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Special Issue on Librarians as Fundamental, Transformational, and Visionary Leaders in the OER Movement

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Special Issue on Librarians as Fundamental, Transformational, and Visionary Leaders in the OER Movement

cont'd.

Letter from the Editors

Samantha Cook is the Instructional Design Librarian at the University of Wyoming Libraries. Samantha received her Bachelors in History from the University of Wyoming and Masters of Science in Information Studies from the University of Texas. Her current research projects are Universal Design for Learning in library instruction, libraries and centers for teaching and learning, accessible library and archival practices for people with invisible disabilities, and OER initiatives.

Kristina Clement is the Student Success Librarian for the University of Wyoming Libraries. Kristina received a Master's of Arts in Italian Literature from the University of Notre Dame and a Master's of Information Science from the University of Tennessee Knoxville. Her current research interests include Universal Design for Learning in library instruction, outreach to transfer students and first-generation students, instructional assessment, Open Educational Resources (OER), and user experience.

Hilary Baribeau is the Digital Scholarship Librarian at the University of Wyoming Libraries. Hilary received her BA from Carnegie Mellon University and her MLIS from the Pratt Institute. Her research areas are in scholarly communications, open access, and open educational resources. She currently manages the University of Wyoming's OER grant initiative.

Dear Readers of *IJOER,*

As early-career librarians, we were thrilled to accept the invitation to guest edit a special issue of *IJOER* about Libraries & OER. This issue was very important for us because libraries are often the leaders of OER initiatives on campus. When we started our call for proposals we were hopeful that we would get enough submissions for one issue but were delighted to receive a much larger number of proposals than originally expected--nearly 50 paper proposals. Because of the significant interest in this special issue, we chose to do a double issue to properly showcase the ways in which libraries and librarians are critical players in the open education landscape. The papers in the first volume of the special issue are case studies that illustrate how different institutions create, sustain, and assess their OER programs.

One of the reasons OER initiatives often begin with libraries is that librarians are uniquely positioned to support the creation, adaption, and adoption of OER in

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higher education. And while librarians may be significant OER champions, most do not choose to go it alone. Many of the papers in this issue detail the need for successful partnerships across an institution in order to support OER supporters and practitioners, create visibility around the need for OERs, and to ensure the sustainability of OER initiatives. Librarians are often in a position to facilitate these relationships and these articles describe the successes and learning experiences from a myriad of partnerships. Details of contributions from a range of library positions, instructional designers, faculty members, administrators, and governmental partners are described and the need for clear roles, long-term thinking, and effective communication techniques are highlighted.

Other papers detail the need for OERs that goes beyond the capacity for OER to save students and the institution money. Rather, they highlight the need for a more equitable and accessible academic environment that will create opportunities for meaningful impacts. These papers explore pedagogical opportunities afforded by OERs and the wide range of impacts that accessible educational materials have on student success. Several of our authors show that thinking outside of the box when it comes to OER can have a wider, and sometimes unexpected, impact on students.

Lastly, the papers in this issue also highlight the need for intentional engagement with students, both as collaborative partners in the creation of OER and as important stakeholders from whom librarians should solicit feedback in order to keep OER initiatives moving forward. Methods of effective assessment are of high importance and the thoughtful inclusion of student voices and experiences make the entire process that more meaningful.

In all, we are so pleased with the quality of papers that we received for this double special issue on Libraries and OER. We hope that our readers will not only find inspiration from the work of our authors but that they will also find a number of practical applications that will help facilitate OER initiatives at their institutions. Looking ahead to our second special issue, readers will enjoy a number of research papers, theoretical perspectives, opinion pieces, and position papers.

The editors would like to give a special thank you to our peer reviewers, especially those who went above and beyond with last-minute requests, this issue could not have been produced without your support.

Samantha Cook, MSIS, Instructional Design Librarian
University of Wyoming Libraries

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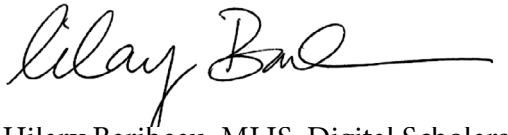

Hilary Baribeau, MLIS, Digital Scholarship Librarian
University of Wyoming Libraries

Carta de las editoras

Samantha Cook es la bibliotecaria de diseño de instrucción en las bibliotecas de la Universidad de Wyoming. Samantha recibió su Licenciatura en Historia de la Universidad de Wyoming y su Maestría en Ciencias en Estudios de la Información de la Universidad de Texas. Sus proyectos de investigación actuales son Diseño universal para el aprendizaje en la enseñanza de bibliotecas, bibliotecas y centros de enseñanza y aprendizaje, bibliotecas accesibles y prácticas de archivo para personas con discapacidades invisibles, e iniciativas REA.

Kristina Clement es la bibliotecaria de éxito estudiantil de las bibliotecas de la Universidad de Wyoming. Kristina recibió una Maestría en Artes en Literatura Italiana de la Universidad de Notre Dame y una Maestría en Ciencias de la Información de la Universidad de Tennessee Knoxville. Sus intereses de investigación actuales incluyen el Diseño Universal para el Aprendizaje en la instrucción de la biblioteca, la divulgación para transferir estudiantes y estudiantes de primera generación, evaluación de la instrucción, Recursos Educativos Abiertos (REA) y experiencia del usuario.

Hilary Baribeau es la Bibliotecaria de Escolaridad Digital en las Bibliotecas de la Universidad de Wyoming. Hilary recibió su BA de la Universidad Carnegie Mellon y su MLIS del Instituto Pratt. Sus áreas de investigación son comunicaciones académicas, acceso

abierto y recursos educativos abiertos. Actualmente gestiona la iniciativa de subvención OER de la Universidad de Wyoming.

Querida audiencia de *IJOER*,

Como bibliotecarias de carrera temprana, nos entusiasmó aceptar la invitación para editar un número especial de IJOER sobre Bibliotecas y REA. Este problema fue muy importante para nosotros porque las bibliotecas son a menudo los líderes de las iniciativas REA en el campus. Cuando comenzamos nuestra convocatoria de propuestas, teníamos la esperanza de que recibiéramos suficientes presentaciones para un tema, pero estábamos encantados de recibir una cantidad mucho mayor de propuestas de lo que se esperaba originalmente: casi 50 propuestas en papel. Debido al gran interés en este número especial, elegimos hacer un doble número para mostrar adecuadamente las formas en que las bibliotecas y los bibliotecarios son actores críticos en el panorama de la educación abierta. Los documentos en el primer volumen del número especial son estudios de casos que ilustran cómo diferentes instituciones crean, sostienen y evalúan sus programas REA.

Una de las razones por las que las iniciativas REA a menudo comienzan con las bibliotecas es que los bibliotecarios están en una posición única para apoyar la creación, adaptación y adopción de REA en la educación superior. Y aunque los bibliotecarios pueden ser importantes campeones de REA, la mayoría no elige hacerlo solo. Muchos de los documentos en este número detallan la necesidad de asociaciones exitosas en una institución para apoyar a los partidarios y profesionales de REA, crear visibilidad en torno a la necesidad de REA y garantizar la sostenibilidad de las iniciativas de REA. Los bibliotecarios a menudo están en condiciones de facilitar estas relaciones y estos artículos describen los éxitos y las experiencias de aprendizaje de una miríada de asociaciones. Se describen detalles de las contribuciones de una variedad de puestos de biblioteca, diseñadores de instrucción, miembros de la facultad, administradores y socios gubernamentales y se destaca la necesidad de roles claros, pensamiento a largo plazo y técnicas de comunicación efectivas.

Otros documentos detallan la necesidad de REA que va más allá de la capacidad de los REA para ahorrar dinero a los estudiantes y a la institución. Más bien, resaltan la necesidad de un entorno académico más equitativo y accesible que cree oportunidades para impactos significativos. Estos documentos exploran las oportunidades pedagógicas que ofrecen los REA y la amplia gama de impactos que los materiales educativos accesibles tienen sobre el éxito de los estudiantes. Varios de nuestros autores muestran que pensar fuera de la caja cuando se trata de REA puede tener un impacto más amplio, y a veces inesperado, en los estudiantes.

Por último, los documentos en este número también destacan la necesidad de un compromiso intencional con los estudiantes, tanto como socios colaboradores en la creación de REA y como partes interesadas importantes de quienes los bibliotecarios deben solicitar comentarios para mantener las iniciativas de REA en movimiento. Los métodos de evaluación efectiva son de gran importancia y la inclusión reflexiva de las voces y experiencias de los estudiantes hace que todo el proceso sea más significativo.

En general, estamos muy satisfechas con la calidad de los documentos que recibimos para este doble número especial en Bibliotecas y REA. Esperamos que nuestros lectores no solo se inspiren en el trabajo de nuestros autores, sino que también encuentren una serie de aplicaciones prácticas que ayuden a facilitar las iniciativas REA en sus instituciones. Mirando hacia nuestro segundo número especial, los lectores disfrutarán de una serie de trabajos de investigación, perspectivas teóricas, artículos de opinión y documentos de posición.

Las editoras desean agradecer especialmente a nuestros colegas revisores, especialmente a aquellos que hicieron todo lo posible con las solicitudes de última hora, este problema no podría haberse producido sin su apoyo.

编者来信

Samantha Cook是怀俄明大学图书馆的教学设计馆员。Samantha在怀俄明大学取得历史学士学位，然后在德克萨斯大学取得信息研究科学硕士。她目前的研究课题是图书馆教学中的全方位课程设计、教学学习图书馆和中心，为隐形残障人群提供可获取的图书馆和档案实践，以及开放教育资源（OER）倡议。

Kristina Clement是怀俄明大学图书馆的学生成功馆员（Student Success Librarian）。Kristina在圣母大学取得意大利文学硕士学位，并在田纳西大学取得信息科学硕士学位。她目前的研究兴趣包括图书馆教学的全方位课程设计、用于转移大学生和第一代大学生的外展活动、教学评估、开放教育资源和用户体验。

Hilary Baribeau是怀俄明大学图书馆的数字学术馆员。Hilary在卡内基梅隆大学取得文学学士学位，然后在普瑞特艺术学院取得图书馆与信息科学硕士学位。她的研究领域是学术传播、开放存取和开放教育资源。目前她管理怀俄明大学的OER拨款倡议。

亲爱的《开放教育资源国际期刊》（IJOER）读者，

作为处于早期事业的图书馆员，我们很激动以特约编辑的身份接受邀请，就图书馆和开放教育资源（OER）一事编辑一期IJOER特刊。本期对我们而言尤为重要，因为图书馆经常是校园OER倡议的领导者。当我们开始征集文章时，我们希望能收到足够一期数量的投稿，但我们很高兴收到了比预期更多的文章—接近五十篇。鉴于对本期特刊的特别关注，我们选择将两期内容合并发行，以恰当地展示图书馆和馆员在开放教育版图中扮演关键参与者的各种方式。本期特刊的第一卷所收录的文章是案例研究，它们阐述了不同的机构如何创建、维持和评估其OER项目。

OER倡议经常以图书馆为发起者的原因之一在于，图书馆员特别能支持OER在高等教育中的创建、改编和采纳。尽管图书馆员可能是重要的OER支持者，但大多数馆员不会选择独自进行这一工作。本期收录的许多文章都详细描述了需要在一个机构里成功建立伙伴关系，以期支持OER的支持者和从业人员，围绕OERs的需求创造可见性，并确保OER倡议的可持续性。图书馆员经常能促进这些关系，并且这些文章从大量的伙伴关系中描述了成功案例和学习体验。描述了来自一系列图书馆职员、教学设计者、大学教师成员、管理员和政府伙伴的贡献细节，强调了对清晰角色、长期思考以及有效沟通技术的需求。

其他文章详细描述了对不止于为学生和机构省钱的OERs的需求。更确切地，它们强调了需要一个更为公正和可获取的学术环境，后者将为有意义的影响创造机遇。这些文章探究了OERs提供的教学机会，以及可获取的教育资源对学生成功产生的大范围影响。几位作者表明，对待OER时，跳出思维定式能对学生产生更广的、有时甚至是意想不到的影响。

最后，本期文章还强调了需要有意地让学生参与OER，他们不仅作为OER创建中的协作伙伴，还作为重要的利益攸关方（图书馆员应对其征集反馈），以期保持OER倡议向前推进。有效评估的方式极其重要，并且将学生的意见和经历考虑在内的包容性能让整个过程变得更有意义。

总而言之，我们对本次关于图书馆和OER的两期合并特刊所收录文章的质量感到很高兴。我们希望读者将不仅能从作者的文章中找到灵感，还能从中找出一系列将帮助促进其所在机构的OER倡议的实际应用。未来第二期特刊中，读者将享受阅读一系列研究文章、理论视角、评论文和立场文。

编辑在此向我们的同行评审表示感谢，尤其是那些尽心完成最后一刻的修改工作的评审员，你们的支持是本期必不可少的一部分。

3 Questions for an OER Leader | Featuring Marilyn Billings

Hilary Baribeau, University of Wyoming's Digital Scholarship Librarian and Guest Editor for this Special Issue of *IJOER* sat down to interview **Marilyn Billings**, the head of the Scholarly Communication Office at the University of Massachusetts, Amherst, pioneer of the Open Education movement, and our featured OER Leader.

