). Founded by two campus librarians in 2018, this incentivized OAER-adoption program replicated other successful small faculty incentive library grants (Contrada *et al.*, 2018) and was funded through a competitive Abington Chancellor’s Grant to support innovative student success initiatives. ACCFF supports instructors as they explore, evaluate, and adopt open, affordable, or low-cost materials for pre-existing courses. Instructors receive one-on-one guidance in finding appropriate materials, adapting their courses to draw from new content, and incorporate open and affordable materials into the organization used in their course management systems.

The first ACCFF cohort included seven instructors who teach courses in English, Math, Communication, Psychology, or Criminal Justice, chosen from a pool of nineteen applications. Participants were selected based on:

- The availability of open and affordable materials for their courses
- The number of students who would be impacted by the change in their own course
- How altering the cost of the course might affect degree programs across campus, among other factors

Over the spring and summer of 2019, participating instructors were invited to several in-person meetings where they worked with librarians, instructional designers, and other faculty to find, evaluate, adapt, and organize open and affordable materials for their courses. The first round of newly adapted courses, all of which were ultimately redesigned with materials that were completely free to students, were first taught in the summer and fall of 2019. ACCFF estimates a total savings of $45,779 from this first set of 11 courses, which impacted 326 students at the Abington campus.

Beyond local funding to the campus faculty, ACCFF received additional support from UL, an example of the philosophy of “one library, geographically dispersed” (Dewey, 2020). Through this support ACCFF connected more centralized projects, like ACT, with the local ACCFF team. Librarians and instructional designers at University Park joined the in-person meetings, both physically and virtually, to meet individually with faculty and answer questions with the local Abington ACCFF team. At the time, Abington did not have its own instructional designer, so cross-campus collaboration was essential. Though the program was initially funded for a one-time offering, its success resulted in Abington’s Chancellor renewing funding for a second round.
Currently, the ACCFF team is assessing the first round of courses with a particular focus on understanding how the open materials were integrated into the course management software, how students accessed and interpreted them, and how this does or does not align with students’ preferences for course material access. Initial student survey results show that 99% of the student respondents found the materials about the same (14%) or easier to access (85%) compared with traditional course materials. Initial faculty results showed that a majority found the OAER course materials to be the same or higher quality than previous course materials and that they were likely to use OAER materials in future courses. The results of this assessment will be used not only to improve the second round, but also to inform broader UL affordability initiatives, including sharing logistics with other campuses that want to replicate this adoption grant. Perhaps an even more important outcome, however, is that in marketing the grant in both rounds, there has been a noticeable increase in inquiries from faculty about using OAER course materials, unrelated to the grant. The librarians that administer the grant have been asked to identify OER textbooks, assist with building course reserves that comply with Fair Use, and to speak at faculty meetings about using library-licensed items in the LMS.

Professional Development

In order to facilitate open and affordable initiatives at a large institution with many locations, it is critical for administration to also provide broad support for professional development that enables grassroots campus- and unit-specific innovation. At Penn State, that support takes the multiple forms of a campus-wide Open Liaison program, funding for library faculty and staff seeking to participate in professional development, and support for librarians to facilitate internal professional development opportunities related to OER and affordability.

The Open Liaison Program

In early 2018, the UL Open Access Outreach Task Force put out a call for Open Access Liaisons. The Open Access Outreach Task Force was charged with identifying ways to help provide awareness of the Open Access guidance and support that is available to all of our libraries across the Commonwealth. One of their first initiatives was to identify one contact person from each library – Commonwealth Campus Libraries and University Park Branch Libraries – to serve as the Open Access Liaison for their locations. A similar call followed for Open Education Resources (OER) Liaisons. To prevent duplication of effort on some campuses, the two liaison groups merged into one Open Liaison position. There are several responsibilities of Open Liaisons, which include:

- Providing regular updates on Open initiatives to their library
- Increasing awareness of University-wide Open initiatives at their campus
- Serving as a contact point and communication channel between their library and Open Publishing Services at University Park and Open Education departments within UL
- Offering assistance with open projects at their campus and library whenever possible
Open Liaisons have great flexibility in determining the appropriate programming to raise awareness of OER and affordable content at their campuses. Many liaisons have raised awareness by hosting events during Open Access and Open Education Weeks at Commonwealth Campus and subject libraries. During Open Access Week 2018, many UL locations screened the documentary *Paywall: The Business of Scholarship* with post-screening discussion of access and affordability issues. At Penn State Harrisburg, in addition to the screening, the Open Liaison created a display showcasing library resources about the Open movement along with promotional items for campus community members to take. Additional Open Access Week programs at campuses include panels on OER, celebrations of faculty who publish open content, and scholarly article “upload-parties” to increase awareness of the University’s institutional repository.

**Support for Professional Development**

In addition to the regular internal Open Liaison calls and meetings, Penn State Libraries has partnered with external stakeholders to bring professional development opportunities for both libraries and disciplinary faculty to campus. In 2016, spurred by the OER Task Force, UL hosted Penn State’s first OER Summit, a day-long professional summit held at University Park and simulcast to all of the campuses. Nicole Allen, director of Open Education for the Scholarly Publishing and Academic Resources Coalition (SPARC), gave a keynote address. The summit’s agenda featured a showcase of Penn State faculty early OER adopters, hands-on OER workshops, and consultations for faculty interested in getting started with OER. When Penn State joined the Open Textbook Network (OTN), UL hosted an OTN workshop at University Park during Open Access Week 2017. Those faculty attending workshop were offered a $200 stipend incentive after reviewing an OTN textbook. The OTN workshop helped conversations continue between UL and their campus constituents about OER and its potential in the classroom. In 2019, UL was the host institution for the inaugural Affordable Learning PA Open Educational Resources (OER) Summit for faculty and librarians from across the Pennsylvania to develop inter-institutional relationships and share resources in order to move statewide initiatives forward.

Beyond the library, TLT provides an annual opportunity for librarians, course faculty, and instructional designers to join in a shared experience for professional development at the TLT Symposium. These groups both present at and attend the Symposium together, sharing innovative successes that benefit students across the entire university. The 2015 Symposium featured the first session on OER, and The 2016 Symposium offered an entire Open and Affordable track (Penn State Teaching and Learning with Technology, 2016); In the following years, OER programming has been a staple topic for symposium sessions. In addition to programming, members of the instructional community also have the opportunity to compete for institutional support and funding during Open Innovation Challenge at the Symposium. The challenge is a pitch competition in which the top 5 ideas, selected from submissions prior to the symposium, make a 5-minute pitch for their innovative educational idea; winners are selected by committee and popular vote of the attendees. This free conference is a primary method of highlighting internal strengths, promoting library support for OER, and inspiring more members of the Penn State community to make real change in transforming their course content to
improve student access and outcomes. Increasing awareness of OER and the availability of support is critical to expanding the number of faculty adopting and creating OER for their own courses.

Externally, UL has been a sponsor of the national OpenCon Conference and the inaugural OpenCon Philly in 2019, with Penn State Librarians helping to organize the latter. UL has also supported its faculty and staff in pursuing professional development opportunities in national and international arenas. UL has financially supported individual faculty to attend OpenCon and Open Ed conferences and the UCT-SPARC Africa Open Access Symposium. Likewise, faculty and staff have been encouraged to pursue more involved professional development opportunities, such as the nine-month Open Textbook Network OER Certificate of Librarianship and the year-long SPARC Leadership Program, both of which have had a direct impact on Penn State campus library-led affordability initiatives like the Penn State Abington Affordable Course Content Faculty Fellowship and the Penn State Berks Textbook Affordability Dashboard (Penn State Berks Thun Library, 2020). As Penn State does not currently designate open or affordable courses in its course catalog, this dashboard, which is now being used as a template for other campuses to track affordable courses, is a single source for students at the Berks campus to get information on the cost of course materials and find open and affordable courses.

Facilitating Professional Development
In 2017, UL charged a new Strategic Action Team for Affordable Course Content and Open Educational Resources after hiring the Open Education Librarian. The primary charge was to review the findings and implement the recommendations of the previous iteration of the committee, the OER Task Force, which advised the university-wide task force for UL.

The charges included specific recommendations for creating faculty development events and programs related to OER and affordable content adoption and creation, with a specific stipulation that there should be a process for getting Commonwealth Campuses involved. In the first year, the strategic action team developed Affordable Success: Getting Started with OER at Your Campus, a workshop that can be customized to each campus while still containing shared elements, such as the definitions for OER and affordable course content, the history of OER at Penn State, and university-wide initiatives for participation. Campuses can easily edit the workshop to highlight faculty using OER at their location, as well as the instructional designers and librarians involved in the process to help build connections and take next steps. The program host chooses from one of three activities at the end of the workshop to help attendees brainstorm about course transformation. In addition to the PowerPoint with customizable slides, the workshop includes a letter to the workshop presenter explaining how to use the PowerPoint, and an instructional overview with objectives and ideas for assessment. Sharing the success of OER early-adopters can spark ideas from newly interested faculty and increase awareness of library support for course transformation. This workshop-in-a-box has been successfully presented at a few campuses already with more in planning stages. Informal feedback has indicated that faculty appreciate these programs and workshops. Moving forward
a formal assessment of professional development efforts is necessary to determine impact and opportunities for growth.