1 ***Hilary:*** You are a founding member of the Open Textbook Network (OTN). Can you talk a little bit about the initial goals of OTN and what you envision as the future of OTN?

Marilyn: What I saw as some of the initial goals of the Open Textbook Network were to build a community that could work on Open Education together so that we could all build on our respective strengths. More than just librarians, OTN could include faculty, instructional designers, academic computing and technology support folks. As a community, OTN could start building tools that all of us could use, rather than each institution building its own tools separately. In that way, we could build on each other's ideas and exponentially grow the Open Education movement. Another initial goal of the OTN was to create workshops that were for specific audiences. We created one that is specifically for librarians, one specifically for faculty, and others for folks that support Open Education in their colleges and universities. That way, we can target the specific needs of each of those groups as they move forward.

2 ***Hilary:*** And what do you think are some of the future goals of OTN?

Marilyn: Some of the future goals include building more resources that are available for students. I should say that I am an Open Textbook Network presenter for the librarian group so, when I go off and do site visits, there is often also a request to meet with students. I created a presentation that is really targeted for them and helps students find links to resources that they can use for their own advocacy efforts going forward at their respective institutions.

Another area that we are working on is the need to build more ancillary materials. We hear from faculty that there's a need for those kinds of materials, whether it's videos, quizzes, PowerPoint

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slides, any of the other kinds of content that faculty would normally use that would supplement an Open Textbook Network text. We want to have a coordinated effort that is part of the building the community piece that I talk about earlier, so that we can build more of the materials that faculty are asking for.

Another piece that the OTN is envisioning is to gain more traction on the international stage. There's a large international movement around Open Education and we want to make sure that the OTN is a part of that.

Hilary: What are two of the biggest successes of the Open Education Initiative at the University of Massachusetts, Amherst? And what is one learning experience from a less successful idea of the Open Education Initiative?

Marilyn: I think one of the biggest successes is that, from the outset in 2011, we've received grant proposals from across the whole University. Those range in scope from general education, to graduate courses. That says that there is a need across the entire academic curriculum for a dramatic change in the way that courses are handled as a response to high-cost textbooks. Faculty want more impactful learning materials.

Another big success is the fact that we've been able to work closely with specific departments. Physics is just one that I'll mention here. They've moved their general education course over to an OpenStax textbook with ancillaries that they themselves have worked on as a whole team, such as videos, quizzes, and flash cards. We're trying to replicate that kind of success with other departments here at the University.

For the less successful idea—I'll just have to admit to not having all of my ducks in a row when the Initiative first started because there weren't that many other institutions with these kinds of programs in place yet. We had a couple of grant recipients who ether didn't complete their work, or realized that they couldn't accomplish what they set out to do, so they willingly returned the grant dollars, which I thought was an excellent solution for that particular problem. Since that time, we have set up an introductory workshop which we don't mandate but that we highly recommend. Faculty can then get a better idea of what our expectations are for Open Educational Resources and learn about the CC-BY licensing that we want them to use. We also have one-on-one interviews with the faculty recipients and can answer their specific questions and set goals and timeframes. This allows us to build a positive relationship from the very beginning of when faculty receive the grant. Lastly, we make sure to include the academic library liaison in these conversations whenever possible because they are the primary point of contact with the faculty in a given department. This has really proven to be an excellent strategy because it provides the individualized attention that faculty need to flip their class over to Open Education and we can get them on board with envisioning a completely different pedagogical approach to the classroom and new assessment techniques.

3 ***Hilary:*** So, my last question: Based on your involvement with the Open Education Initiative project at U Mass, Amherst, what are three key recommendations you would give other institutions who may also be trying to create similar programs?

Marilyn: My first recommendation would be buy-in. Make sure that you have buy-in from other parts of your institution, whether they are groups that will be supporting the initiative through funding or other kinds of support. An example would be the Provost's Office. Ours has been very supportive and has given us some of the funding that we use for the mini-grant program. They are the ones that put out the calls for proposals to the faculty and support us when we send out letters to go out to the faculty in recognition of their grant award. That way, we get the support for the faculty work that's going to be happening in this area which could then have a positive impact on tenure and promotion.

Other people that you want to support your Open Education Initiative is obviously your Library. The Library is usually at the frontlines of working with faculty. If there's a Center for Teaching and Learning, they would have the expertise with instructional designers and assessment personnel. They may also have experiences with building surveys and could work directly with faculty as they envision this new kind of pedagogy. Also, the buy-in from Academic Computing, campus technology folks, or those who support the Learning Management System on your campus will be important so that they can assist with Open Textbook integration.

A second recommendation would be establishing a peer review process. If you're creating a mini-grant program, one of the things that you want to make sure to have in place is a peer review mechanism because faculty are used to this kind of review process whenever they apply for potential grants. When creating a peer review group, look back at those folks who have buy-in. Also, see if you can find a faculty advocate on your campus, or look to the faculty governance group that might be in charge of curriculum oversight, undergraduate education, to see if you can get faculty representation from there. In our specific case, we have an information technology minor and the chair of that group also participates with us. So, those are a few ideas of how one would find the peer reviewers for your mini grant proposals.

My third key recommendation is that you have a dedicated staff person for Open Education. I would recommend someone who is at least half-time who can be dedicated to your Open Education program if you're going to have success in developing these kinds of programs at your institution. In our case, I was very fortunate to be able to pull in a librarian whose title is Open Education and Research Services Librarian. This person dedicates quite a bit of time to our Open Education Initiative and is also an academic library liaison. Ultimately, this person is able to apply their expertise from working with specific departments, as well their work

on the Open Education Initiative, to speak to the value and the priority that the library has for our Open Education work.

Hilary: Ok, great! That was wonderful, Marilyn. Thank you so much!

Marilyn: Oh, you're welcome. Ω

Building a Community of Inquiry Around OER

Gretchen Scronce, Amanda Kraft, and Jolanda-Pieta van Arnhem
College of Charleston, South Carolina

Abstract

This article discusses the pedagogical framework used by librarians who are developing and leading the training component of a new grant program for faculty interested in converting existing course materials to open educational resources (OER). The authors detail how librarians built a Community of Inquiry (CoI) surrounding OER to foster campus collaborations and demonstrate the value of OER by participating in efforts to develop grant guidelines, review proposals, and provide training and support for faculty grant recipients. Librarians designed an asynchronous OER training course for faculty in the campus learning management system (LMS), using existing open source materials. The course applies the CoI model of teaching and learning—through teaching, social, and cognitive presence. Through the course, librarians worked with faculty from a variety of disciplines to integrate affordable learning resources in their courses. The article includes some reflections from faculty and lessons learned thus far, along with resources used in the OER grant program.

Keywords: Community of Inquiry**,** faculty-librarian relationships, faculty development**,** OER grant program**,** learning management system

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Construyendo una comunidad de investigación alrededor de los REA

Resumen

Este artículo analiza el marco pedagógico utilizado por los bibliotecarios que desarrollan y lideran el componente de capacitación de un nuevo programa de becas para profesores interesados en convertir los materiales del curso existentes en Recursos Educativos Abiertos (REA). Los autores detallan cómo los bibliotecarios construyeron una Comunidad de Investigación (CoI) en torno a los REA para fomentar las colaboraciones en el campus y demostrar el valor de los REA al participar en los esfuerzos para desarrollar pautas de subvenciones, revisar propuestas y proporcionar capacitación y apoyo para los beneficiarios de subvenciones para profesores. Los bibliotecarios diseñaron un curso de capacitación de REA asíncrono para profesores en el sistema de gestión de aprendizaje del campus, utilizando materiales de código abierto existentes. El curso aplica el modelo CoI de enseñanza y aprendizaje, a través de la presencia docente, social y cognitiva. A través del curso, los bibliotecarios trabajaron con profesores de una variedad de disciplinas para integrar recursos de aprendizaje asequibles en sus cursos. El artículo incluye algunas reflexiones de la facultad y las lecciones aprendidas hasta ahora junto con los recursos utilizados en el programa de subvenciones REA.

Palabras clave: comunidad de investigación, relación entre bibliotecarios y profesorado, desarrollo del profesorado, Programa de subvenciones de REA, sistema de gestión del aprendizaje

围绕开放教育资源（OER）建立一个探究社群

摘要

本文探讨了由图书馆员用于开发并领导一项新的经费项目的培训部分而使用的教育框架，该经费项目适用于对将现有课程材料转换为开放教育资源（OER）感兴趣的教师。作者详细描述了图书馆员如何建立一个探究社群（Community of Inquiry，CoI），以培养校园协作，作者还通过参与开发经费指南，评审提议，和为学院经费接收者提供培训和支持，进而证明了OER的价值。图书馆员通过使用现有开源材料，

为校园学习管理系统中的教师设计了一个异步OER培训课程。课程通过教育存在、社会存在、认知存在，对CoI的教育和学习模式进行了应用。通过该课程，图书馆员与不同学科的教师共同合作，将可支付的学习资源融入课堂中。本文包括一些由教师提供的反思，和目前从OER经费项目所使用的资源中学到的经验。

关键词：探究社群，教师与图书管理员的关系，教师发展，OER经费项目，学习管理系统

Introduction

When the College of Charleston (CofC), a large public master's college in Charleston, South Carolina, initiated a grant program for faculty interested in converting their course materials to open educational resources (OER) during the 2018-2019 academic year, the College Libraries became an epicenter for OER support on campus. Librarians were already utilizing and learning about OER from the ground up—long before the grant program was announced, research and instruction librarians were using OER textbooks in their own credit-bearing information literacy classes. Library staff had also attended conference sessions and training on affordable learning initiatives, developed an extensive online OER guide, and formed a working group in partnership with instructional technologists from CofC's Teaching and Learning Team. Due to this existing knowledge and expertise, librarians consulted on and participated in every step of the grant program. They helped develop grant guidelines, reviewed proposals, and led training and support for faculty grant recipients. This article will focus on how research and instruction librarians at CofC designed an asynchronous OER training course for faculty in the campus learning management system (LMS)—using existing open source materials—and subsequently worked with faculty from a variety of disciplines to integrate affordable learning resources in their courses. Through their leadership with the grant program, librarians sought to foster a Community of Inquiry (CoI) surrounding OER on campus. The CoI model of teaching and learning identifies three essential elements for learning (teaching presence, social presence, and cognitive presence), and specifically applies them to online learning environments (Garrison, Anderson, & Archer, 2000). The course created by librarians at CofC applies these three elements in the following ways:

- **Teaching Presence:** The course adapts Creative Commons (CC) licensed OER development training from the State University of New York (SUNY). By using OER materials as the basis for our curriculum, faculty were provided with a model for how they can adapt OER and share resources. Many faculty members are concerned that using OER will mean added work and less time—this example shows how reusing materials developed and appropriately licensed can be timesaving and efficient.

- **Social Presence:** The course uses online education best practices to facilitate collaboration and knowledge sharing, including member introductions, discussions, and organizing faculty and librarians into team groups. This encourages faculty to learn from and support each other in an environment that is familiar and lasting.

- **Cognitive Presence:** Faculty members apply what they are learning into their OER course design. Grant projects can be loosely grouped into two categories: selecting and adapting existing materials and developing and formatting material newly created by the instructor. Within these two categories, however, projects vary greatly, from adding homework exercises in Mathematical Markup Language to a vector calculus textbook written by math department colleagues, to searching for openly licensed Russian language resources. Considerations such as accessible design are reflected across all projects.

Literature Review

Libraries and OER

Advocacy for OER amongst librarians is not a new or especially innovative topic, although it is widely discussed in current professional literature within the context of affordable learning in K-20 education and, occasionally, in connection to critical librarianship and engaged pedagogy (Crissinger, 2015; Wilkinson, 2017). In the recent past, "one of the greatest challenges" in supporting faculty interest in OER adoption was finding, evaluating, and using materials with appropriate licenses to use in courses (Massis, 2016, p. 770). Thankfully, the seemingly barren landscape has bloomed with the help of dedicated institutions of higher education and nonprofit organizations to create both open courseware and highly searchable OER repositories—e.g., OpenStax from Rice University, Open Textbook Library from the Open Textbook Network and the University of Minnesota, GeorgiA LIbrary LEarning Online (GALILEO) from Affordable Learning Georgia (ALG) and the University System of Georgia, Multimedia Educational Resource for Learning and Online Teaching, commonly known as MERLOT, from the California State University System, OER Commons powered by the independent education nonprofit Study of Knowledge Management in Education (ISKME), and many, many more. In addition, the willingness of statewide academic library con-

sortia—e.g., the aforementioned ALG, Louisiana Library Network (LOUIS), Ohio Library and Information Network (OhioLINK), Open Oregon, and Virtual Library of Virginia (VIVA)—international consortia like Community College Consortium for Open Educational Resources (CCCOER), and system-wide OER initiatives, like the one at SUNY, to support academic librarians, faculty, and instructional designers and technologists as they explore OER, for both the sake of "saving students money" and "an overall improvement in students' academic performance" (McBride, 2019, p. 24), has not gone unnoticed in the literature (Bell & Salem, 2017; Colson, Scott, & Donaldson, 2017; Evans, 2018; Evans, 2019; Salem, 2017).

While conversations regarding copyright law, fair use, and intellectual property—and the introduction of CC licenses over a decade ago—have placed libraries and the work of librarians "at the crux of affordable learning," OER curation, promotion, and even publication have also become "an integral part of an academic library's service model" (Evans, 2019, p. 1) as college and university tuition costs continue to rise and more students are reported to be food and/or housing insecure (Blagg, Whitmore-Schanzenbach, Gundersen, & Ziliak, 2017; Goldrick-Rab, Richardson, & Hernandez, 2017; Hallett & Crutchfield, 2018). The process of converting to OER can be time-intensive, however, and buy-in is not likely to materialize based on the cause of affordable learning alone (Cummings, 2019). Beyond "practical reasons" (Wilkinson, 2017, p. 117) for library involvement in OER adoption and delivery, librarians are also pedagogically inclined, through digital and information literacy instruction, "to demonstrate how authority is a means to disseminate power, not withhold it" (p. 118). As an alternative to traditional models that favor "the university bookstore's treatment of knowledge as capital" (Wilkinson, 2017, p. 115), OER empowers both faculty and students to fully engage with course content in meaningful ways and allows faculty to make deliberate choices when selecting and adapting or developing and formatting materials. It seems as though librarians are uniquely poised to discuss the "pedagogical superiority" of open education (Cummings, 2019, p. 25) and develop and deliver campus-wide professional development on "the potential of digital technologies and specifically the need for new digital literacies" (Conole, 2018); their expertise and willingness to lead is well-recognized in the literature covering the practical application of OER grant and incentive programs (Bell & Johnson, 2019; Bell & Salem, 2017; Goodsett, Loomis, & Miles, 2016; Jensen & Nackerud, 2016; Walz, Jensen, & Salem, 2016).

Librarians and the Community of Inquiry model

Almost 20 years ago, the CoI framework was first introduced as a model of teaching and learning, specifically for delivering courses "anytime, anywhere" and for facilitating educational transactions through "computer-mediated communication" (Garrison et al., 2000, p. 87). Despite increasing enrollment in online and distance education

programs in the United States (Seaman, Allen, & Seaman, 2018), experimentation with "authentic tasks and active learning techniques" (Finch & Jefferson, 2013, p. 181) in blended and online learning environments is still widely discussed in the literature, and students reportedly "bemoan the fact that they do not have the personal connection they desire when learning online" (Rapchak, 2017, p. 59). Courses and training delivered by librarians, however "multi-task, multi-purpose, multi-disciplinary" (Finch & Jefferson, 2013, p. 182) they are designed to be, can be also be disappointing to students and participants if they lack the collaborative approach and "facilitative nature" (p. 187) of the CoI model, which identifies teaching, social, and cognitive presence (see Figure 1) as overlapping elements in "a successful higher educational experience" (Garrison et al., 2000, p. 87).

Figure 1. Elements of an education experience.

Methodology

While interest in open education already existed in pockets around campus, advocacy for OER came only after it became obvious that both library staff and academic administration—i.e., the Provost—were in a position to foster a CoI around OER. A handful of individual faculty were using OER in their courses, but a formal network of support was lacking until an interdepartmental working group of library staff began meeting to discuss and develop a campus-wide strategy. The group formed out of professional interests and personal experience. Several librarians at CofC teach a credit-bearing information literacy course, and most had reused content from an open textbook from SUNY Open in their course—i.e.,

The Information Literacy User's Guide: An Open, Online Textbook (Bernnard et al., 2014)—and/or one published by the Ohio State University—i.e., *Choosing & Using Sources: A Guide to Academic Research* (Lowery, 2016). Additionally, two of these faculty librarians had written and published lesson plans for the course under a CC license (Finch & van Arnhem, 2018; van Arnhem & Finch, 2018). Several members of the group had also attended consortial trainings and conference sessions related to campus affordable learning initiatives. Shortly before the group began meeting, the research and instruction librarians created an OER LibGuide (CofC, 2018) and began putting out feelers on campus for other partners, including instructional designers and technologists from CofC's Teaching and Learning Team. At the same time, the Provost developed an interest in OER because of its frequent coverage in academic and higher education literature and tasked a faculty member with researching and developing a proposal for a grant program to incentivize and reward faculty for transitioning their courses to OER. The appointed faculty member met with two members of the library working group, and librarians were subsequently involved in all aspects of the program. In particular, it was decided that the library would be the primary source of support for faculty receiving grants. This support would include a formal training component and ongoing assistance and guidance, as needed, from an assigned library liaison. The program was announced at a meeting of the Faculty Senate (see Figure 2), and any and all faculty members were invited to apply for $750 grants to transition a course to OER, while librarians offering support to these faculty members, ultimately, received smaller stipends of $200 each for their efforts. A total of 10 faculty members applied to the program, representing eight OER projects—two of the projects were collaborative, involving courses taught by multiple instructors. Once the faculty applications were reviewed and accepted by a small committee of two faculty members, one librarian, and one instructional technologist, librarians could begin preparing a training course that would foster a CoI surrounding OER.

Developing the OER training course

Many faculty members at CofC have participated in a program called Distance Education (DE) Readiness, designed to prepare faculty for teaching in an online environment. DE Readiness completion is required before instructors can teach online at CofC (CofC, 2017). The program is an asynchronous online course administered in the campus LMS (Brightspace/D2L) and administered and taught by an instructional technologist. Other faculty members, past DE Readiness graduates, serve as mentors and leaders of small groups. All research and instruction librarians at CofC have taken DE Readiness in preparation for teaching online credit-bearing information literacy courses, and one librarian has served as a DE mentor. Because of faculty familiarity with this program, and because in-person training posed scheduling challenges, DE Readiness was chosen as a model for an online OER train-

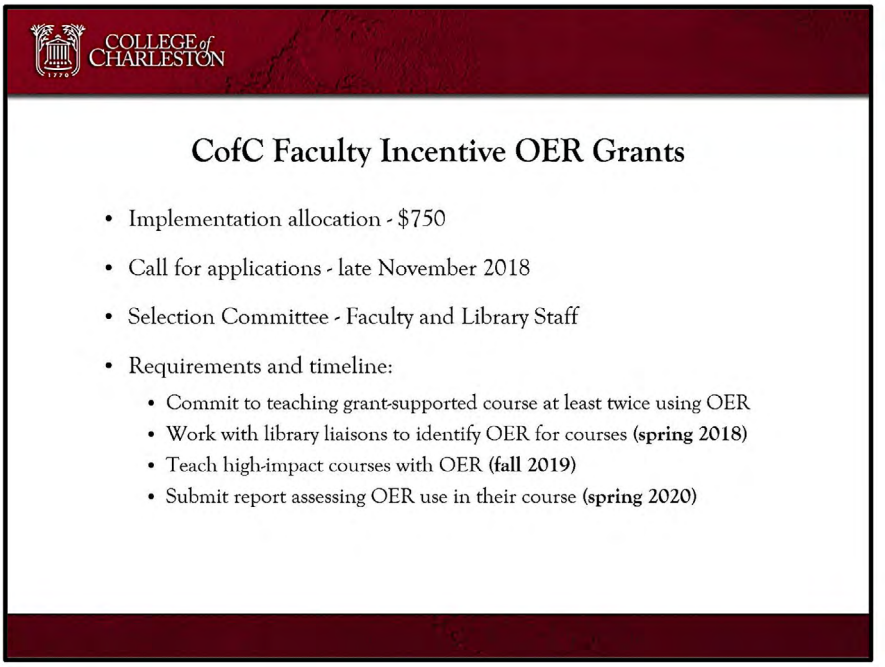

Figure 2. Slide from Faculty Senate Provost's Report (November 13, 2018) Open Educational Resources (OER).

ing program for OER grant recipients. Three librarians—the authors of this article—volunteered to build, collaboratively, an OER training course based on DE Readiness and deliver it entirely on the campus LMS with support from our CofC's instructional technologists, who regularly manage the DE Readiness program.

Rather than develop new materials from scratch, the group decided to use existing, open resources on OER. Numerous resources have been created to foster faculty understanding of OER, but the OER Community Course created by SUNY was selected as the model for our course (SUNY, 2018). As previously mentioned, SUNY OER Services is one of the largest and most robust statewide OER initiatives in the United States. SUNY has developed extensive training modules covering different aspects of open education and shared them online, and the course was designed in ways that paralleled what CofC librarians were discussing for their program, including content that was separated into manageable chunks, a discussion space for faculty to communicate simultaneously with librarians and with each other, and a badging program for faculty who completed the modules and corresponding activities. Certain aspects of the program, such as discussion boards and cohort groups, are limited to SUNY faculty and staff, but the course content is freely available on the web for anyone's use. SUNY staff members were generous in answering questions and even shared a folder containing text and image files used in the online course. Following

independent reviews of the SUNY content, the authors of this article used the files to create four content modules in the LMS course: Defining OER; Identifying, Finding and Adopting OER; Customizing and Integrating OER; and Creating, Licensing, and Publishing OER. These four topics best captured the essential knowledge necessary for faculty to develop a thorough understanding of OER, use it effectively in their course, and become an advocate for OER on campus. Additional topics were considered, but it was decided that faculty needed to acquire the basics and then shift their focus to their individual courses, rather than work through additional, general content about OER.

Identifying, finding, and adapting OER about OER was a strategic curriculum design choice. Reusing SUNY's open content dramatically reduced the time and effort involved in developing the training program. Developing a new course is time-intensive, and many institutions, especially those without a dedicated OER or scholarly communications librarian, may find it challenging, initially, to implement such a program from scratch. This parallels the concerns of many instructors that designing or redesigning a course using OER is impractical (Cummings, 2019). This course not only provided faculty with an example of OER in action, it also demonstrated that using OER, and open education itself, can save time, add quality, and potentially improve the "educational experience" (Garrison et al., 2000, p. 87) of both instructors and students or participants. As previously mentioned, the CoI framework identifies the overlap or "convergence" of teaching, social, and cognitive presence as ideal in creating "a collaborative constructivist education experience" (Vaughan, Garrison, & Cleveland-Innes, 2013, p. 11), and the OER training course developed and delivered by librarians was designed with this in mind.

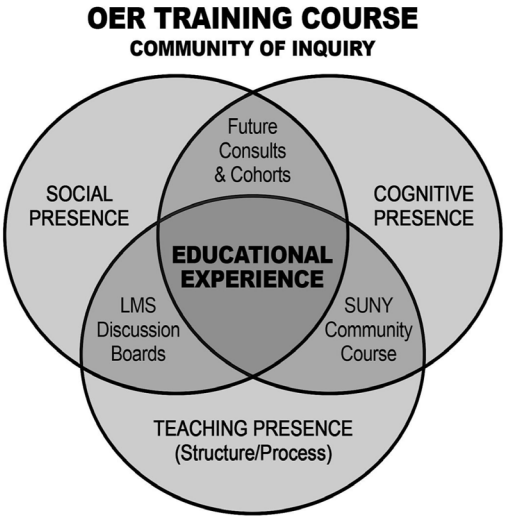

Figure 3. Educational experience in the OER training course.

Delivering the OER Training Course

Teaching presence.

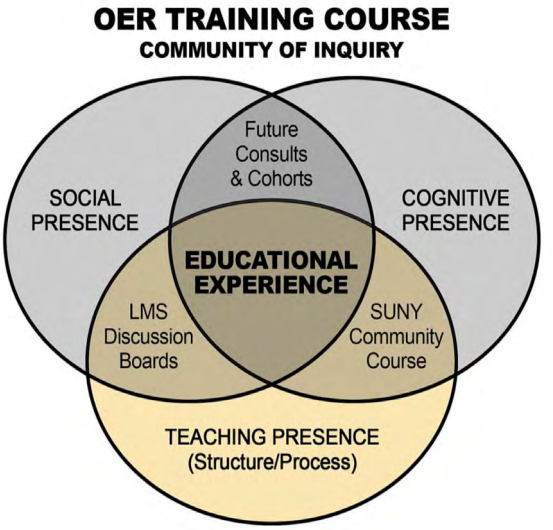

Figure 4. Teaching presence in the OER training course.

First, by using the SUNY course content as a backbone, librarians demonstrated to faculty how OER can be used to create a strong teaching presence in an online course (see Figure 4). The course began with a Welcome and Overview module that introduced the course with a quick syllabus and a welcome video that outlined expectations for the course and explained how the course would incorporate materials created and CC-licensed by SUNY into the informational part of the course. This first module also contained a discussion board for introductions in addition to a pre-course survey (see Appendices A and B), designed to gauge participants' familiarity and/or comfort level with the topics covered in the course. Following the Welcome and Overview module were four content modules based on SUNY's course. The SUNY content selected for inclusion was lightly edited to be more institution-specific, renamed, and reformatted as native HTML documents in the LMS (see Figure 5), offering a seamless, cohesive experience to someone working their way through the course materials. While SUNY materials incorporate a variety of sources and embedded content, such as videos and podcasts, the overall course has a consistent style and voice that would be more difficult to achieve if the course simply linked to SUNY's website.