**Partnering with Stakeholders**

*Campus Bookstores*

Penn State provides numerous options for adopting and adapting OER course content, which allows faculty across many campuses to pilot various resources and use what works best. Penn State’s bookstores, managed by Barnes and Noble Education (BNED), provide faculty with additional options for adopting OER texts through their textbook selection portal from OpenStax, XanEdu, and MERLOT. The bookstore also empowers students to look for and select courses with OER content through its “Find OER” page. Students can select their campus and search for courses which use an OTN text for the course. Currently, 15 campuses offer courses with affordable print OER textbooks that can be purchased directly through the bookstore for 49 courses for less than $50 per text. Each text listing also includes a note that the text may be available digitally for free, and prompts students to discuss this option with their professor before purchasing the print text.

Penn State faculty have also used LoudCloud, BNED’s software for delivering customizable OER textbooks, which uses OpenStax as a foundation. An initial pilot of LoudCloud course content in psychology found that A and B grades increased when compared to grades in semesters that used the previous, non-OER textbook; notably, correct responses to challenging exam questions also increased. During a TLT Symposium presentation, the faculty member attributed these outcomes as potentially being related to more students actually accessing and using the textbook because it was more affordable. This anecdotal finding echoes similar outcomes reported in the literature (Fischer *et al*, 2015).

*Shared Governance*

Campus student government groups (SGA), as well as the overall Council of Student Governments, are involved in examining affordability programs across the University. SGA and campus leadership, including faculty senates, are building bridges for affordability between faculty, students, and the bookstore and highlighting the need for more transparency in course material costs at many levels. Affordability initiatives are examined for potential support or suggestions for improvement by each governmental body as applicable. Campus-based discussions which involve students help address the specific issues that are unique to each campus’s faculty and students.

**Future Plans and Conclusion**

UL has long been involved with providing affordable student access to course materials and has responded to the changing market and rising student needs by leading and supporting varied open and affordability initiatives. It is a key partner in both the strategic and practical implementation of many open and affordable initiatives at the University, which range from
broad university-wide programs, to smaller campus-specific grants and outreach events, to strong support for and leadership in professional development, to creating a network of strategic partnerships. Top-down mandates like Penn State’s can carry the risk of resistance and failed efforts at the ground level (Decker et al, 2012). UL has taken a distributed approach of evaluating programs and collections, as well as campuses and governing structures, and identifying courses, instructors, and suitable funding and resources to increase adoption of affordable course content across all programs. This demonstrates specific and replicable strategies which harness the particular affordability challenges of multiple stakeholders while giving them the flexibility to meet their needs leads to success. Because of Penn State’s unique structure with campuses of all sizes, a variety of grant funding levels, and many different academic library experiences within one institution, this case study presents scalable and customizable solutions for each campus based on their unique needs. Although textbook and higher education costs continue to rise, fortunately, so do the options and awareness around open and affordable educational materials. Throughout these changes, UL continues to look for ways to support faculty in using open and affordable resources, and in sharing this case study to give other institutions a variety of ideas for how they might move their own varied programs forward.

Looking towards the future, multiple library faculty and staff on the OAER Working Group are using data and assessments from all ongoing initiatives to inform future programs, including providing faculty incentives, expanding the eBook program, and building OAER education into the development of new general education courses. They are also leveraging the experience of Penn State early-adopters and its consortia relationships to help develop an OER Repository, to create z-degree programs, which allow students to complete an entire course of study without purchasing textbooks (Wiley et al, 2016), and to build a team of ongoing support for faculty who wish to author course materials and to contribute to the OER ecosystem. One important future growth area for UL is organizing and expanding its partnership with students and ensuring that student voices are central to any affordability initiatives. While there is student representation on university OAER working groups, and individual librarians have developed student-focused outreach programs and worked with individual campus student governments, there is still potential to greatly increase student involvement in the promotion, adoption, and creation of OER course materials.

At Penn State, UL has been both a strategic administrative partner and a grassroots leader in many university-wide and campus OAER initiatives. Despite being a large R1 research university, Penn State’s unique multi-campus organization and UL’s centralized but geographically-dispersed structure means that its involvement in many initiatives could be applicable to academic libraries of all sizes. As the open and affordable environment continues to evolve and Penn State faculty support for and student awareness of it builds, UL will continue to look for ways to meet the administrative affordability mandate by developing programs that meet the needs of the students, faculty, and staff at each of its many campuses.
References

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