A wrap-up module was planned (see Figure 6), but it was not released to participants due to a compressed timetable for the first round of grant recipients. OER training for the first cohort occurred during the second half of the Spring 2019 semester and was complicated by the final exam schedule and summer break when faculty are

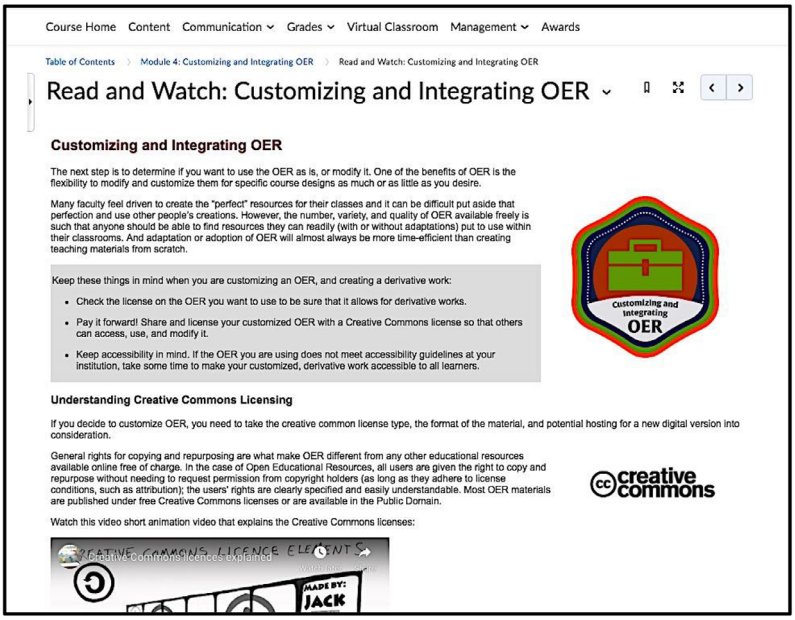

Figure 5. OER training course example module.

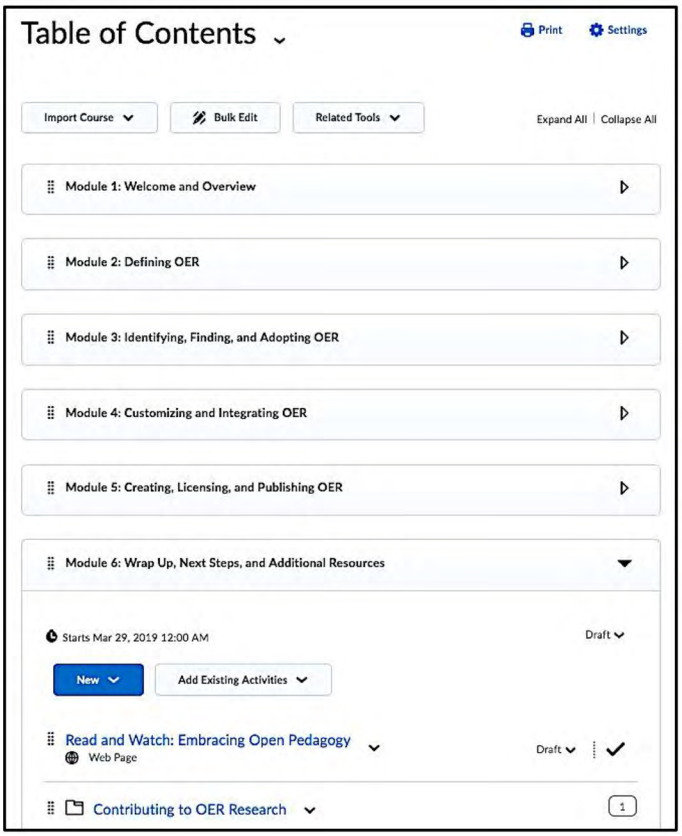

Figure 6. OER training course table of contents.

off-contract. Faculty members continued to work on their course materials during the summer months with the assistance of librarians and were asked to complete their OER projects by the start of the Fall 2019 semester. Due to complications of releasing training mid-semester at a busy time for faculty, subsequent changes and additions to the training course are expected for the second round of grants, along with an extended timeframe for recipients to complete content modules and other activities. Faculty members from the first cohort will be asked to share their experiences with new cohort members in order to expand discourse and offer peer support. All these efforts should help to increase the teaching presence in the online OER training course.

Social presence.

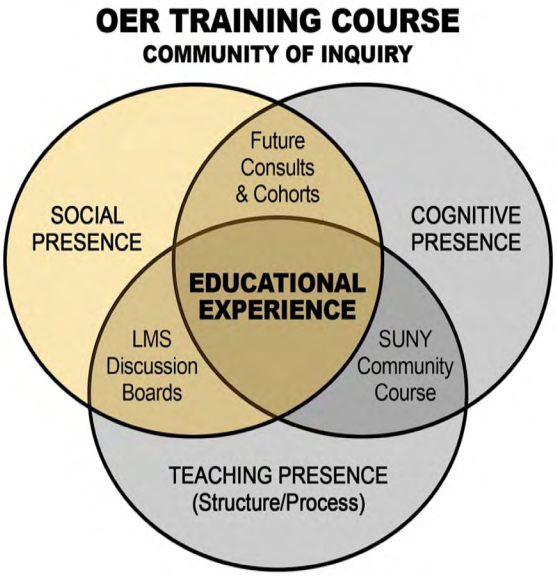

Figure 7. Social presence in the OER training course.

Secondly, in designing the course, the librarians sought not only to support faculty's individual projects through open discussion in the LMS but also to strengthen current knowledge and future advocacy of OER on campus (see Figure 7). While some components borrowed from SUNY touched on building this campus network, creating a strong social presence in the course was a more effective way of accomplishing "Emotional Expression," "Open Communication," and "Group Cohesion" (Garrison et al., 2000). A standard Introductions discussion board was included in the first module and participants were asked to introduce themselves and explain their projects (see Figure 8). This led to some of the most fruitful interactions of the course, with faculty offering suggestions to each other and recognizing

points of overlap. After introductions were made, the librarians teaching the course reviewed the projects and assigned each participant to a small group. These groups were loosely based on the librarians' subject liaison areas, although not all subject areas were represented by the three librarians leading the course. Separate Group Discussions were set up for each group (see Figure 9), although this proved to be unnecessary—the list of participants was short enough that the main discussion board proved to be a more effective way to collaborate than private discussions with only three to four people.

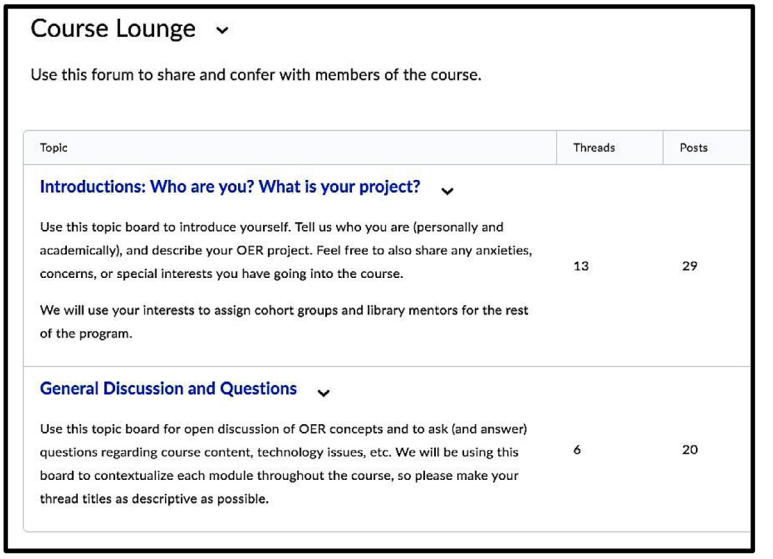

Figure 8. OER training course course lounge.

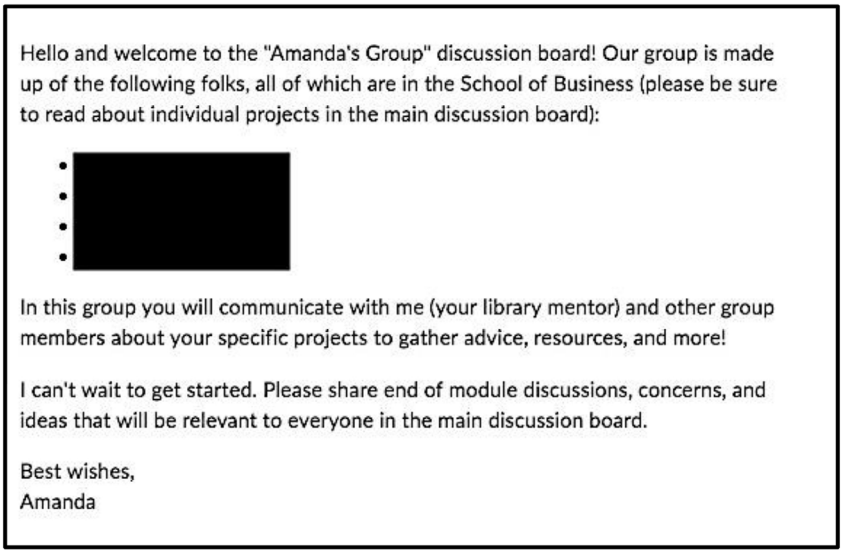

Figure 9. OER training course group discussions.

From the library's point of view, the social aspects of the course were the most successful. Building partnerships with campus stakeholders, including teaching faculty, is an important component of successful OER initiatives (Salem, 2017), but early efforts by the library to gauge faculty interest in and usage of OER on campus were not especially fruitful. By cultivating relationships with grant recipients, especially through mentor groups that assigned faculty to one specific librarian, the library now has strong OER connections in many departments on campus. Plans are being discussed to host one or more events in the library in the future, where participating faculty can discuss and showcase their projects with other faculty on campus. Librarians teaching the course—the authors—have presented at local conferences alongside one of the grant recipients (Kraft, O'Byrne, Scronce, & van Arnhem, 2019) and have solicited feedback on the program from all current grant recipients in an effort to provide an opportunity for faculty to share their own experiences. The authors plan to continue to collaborate with grant recipients in the future on additional presentations, assessments, and scholarly writing, as they continue to learn more about OER resources and use or create them for their courses.

Cognitive presence.

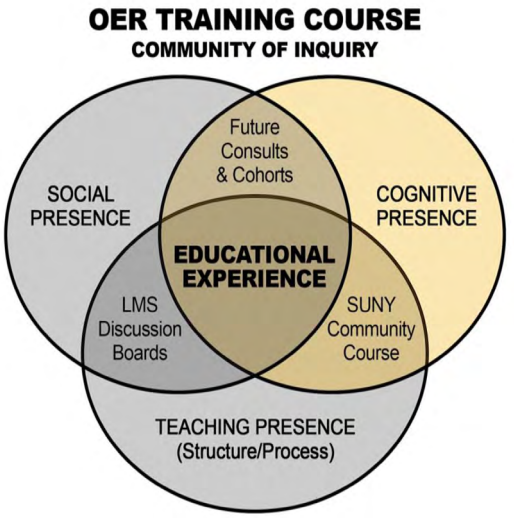

Figure 10. Cognitive presence in the OER training course.

Finally, the third element of the CoI model of learning, cognitive presence, is closely related to "Exploration," "Integration," and "Resolution" (Garrison et al., 2000)—i.e., critical thinking. Because the course did not incorporate traditional assignments or assessments, cognitive presence is more difficult to identify than teaching and social presence. However, in many ways, supporting faculty as they make connections and facilitating the exchange of infor-

mation were the primary goals of the entire course. Much of this cognitive work takes place individually, as faculty incorporate what they have learned from course materials and each other into selecting, developing, and formatting materials for their own courses (see Figure 10). This work will continue into the Fall 2019 semester as faculty teach their courses with OER, most for the first time, and they will have continuous access to the OER training course and the News/Announcements feed on its homepage (see Figure 11). The OER training course uses online education best practices to facilitate collaboration and knowledge sharing, including member introductions, discussions, and organizing faculty and librarians into team groups. This encourages faculty to learn from and support each other in an environment that is familiar and lasting. In the librarians' conversations and email exchanges with faculty over the Spring and Summer 2019 semesters, faculty have exhibited indicators of cognitive presence, including asking questions, exploring different solutions, and applying new methods, ideas, and materials into their courses.

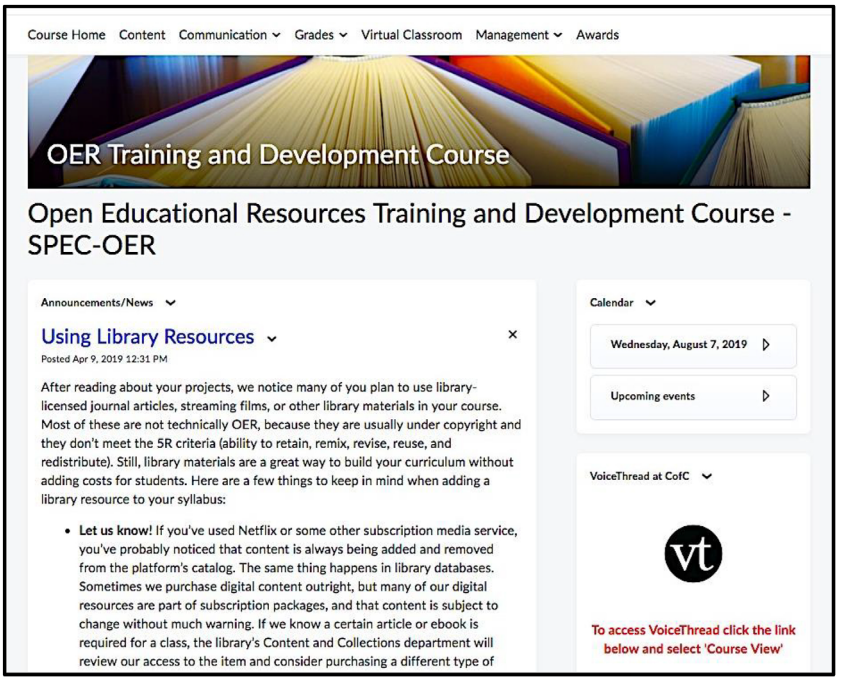

Figure 11. OER training course announcements/news feed.

Findings and Results

Most OER grant courses are currently being taught for the first time or are scheduled to be taught in future semesters, so a full analysis of the first grant cycle is still pending. Formal assessment and evaluation will occur once the first year concludes in Spring 2020 and will include a

complete comparison of program costs and savings, qualitative analysis of final reports submitted by participating faculty, and possibly comparative analysis of student performance and grades.

The librarians have collected some reflections from faculty and lessons learned thus far, including the importance of timing the course to maximize faculty engagement. They also compiled an estimated cost-savings analysis based on enrollment numbers in August 2019. For the initial grant cycle, the estimated amount spent on grants was $8,500.00 (including stipends for 10 faculty participants and four librarians). In comparison, an early estimate of previous textbook costs for five of the courses being taught with OER in Fall 2019 showed almost $14,000 saved in student textbook costs (remaining grant courses have yet to be taught or estimated material costs were unavailable) (see Table 1). This indicates the total financial impact for students will far outweigh the cost of awarding grants.

Table 1. Estimated Textbook Savings For Students - Fall 2019

Estimated Textbook Savings for Students - Fall 2019			
Department and Course	**Cost of Comparable Textbook**	**Fall 2019 Enrollment (as of 7/29/19)**	**Estimated Savings per Course**
Mathematics: Vector Calculus with Chemical Applications	$195.00	8	$1,560.00
Management & Marketing: Entrepreneurship Theory and Practice	$86.25	30	$2,587.50
Management & Marketing:	$176.00	23	$4,048.00
Hospitality and Tourism Management: Hospitality and Tourism Technology	$115.00	29	$3,335.00
Women's and Gender Studies: Intro to Women's and Gender Studies	$67.45	35	$2,360.75
		Total Estimated Savings:	$13,891.25

Interpretations and Recommendations

One obvious drawback to an LMS course is its lack of openness. All parts of the course are CC licensed, but in practice, it is difficult to share materials from within an LMS. Participating librarians felt the benefits of modeling OER using a tool that is ready-made and familiar to most faculty, along with the ability of the

LMS to provide a controlled discussion space that fosters trust and community, outweighed the inability to share. Still, placing open content in a restricted environment is a drawback. One faculty member's OER project is to transition materials from the LMS to an open website, and the librarians are eager to learn from this project and consider how the course could be held on an open platform in the future.

Timing should be an important consideration for future cycles of this grant program and for any similar initiatives. The initial grant program was conceived of and planned during the Fall 2018 semester and launched in early 2019. By the time applications were received and evaluated and training was ready, it was already spring break. The second half of the spring semester proved to be an extremely busy time for faculty. Furthermore, because the grant program was new and initial information about the program had been somewhat vague, they were not prepared for a time-intensive training course. Most participated in the initial discussion board with excitement and a willingness to engage with each other's questions, but involvement quickly tapered off as end-of-year pressures escalated. None of the faculty completed the entire LMS course in the recommended timeframe, although several returned to the content once the semester ended and they had more time to devote. Because faculty had not completed the initial modules, a planned, final wrap-up module containing an OER review activity was never released and assigned, and the semester ended without a formal ending for this course.

The grant timeline and application materials have been refined for the second round of OER grants, to be awarded in December 2019 following an application period in the fall. The course will officially run during the Spring 2020 semester, but participating faculty will have an opportunity to begin the course during winter break if they wish, and all faculty will begin the semester with an understanding of course expectations and the time commitment involved. The award has increased from $750 per faculty member to $1000.

CofC's second grant cohort will be expected to teach their course for the first time during the 2020-2021 academic year. This reflects an expansion of the timeframe for implementing an OER course. Faculty in the initial Spring 2019 grant cohort were expected to teach their revised course in Fall 2019, but this proved unrealistic for some instructors and projects. One notable problem is that many courses are not scheduled to be taught every fall semester. Other faculty members were asked to rearrange their course load and take on additional new course preparation during the scheduled implementation time, requiring them to push out the delivery of their OER course into a future semester. Another setback encountered was the lack of suitable OER resources for specific disciplines/goals. For example, one project proposal involved seeking OER materials for a 200-level language course. Participants were un-

able to locate suitable resources for this course, but they did identify OER materials ideal for their 100-level course. They did not have time to rework their 100-level course for Fall 2019, but they anticipate amending their proposal and teaching with OER in a future term. Based on these experiences, it is realistic to incorporate a one-year course implementation period for OER course revisions, beginning after faculty members have completed training.

Changes were made to the grant application in Fall 2019 to more specifically identify and reward the types of projects expected to have the highest impact. The new application clarifies the priority of the grant to fund faculty adoption of OER materials in course sections offered on a recurring basis for first-, second-, and third-year students. It now excludes applicants who teach courses that currently utilize OER or have little or no materials costs to students unless the course is substantially revised during the award period (CofC, 2019).

Conclusions

Overall, faculty perceptions of the OER grant program initiative have been positive. Faculty stated that they found the program to provide an opportunity to reduce costs for students, add flexibility in course design by using open-access digital materials, and provide instructors with the opportunity to utilize current content not generally available in printed textbooks. Instructors found this particularly germane in technology-focused classes. Some instructors were overwhelmed by the number of resources available for their discipline but stated that working with a librarian on their specific learning goals and sharing resources with others was a valuable part of the experience. Grant recipients reported that they found the grant program useful and indicated that it encouraged them to take a new approach to their course design.

In particular, the CoI model appears to be a useful approach for a faculty development program. By considering each element—teaching, social, and cognitive presence—librarians facilitated a full educational experience for faculty, who in turn are better equipped to facilitate the same for their students. There are early indications that the OER grant program has impacted educational experiences at the classroom level. For example, one participant teaching a Women's and Gender Studies course was motivated to apply for a grant because she wanted to reduce the cost burden for her students. In an October 2019 interview shared on CofC's private social media site for faculty and staff (Rose, 2019), she shared that she initially felt intimidated by some of the technical terms and technology being discussed by other participants in the course. Once she completed the course and began experimenting with her course redesign, however, she found herself incorporating more and more non-traditional resources and technology components, such as blogs and videos. She even created a website to contain her syllabus and all class readings, making her course content fully open

for anyone to find. As a result, she has noticed an increase in student engagement, and the response from students has been so positive that she is planning to stop using traditional textbooks in all her classes.

This project illustrates how a library-led training program can be a meaningful component of a successful campus OER initiative. As the community of OER adopters and advocates on campus continues to grow, it is hoped that faculty grant recipients, along with librarians and ultimately even students, can share their experiences with open education in a spirit that fosters a CoI surrounding OER on campus.

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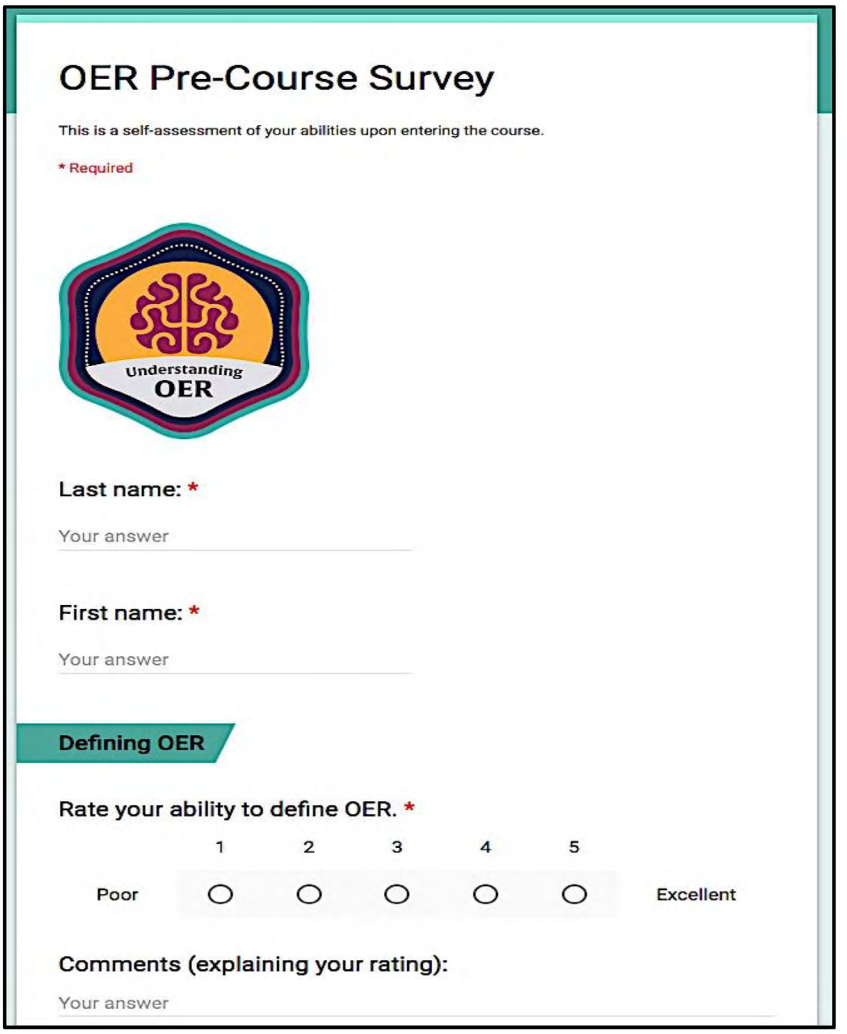
Appendix A

OER Pre-Course Survey (Form)



OER Pre-Course Survey

This is a self-assessment of your abilities upon entering the course.

* Required

Understanding OER

Last name: *

Your answer

First name: *

Your answer

Defining OER

Rate your ability to define OER. *

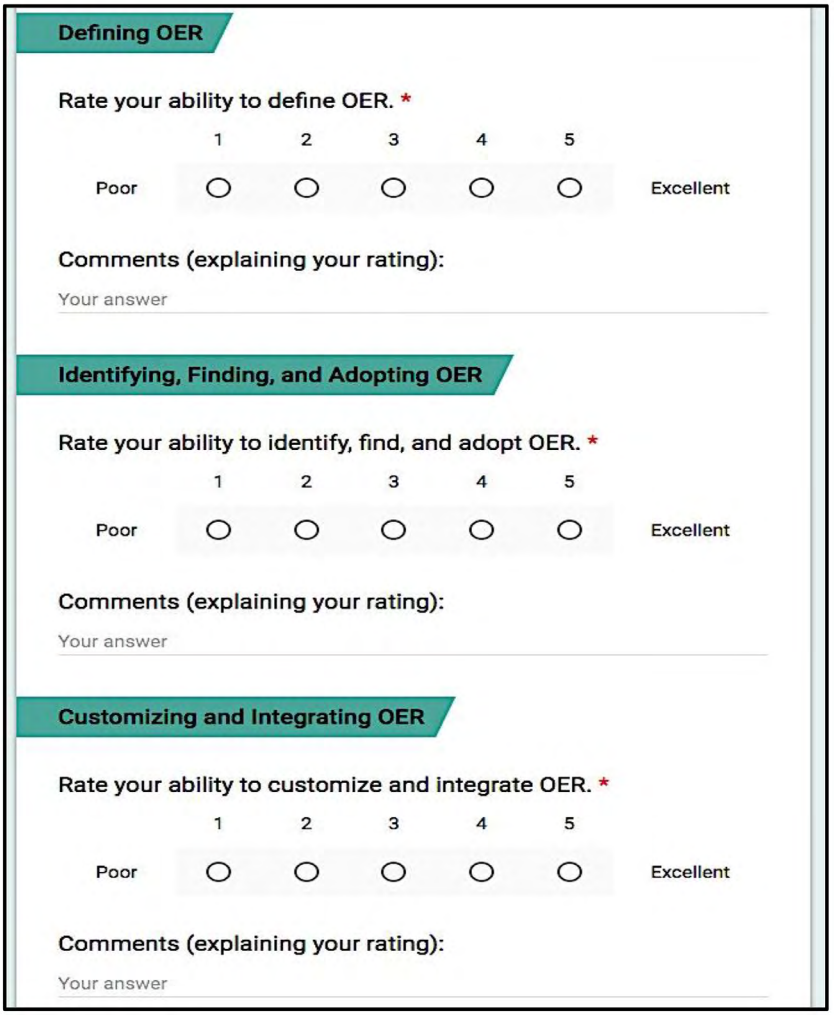
	1	2	3	4	5	
Poor	○	○	○	○	○	Excellent

Comments (explaining your rating):

Your answer

Appendix B

OER Pre-Course Survey (Responses)



Defining OER

Rate your ability to define OER. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Excellent

Comments (explaining your rating):

Your answer

Identifying, Finding, and Adopting OER

Rate your ability to identify, find, and adopt OER. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Excellent

Comments (explaining your rating):

Your answer

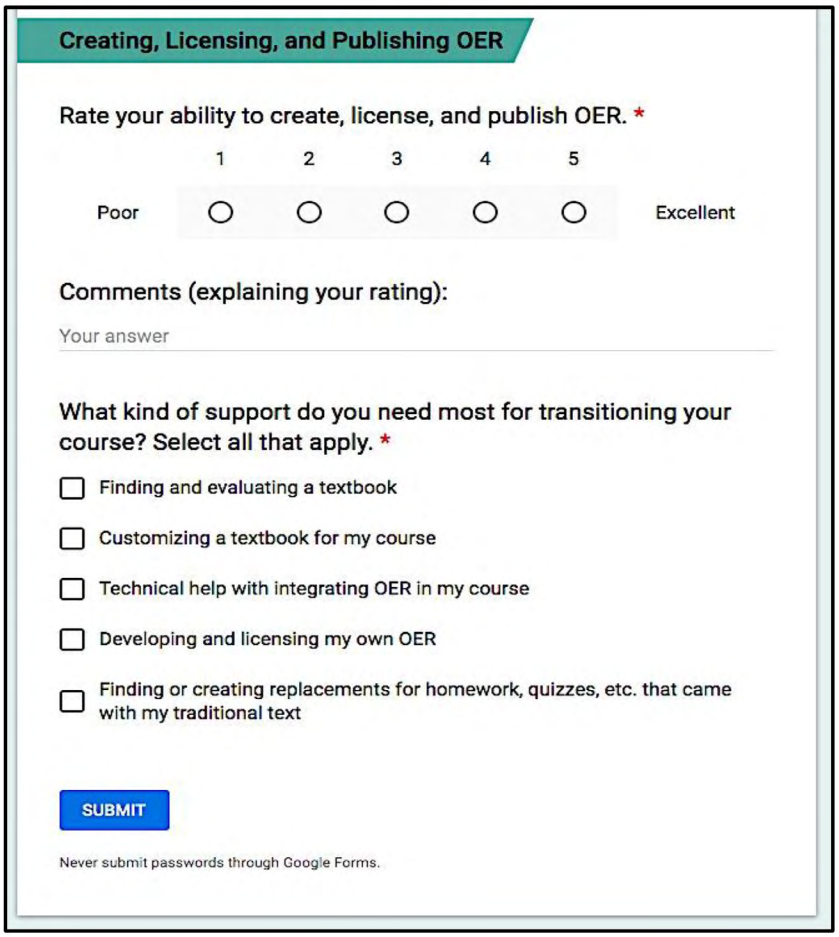
Customizing and Integrating OER

Rate your ability to customize and integrate OER. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Excellent

Comments (explaining your rating):

Your answer



Creating, Licensing, and Publishing OER

Rate your ability to create, license, and publish OER. *

	1	2	3	4	5	
Poor	○	○	○	○	○	Excellent

Comments (explaining your rating):

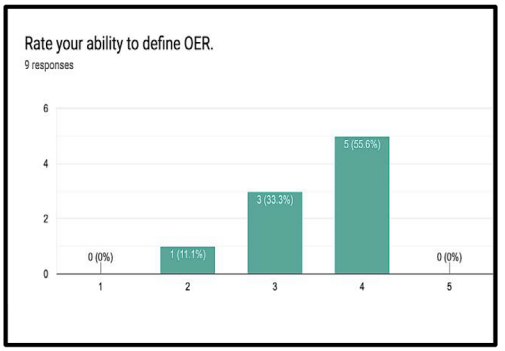
Your answer

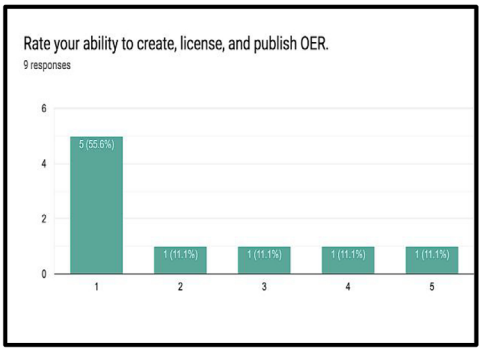
What kind of support do you need most for transitioning your course? Select all that apply. *

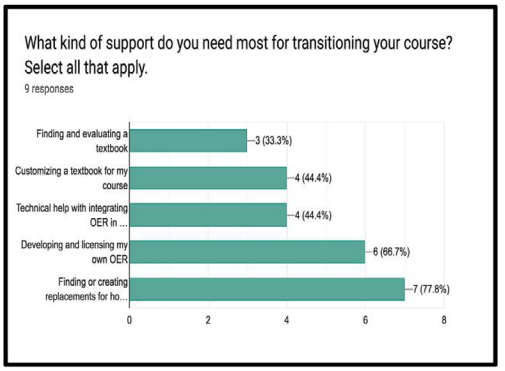
- ☐ Finding and evaluating a textbook
- ☐ Customizing a textbook for my course
- ☐ Technical help with integrating OER in my course
- ☐ Developing and licensing my own OER
- ☐ Finding or creating replacements for homework, quizzes, etc. that came with my traditional text

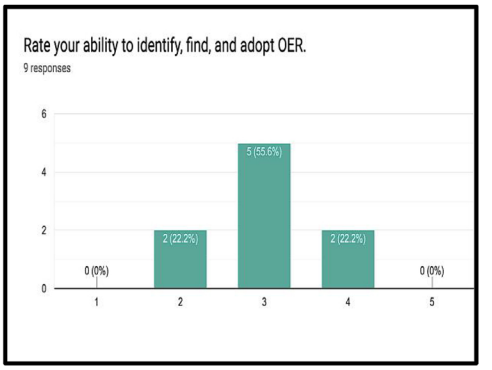
SUBMIT

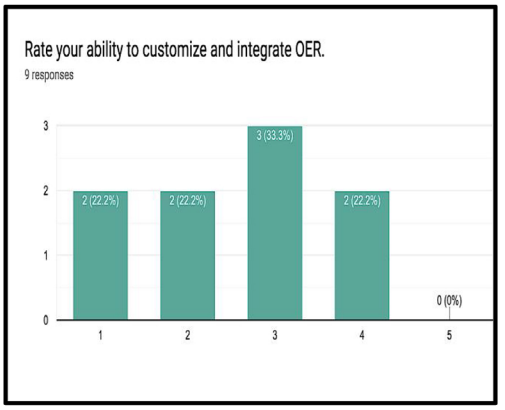
Never submit passwords through Google Forms.


Rate your ability to define OER.
9 responses
6
4
2
0
0 (0%)
1 (11.1%)
3 (33.3%)
5 (55.6%)
0 (0%)
1
2
3
4
5


Rate your ability to create, license, and publish OER.
9 responses
6
4
2
0
5 (55.6%)
1 (11.1%)
1 (11.1%)
1 (11.1%)
1 (11.1%)
1
2
3
4
5


What kind of support do you need most for transitioning your course? Select all that apply.
9 responses
Finding and evaluating a textbook
3 (33.3%)
Customizing a textbook for my course
4 (44.4%)
Technical help with integrating OER in ...
4 (44.4%)
Developing and licensing my own OER
6 (66.7%)
Finding or creating replacements for ho...
7 (77.8%)
0
2
4
6
8


Rate your ability to identify, find, and adopt OER.
9 responses
6
4
2
0
0 (0%)
2 (22.2%)
5 (55.6%)
2 (22.2%)
0 (0%)
1
2
3
4
5


Rate your ability to customize and integrate OER.
9 responses
3
2
1
0
2 (22.2%)
2 (22.2%)
3 (33.3%)
2 (22.2%)
0 (0%)
1
2
3
4
5

Taking OER Abroad with Library-Led Partnerships

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Florida State University, FL

Abstract

Partnerships are key to strengthening open and affordability initiatives on campus, allowing for strategic collaboration and the alignment of department goals to promote open educational resources (OER) in the classroom. This paper focuses on our libraries' partnership with our International Programs (IP) division to promote open course materials and the open movement at our international study centers and study abroad sites through a specialized alternative textbook grant (ATG) program and targeted outreach for instructors teaching in global environments. An overview of the partnership between the Florida State University Libraries and our IP department is detailed and guidance is provided for other academic libraries and/or open and affordable initiative teams in developing globally focused open programs.

Keywords: academic libraries, partnerships, study abroad, OER, open education

 doi: 10.18278/ijoer.2.1.4

Llevar REA al extranjero con asociaciones dirigidas por bibliotecas

Resumen

Las asociaciones son clave para fortalecer las iniciativas abiertas y asequibles en el campus, lo que permite la colaboración estratégica y la alineación de los objetivos del departamento para promover recursos educativos abiertos en el aula. Este documento se enfocará en la asociación de nuestras bibliotecas con nuestra división de Programas Internacionales para promover materiales de cursos abiertos y el movimiento abierto en nuestros centros de estudio internacionales y sitios de estudio en el extranjero a través de un programa de subsidio de libros de texto alternativo especializado y divulgación dirigida para instructores que enseñan en entornos globales. Se detallará una descripción general de la asociación entre las bibliotecas y nuestro departamento de Programas Internacionales y se proporcionará orientación para otras bibliotecas académicas y/o equipos de iniciativa abiertos y asequibles en el desarrollo de programas abiertos con enfoque global.

Palabras clave: bibliotecas académicas, asociaciones, estudios en el extranjero, REA, educación abierta

借由图书馆领导的伙伴关系将开放教育资源（OER）推向海外

摘要

伙伴关系是强化开放、可负担的校园倡议的关键，它能允许战略协作和部门目标的一致，进而推动课堂使用开放教育资源。本文将聚焦于图书馆与国际课程部之间的伙伴关系，通过一个专用替代性课本经费项目和为大学教师在全球环境下开展教育准备的外展服务，以推动我们的国际研究中心和出国留学网上的开放课程材料和开放运动。本文将详细概述图书馆与国际课程部之间的伙伴关系，并为其他学术机构和/或开放式可支付倡议团队就开发聚焦全球的开放计划提供指南。

关键词：学术图书馆，伙伴关系，出国留学，OER，开放教育

Introduction

At Florida State University, International Programs (IP) was identified as an early partner for our open educational resources (OER) initiative due to the widespread course materials complications our global sites face without access to a local bookstore and in maintaining the high-cost, traditional textbook model in the increasingly flexible global learning environment. IP coordinates our university's extensive study abroad program, which offers opportunities for global learning at four international study centers and faculty-led programs in over 20 locations. This collaboration has grown to include an internationally focused mini-grant program, mirroring our on-campus alternative textbook grant (ATG) program. Instructors travelling from the main campus to teach abroad or those located permanently at our international study centers are offered support for switching from a traditional textbook to a low-cost or open option, funded by the IP department. Furthermore, our collaboration has allowed for targeted outreach to the high enrollment courses taught abroad and the opportunity to provide workshops and presentations to our international faculty with a focus on the specific course material issues that affect instructors teaching overseas. This article provides an overview of our University Libraries' partnership with International Programs in supporting and promoting our open and affordable initiative beyond main campus with guidance for other academic libraries and OER teams on partnering with global learning divisions and the general benefits to developing specialized OER outreach programs.

Literature Review

In order to assess the impact of OER initiatives, many OER researchers have focused on cost, outcomes, usage, and perceptions—the so-called COUP Framework developed by the Open Education Group (Hilton, Wiley, Fischer, & Nyland, n.d.). However, very few researchers have focused on the use of OER initiatives to forge new partnerships between stakeholders at an academic institution. In cases where researchers have focused on this topic, they typically do so in a cursory fashion as part of a larger argument. For example, Salem (2017) examined many specific examples of library-led OER initiatives that involve various kinds of partnerships, but only briefly mentioned the importance of intra-institutional partnerships in particular, and then only with reference to common partners, such as teaching and learning centers, faculty development units, institutional research offices, student governments, and university bookstores. Although Kleymeer, Kleinman, and Hanss (2010) explored the skills and advantages that academic libraries can bring to intra-institutional OER partnerships, they mostly focused on the libraries rather than on any other specific partners and made no mention of international study abroad programs as a potential partner. Researchers have also explored partnerships between librar-

ians and faculty (Avila & Wray, 2018; Goodsett, Loomis, & Miles, 2016), inter-institutional library partnerships (Smith & Lee, 2016), cross-institutional partnerships to develop OER (Marshall, Kinuthia, & Richards, 2012), and partnerships with third-sector organizations (Macintyre, 2013). In contrast to the above studies, this article provides an in-depth case study of a partnership between the University Libraries and the Office of IP at the authors' home institution, with a view to informing library practice by expanding the horizon of possible intra-institutional partnerships for academic librarians working on OER initiatives.

Background

Florida State University's IP department offers study abroad opportunities to over 1,600 students a year through the support of international study centers and study abroad sites across the globe. The most popular program is the First Year Abroad/First Semester Abroad Broad Curriculum at the three European campuses in Florence, Italy, London, United Kingdom, and Valencia, Spain, which allows students to complete liberal studies and core courses abroad and fulfills the university's summer residency requirement. The additional international study center is located in Panama City, Republic of Panama and is the only degree-granting international campus under the university umbrella. It is also differentiated in the student demographics, as nearly all of the campus population is from Latin America and the Caribbean, as opposed to the American students travelling to Europe for First Year Abroad/First Semester Abroad. Our students studying at the Panama campus are eligible for a special 2+2 scholarship, where after studying for two years at the Panama campus, they are able to transition to the main campus to finish their degrees while qualifying for in-state tuition rates, saving them up to $15,000 annually. In Florence, London, and Valencia, a majority of instructors travel from the main campus in Tallahassee to teach at these study centers in the summer as opposed to more local instructors in the spring and fall. Panama's faculty and staff are almost entirely local Panamanians, with only a few instructors travelling from main campus to teach each year. While Panama and Florence have full time librarians, the London library is managed by the IT staff members and Valencia does not have a formal library or library staff.

University Libraries supports and enhances the teaching, learning, research, and service activities of the university through strategic engagement in collaborative partnerships to advance intellection discovery. Florida State University Libraries has focused on strengthening its partnership with IP and supporting the international study centers with resources, services, and staff significantly since creating an Extended Campus and Distance Services Librarian role in 2014. Library staff and administrators visit the study centers on a regular basis, complementing our online outreach efforts to students and instructors with in-person

orientations, workshops, and faculty meetings. In order to formalize and standardize our partnership, a Memorandum of Understanding (MOU) was established in 2018 which designated specific responsibilities of University Libraries (provision of access to resources and services, outreach, instruction support, OER, information literacy, collection projects, copyright, and support learning) in exchange for funding in support of resources, staff, and annual travel. Our collaborative work to support the study center differentiates from our general distance library services portfolio in that it goes beyond our online learning objects, asynchronous information literacy program, and integration in the learning management system to instead meet the unique needs of our international locations. One aspect of collections that has been a challenge and, therefore, a focal point for global library support is course reserves and instructional material support. When travelling to the European study centers, students rarely bring their textbooks with them due to the nuisance of international travel with heavy, introductory level course materials; however, there is no access to a local bookstore and shipping overseas only exacerbates the already high price of these materials, causing many students to forego their required materials completely. While there is a small subsidiary of the campus bookstore in Panama, the staff struggles with how many items to purchase for each course, as books have to be purchased well in advance and students are able to drop and add courses into the first week of classes, causing simultaneous issues of overstock with some courses and a lack of availability for others. This has been a hindrance to the teaching and learning at each of the study centers with administrators, instructors, and students bringing this to the attention of the Extended Campus and Distance Services Librarian. This led to a critical moment of recognition as to how University Libraries could better support and alleviate the instructional material predicament at our international study centers.

Overview of Partnership

Our OER initiative has been slowly growing on campus since 2016. Drawing from other open and affordable programs, we assembled a small team of librarians to plan, develop, and promote student- and faculty-focused campaigns. This effort included the implementation of an ATG program to support instructors transitioning from traditional, commercial textbooks to open, affordable alternatives. Successful applicants received $1000 in grant funding and support from our OER team in finding suitable materials, navigating licensing, and using OER-enabled pedagogy.

Based on experience in the first iteration of University Libraries' mini-grants program, the Extended Campus and Distance Services Librarian recognized an apropos opportunity: to extend and target the mini-grant program to instructors teaching abroad. IP was approached with a proposal to match the current funding model provided by University Libraries, limiting

applications to only instructors teaching at our European study centers, as these students faced the bulk of the textbook challenges. Our partners at IP were immediately enthusiastic about the proposal and committed to providing $10,000 for 10 $1,000 grants. Once the requirements and workflow were negotiated with IP and the study center administrators, we drafted an email introducing the new grant program, outlining the open textbook movement, and offering guidance on the application process and requirements. Furthermore, the OER team had previously employed a targeted outreach approach to high-enrollment on campus courses, proactively emailing all instructors with recommendations for high-quality open textbook options to replace their current traditional course material model. Since many of the courses offered at the European study centers overlapped with the high enrollment courses on main campus (as core courses and general liberal arts), we were able to adapt our outreach to the local and on-campus instructors teaching abroad, sending textbook substitution suggestions via email individually to instructors as well as a reminder to apply for our new IP ATG program.

As a site visit funded by the annual travel funds designated in the IP MOU had been planned for Spring 2018 to campuses in Florence, Valencia, and London, library staff were able to center faculty presentations and meetings around the new IP mini-grant program, providing ample opportunity for broader OER discussions and impromptu consultations with instructors on locating open or affordable options to replace their commercial textbook options. These promotion strategies were imperative for not only introducing the program, but also engaging in a dialogue with instructors about using OER and providing a space to hear feedback and address concerns. As many of the instructors abroad were brand new to the open landscape, the face-to-face discussions were key to meaningful outreach strategy.

Launching OER Abroad

The situation at international campuses necessitated the need for distance library services staff to adopt OER advocacy as part of their role. However, there are several factors that shaped a good fit for the initiative beyond the ongoing textbook challenges. The First Semester Abroad/First Year Abroad, broad curriculum program provided a plethora of high-quality general textbook options available to instructors; almost every course had a title available from OpenStax or the Open Textbook Network. The high cost of studying abroad lends itself to other cost-saving measures, in order to offset some of the costs of global learning. Yet, it is within the role of librarians, as liaisons and as advocates, to identify these connections and mindfully align cross-campus department goals.

IP aims to provide a seamless educational experience abroad in order to cultivate students to become intercultural and global citizens. IP faculty members often speak of taking learning out of the classroom, taking instruction

from the ordinary to the extraordinary. University Libraries' role in this is key to our partnership and this work requires creativity and ingenuity, taking the library out of the ordinary as well. This program speaks to more than just identifying a problem (textbooks) and a solution (OER), but also to a foundational culture change where cross-campus partnerships can merge ideas and align goals to create something innovative and groundbreaking. The mini-grant program had to be adapted to fit the needs of IP and the instructional needs for teaching abroad. Deadlines were modified. A new web presence was created. The funding model required creativity as University Libraries' disbursement of grant funds was disseminated as funding for technology or professional travel, while IP aimed to align the program with their travel funding reimbursement model; it was decided that the grant funds would be distributed as meal reimbursements within the same process. Flexibility is key in establishing any collaborative program, especially in the landscape of open and affordable in order to be responsive and effective in program development.

Challenges

University Libraries' partnership with IP has presented a number of challenges, both for the partners involved and for instructors who are interested in participating in the ATG program. Communication about the partnership has been a challenge for University Libraries, since we lack a direct communication channel for distributing information to IP instructors. All communication from University Libraries must be sent to IP staff to then be sent on to the instructors. This arrangement has resulted in calls for participation being sent to instructors very close to the application deadline, allowing less than adequate time for instructors to consider the opportunity and prepare an application. University Libraries' ATG team can mitigate this challenge somewhat for the main campus instructors by sending out promotional materials through campus-wide communication channels. This strategy does not work for instructors who are local to the international study centers, however, since they are typically excluded from campus-wide communication channels.

A major challenge both for program partners and for course instructors has been the perception that course materials assigned at international study centers should conform to those assigned on main campus. This perception is not universal; some academic departments give instructors the freedom to assign whatever materials they see fit, while others maintain curriculum committees that seek to standardize materials across different sections of a course and ultimately have final say over what materials are assigned. Even in cases where instructors technically have the freedom to select their own course materials, however, both the directors of IP study centers and the course instructors themselves sometimes prefer that their instructors select the same materials as equivalent main campus courses in deference to the preferences of the sponsoring academic departments.

This challenge is not specific to IP instructors; many main-campus courses have standardized course materials across all course sections and instructors in said courses often feel like they have limited freedom to adopt new materials, creating a real or imagined barrier to instructor adoption of OER. This challenge is also very difficult to address due to the diversity of course material selection processes in place in different departments. In theory, the best strategy for overcoming these challenges would involve identifying and consulting with those responsible for course material selection in departments that make decisions centrally. Our ATG team has had difficulty pursuing this strategy, however, due both to the scale of the work involved and a lack of responsiveness from chairs of curriculum committees.

This challenge of deference to main-campus course material selection can also present an interesting opportunity, particularly in cases where an IP instructor makes a bold choice to select course materials that deviate from those used by other course sections. For example, at the IP study center in the Republic of Panama, instructors have adopted *The Word on College Reading and Writing* from the Open Textbook Library for a high-enrollment English Composition course, citing a need to reduce the cost of the materials used by main campus sections of the course. In such cases, if IP students perform as well or better with the newly adopted materials, IP instructors may be able to demonstrate to the sponsoring academic department that the benefits of adopting the new materials outweigh the risks. Although the librarians who manage the ATG program have no direct way of evaluating student performance, they do share the guidebook to research on OER adoption with all new ATG instructors and encourage them to evaluate student outcomes using the COUP Framework (Hilton et al., n.d.).

Impact

The most immediate impact of the IP partnership has been an increase in funding for the ATG program. University Libraries allocated $6,000 for the ATG program in 2017 and increased the allocation to $10,000 in 2018 and 2019. IP contributed an additional $5,000 in 2018 and $18,000 in 2019, significantly expanding the total funding allocation for the program. Although these contributions exceeded the level of interest from IP instructors, they were nonetheless an encouraging development, allowing the ATG team to award more mini-grants than would have otherwise been possible with funding from University Libraries.

Since the launch of the IP partnership in 2018, the ATG team has received 11 applications from IP instructors, 10 of which were approved for funding (see Table 1). The total student enrollment across these 10 courses was 373, and the total estimated savings to students (based on the new print retail cost of the materials previously assigned in these courses) was $44,956.40. Stated a different way, the IP mini grants have generated $4.49 in student savings for every $1.00 spent. It should be noted

that these projected savings are based only on the first iteration of the courses that adopted zero-cost course materials. If participating instructors continue using these zero-cost materials in subsequent iterations of their courses, the ratio of dollars saved to dollars spent will improve over time.

Table 1. Comparison of Student Savings across IP and Main Campus Courses.

	Applications funded	Total student enrollment	Total estimated student savings	Savings per dollar spent
IP courses	10	373	$44,956.40	$4.50
Main campus courses	24	2,651	$333,356.40	$13.90
All courses (IP and main campus)	34	3,024	$378,312.80	$11.13

The above savings are considerably lower than those generated by non-IP instructors who participated in the ATG program. Indeed, the total estimated savings across all 34 mini-grants awarded since the launch of the ATG program in 2017 will reach $378,312.80 by 2020, which works out to $11.13 in student savings for every $1.00 spent. This discrepancy in student savings is likely attributable to the fact that class sizes at IP study centers are much smaller than those on main campus. In 2018, for example, two mini-grants were awarded to instructors of Introduction to Sociology courses, one located on main campus and the other taught at an IP study center. Whereas the enrollment for the main campus course was 400, the enrollment for the IP course was only 120, resulting in significantly lower student savings for the IP course.

Moving beyond student savings, the ATG team has noticed other benefits of the IP partnership that are more difficult to measure. One of these benefits is the adoption of OER by instructors who do not apply to participate in the ATG program. This was the case with the English Composition courses at the Republic of Panama study center initiating a campus-wide change from a traditional textbook to an open textbook and at other study centers as well. While it would be disingenuous to posit a causal link between the IP partnership and these OER adoptions, the fact that the former preceded the latter suggests that there may be a positive correlation. Another possible benefit that is difficult to measure is the increased recognition of textbook affordability concerns on campus. Although the authors have no formal evidence to support this, it seems reasonable to conclude that IP's efforts to advocate for textbook affordability generally and the ATG program in particular have helped to reach a greater number of instructors than would have otherwise been possible through University Libraries' efforts alone.

Future Directions

In order to proactively address the challenges of the program and further advance OER for our study abroad constituents, a number of future directions and projects have been planned. Integrating OER support into the study abroad instructor onboarding experience is a major goal for expansion. As faculty outreach is key for embedding information literacy into our international curriculum, two certificate programs have been planned utilizing asynchronous modules to inform and promote library resources and services with a major component on OER and open pedagogy. One certificate program will be focused on the needs of local (to the study center) instructors, many of whom have never visited our main campus in Tallahassee and currently adjunct for multiple institutions. The other module will be built with the needs of main campus instructors travelling abroad in mind with information about the mini-grants and other strategies and support for utilizing open materials in their courses abroad. Furthermore, IP has agreed to add language about adopting OER in the application forms for instructors teaching abroad, where preference will be given to instructors who select open and affordable materials. Since there is no traditional, in-person orientation for instructors teaching abroad, these asynchronous options will not only introduce open textbooks and open pedagogy, but also guide instructors to actively explore OER options for their courses abroad to better support non-traditional learning models.

In-person, face-to-face contact is an important component to maintaining and growing partnerships, even with distance and extended campus users. University Libraries' MOU provides external funding for library staff to visit the international study centers and incorporate thoughtful and timely OER outreach to campus administrators and staff including one-on-one meetings with instructors, faculty forums, and formal workshops on OER-related topics. Additionally, main campus workshops are offered on OER and open-enabled pedagogy on a regular basis, offering on-campus faculty travelling abroad the opportunity to engage with the OER team and take advantage of our on-campus support offerings.

Lastly, to build on and augment our current OER initiative, our team is in the midst of exploring a new program to promote affordability on campus and beyond, through the acquisition of unlimited, nonlinear eBook licenses for currently assigned textbooks that fit specified criteria and auto-populating these resources within the Canvas course site. Similar projects have been implemented at institutions such as Penn State and University of Florida (Penn State World Campus, 2019; University of South Florida, 2017). This program is an effective complement to our current open initiatives, providing options to instructors who are unable to locate suitable open resources to support their curriculum. This eBook program will allow the OER team to not only support students through the acquisition of current material licenses, but will also instigate further conversa-

tions with instructors who are not eligible for the program about important factors when selecting course materials, such as vendors, licensing, and open and affordable alternatives.

Partnerships are key to any successful open and affordable movement. Librarians have a unique opportunity to drive OER through collaboration as they work with departments and units across campus in varying roles and capacities to support high impact teaching and learning. It is within the role of librarians, as liaisons and as advocates, to identify these connections and mindfully align cross-campus departmental goals. Our Florida State University Libraries' collaboration with IP provided the foundation to build an innovative OER program through alignment of division goals and by means of effective outreach strategies, going beyond simple solutions to envision and create something more monumental and lasting. We share our experience with the hopes that other library staff working to support OER can emulate our model by acting as agents of open and affordable change.

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Advancing an Open Educational Resource Initiative through Collaborative Leadership

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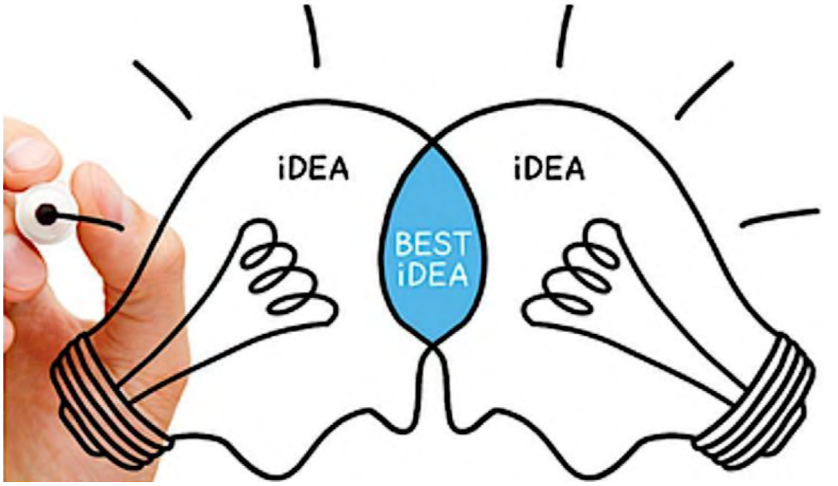

Abstract

In its examination of initial stages of OER implementation at a mid-size public research institution, this article discusses the collaborative leadership practices developed by the Senior Director of Information Technology and Reference and Instruction Librarian as initiators and co-chairs of the campus OER working group. Key to this grassroots effort is the collaborative engagement of stakeholders across campus to increase awareness and use of OER to advance institutional adoption and long-term sustainability. Given that OER labor is often uncompensated and voluntary, it is critically important to highlight the hidden labor of academic support staff and librarians on campus who are often ignored in discussions of the need for faculty incentives, recognition, and compensation. In its discussion of change management, strategic planning, and OER labor inequity, this article illuminates practical processes for establishing a transparent, flexible, and collaborative workflow in advancing an initial OER movement on campus.

Keywords: open educational resources, OER, change management, invisible labor, strategic planning

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Avanzar en una iniciativa de recursos educativos abiertos a través del liderazgo colaborativo

Resumen

En su examen de las etapas iniciales de la implementación de REA en una institución de investigación pública de tamaño medio, este artículo analiza las prácticas de liderazgo colaborativo desarrolladas por el Director Principal de Tecnología de la Información y Bibliotecario de Referencia e Instrucción como iniciadores y copresidentes del grupo de trabajo de REA del campus. La clave de este esfuerzo de base es la participación colaborativa de las partes interesadas en todo el campus para aumentar la conciencia y el uso de los REA para avanzar en la adopción institucional y la sustentabilidad a largo plazo. Dado que el trabajo REA a menudo no es compensado y voluntario, es de vital importancia resaltar el trabajo oculto del personal de apoyo académico y los bibliotecarios en el campus que a menudo se ignoran en las discusiones sobre la necesidad de incentivos, reconocimiento y compensación para el profesorado. En su discusión sobre la gestión del cambio, la planificación estratégica y la inequidad laboral de REA, este artículo ilumina los procesos prácticos para establecer un flujo de trabajo transparente, flexible y colaborativo para avanzar en un movimiento inicial de REA en el campus.

Palabras clave: Recursos Educativos Abiertos, REA, gestión de cambio, labor invisible, planeación estratégica

以协作式领导力提升一项开放教育资源倡议

摘要

本文在检验一个中型公共研究机构的开放教育资源（OER）实践的初期阶段时，探讨了协作式领导力实践，该实践由作为校园OER工作群发起者和共同主席的信息技术资深董事和参考咨询图书馆员提出。这一基础工作的关键在于校园利益攸关方之间的协作式参与，以提高OER意识，进而提升机构对OER的采纳和长期的可持续性。考虑到为OER付出的劳动经常是没有补偿的、自愿的，因此尤为重要的是，强调在学校提供学术支持的教师和馆员所付出的无形劳动，他们在有关教师激励、认可、补偿的讨论中经常被忽略。本文在探讨

变革管理、战略规划、和OER劳动力不平等时，阐述了在促进一项校园OER初期运动时，建立一个透明、灵活、协作式工作流程的实践过程。
关键词：开放教育资源，OER，变革管理，无形的劳动力，战略规划

Introduction

What are the best practices in collaborative leadership for open educational resource (OER) initiatives within higher education? While the literature on OER implementation often emphasizes the importance of garnering support from numerous key stakeholders on campus, there can be an absence of dialogue about the work required in the critical first stages of teambuilding and establishing an OER working group. Although traditional roles for librarians typically include OER advocacy and resource searching, designated OER leadership positions for librarians have not always been considered (Braddlee & VanScoy, 2019). Similarly, the OER-related work provided by academic support staff can often be unnamed and hidden within the OER teams that perform the critical work of open course adoption and advancement within institutions (Hanley & Bonilla, 2016). While both top-down institutional support and advocacy at the ground level are necessary for sustainable OER adoption, the authors discuss first steps that can be taken to energize a campus and spur institutional awareness and commitment to the open educational cause.

The collaborative OER effort took place at the University of Maryland Baltimore County (UMBC), a public research university with an enrollment of 11,060 are undergraduate and 2,540 graduate students. The suburban campus is located about five miles from downtown Baltimore and draws enrollments from both U.S. and international students. Just over 70% of undergraduate students live on campus, while the remaining students commute (UMBC, n.d.-a). The university champions both student academic success and social justice in its mission to "redefine excellence in higher education through an inclusive culture ... [and] advance knowledge, economic prosperity, and social justice by welcoming and inspiring inquisitive minds from all backgrounds" (UMBC, n.d.-b).

Since 2013, a division of the state university system has spearheaded a statewide OER initiative, the goal of which is to provide support in scaling the adoption of OER by public and private university and community college institutions across Maryland (University of Maryland System William E. Kirwan Center for Academic Innovation, n.d.-a). While the use of OER often results in reduced student costs, OER is also of interest because of the

documented positive increase in student grades and lowered rates of D, F, and withdrawal letter grades (Colvard, Watson, & Park, 2018). While there have been impressive developments in OER at other institutions in the state, a centralized OER effort did not exist at UMBC until the spring of 2019, when a Reference and Instruction Librarian and Senior Director of Instructional Technology (IT) co-initiated a grassroots OER working group on campus.

In the absence of OER institutional leadership at UMBC, the OER co-chairs faced the challenge of building an initiative from the ground up. Recognizing that greater awareness of OER on all levels is needed in order to influence institutional leadership support, two major purposes of the OER initiative were identified: namely, to 1) to inform and educate faculty, students, staff, and administrators about the possible impact of OER adoption and 2) to identify and implement processes and practices to facilitate the sustainable adoption of OER at the institution. Given that the working group is comprised of faculty and staff representing the Humanities and STEM, Library, Faculty Development Center, and Information Technology departments, all with primary job responsibilities in their respective departments, the co-chairs recognized a critical need to establish a structured yet flexible working framework for the group. Drawing upon the literature of change management, strategic planning, and labor inequity in higher education, this article examines collaborative leadership practices that are helpful for engaging and galvanizing a diverse team of library, information technology, and faculty professionals in OER awareness and implementation on campus.

Literature Review

The growth of the OER movement marks an increasing interest in "teaching, learning and research materials in any medium—digital or otherwise—that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions" (UNESCO, 2002). Emphasis on open licensing in the OER community has resulted in widespread adoption of five licensing rights that have been coined as the "five R's" (retain, reuse, revise, remix, and redistribute), allowing faculty to tailor the materials for their classes and spurring greater innovation and collaboration in teaching and learning (Jhangiani, 2019; Sterling Brasley, 2018, p. 27; Wiley, 2014). The majority of OER research for the last several decades has focused on student and faculty perceptions of OER and the analysis of cost-savings and financial benefits (Belikov & Bodily, 2016; Colson, Scott, & Donaldson, 2017; Hilton, 2018; Seaman & Seaman, 2018). Recently, there has been a focus on the relationship of OER use and increases in student GPA, retention rates, and graduation rates.

In a survey conducted by the Florida Virtual Campus in 2018, some students indicated that textbook costs have caused them to choose not to purchase a textbook, even at the expense

of earning lower grades. Such studies have further inspired OER advocates to center the OER movement on student success (Florida Virtual Campus, 2019; Jhangiani, 2019). At the University of Georgia, researchers found that the use of OER in the classroom led to increased academic performance for all students, with the greatest increase for traditionally underserved students, such as non-white, part-time, and Pell Grant recipients (Colvard, Watson, & Park, 2018). Such research highlights the potential of OER to advance more equitable learning in higher education. More recent movements within the OER community have emphasized the overall ethos of Open Pedagogy and the potential of OER to transform teaching into a more student-centered practice where students are viewed as collaborators and creators in their own right (Jhangiani, 2019; Yano & Myers, 2018).

In addition to research findings on perceptions of OER, the impact of OER adoption on student success measures, and the turn to open pedagogy, the OER literature is replete with action-oriented case studies detailing both statewide (Bell & Salem, 2017; Frank & Gallaway, 2018; Hanley & Bonilla, 2016), and institution-specific adoption efforts (Blick & Marcus, 2017; Davis, Cochran, Fagerheim, & Thoms, 2016; Ives & Pringle, 2013; Wesolek, Lashley, Langley, 2018; Woodward, 2017). Such case studies illustrate the wide variety of OER models in terms of team composition, workflow, and the extent of top-down versus bottom-up leadership. Awareness of strategic planning models and discussions of change management assisted the authors' efforts in initiating the first OER working group at their institution. Broad concepts can be taken and applied to local needs and institutional context.

Change management and higher education

In a recent dissertation on faculty adoption of OER, Sterling Brasley drew upon several prominent change management theories, including Rogers' (2003) diffusion of innovation model. Writing from a sociological perspective, Rogers described how innovations gain greater acceptance as they are increasingly shared by members of a particular social group (as cited in Sterling Brasley, 2018, pp. 19-37). In their discussion of OER adoption, Braddlee and VanScoy (2019) stated that OER has not yet crossed the needed diffusion threshold of a 16% adoption rate in order to influence more widespread acceptance. However, it is clear that faculty awareness of OER is increasing across the nation. The 2018 Babson Survey Research Group reported that "46 percent of faculty [are] now aware of open educational resources, up from 34 percent three years ago" (Seaman & Seaman, 2018). While OER awareness is necessary on a national scale, greater awareness and adoption needs to take place at institutional levels as well (Braddlee & VanScoy, 2019, p. 2). Sterling Brasley (2018) also drew upon the change management theory developed by Anderson and Anderson (2010), which focused on both internal and external "drivers of change" at the individual and organizational levels (as cited in Sterling Brasley, 2018, pp. 39-

40). In order for the widespread adoption of OER to take place, there needs to be both diffusion through social channels and a supportive external environment. For example, as individual faculty members adopt and recommend OER to their peers, the use of OER will likely gain greater acceptance on campus. Likewise, as institutional resources are allocated to OER programs, faculty and support staff will be better positioned to advance OER adoption.

In their influential article on innovation in higher education, Christensen and Eyring (2012) described the disruption of digital learning innovations in traditional classroom university instruction. While they do not address OER specifically in their article, they highlight the necessity of cultivating an environment to incentivize and support faculty in adopting innovative teaching and scholarship practices. They state that "no meaningful discussion of change can be undertaken without assurances ... of supportive success measures" (Christensen & Eyring, 2012, p. 52). In other words, in order for large-scale change to take place, there needs to be a support network in place to minimize risks and to lead the way in a substantial change. In the case of OER adoption, having a team in place to support the selection, revision, adoption, and assessment of OER efforts can help ameliorate anxieties stemming from changes that innovation brings.

Strategic planning and OER

As documented in discussions of change management, institutional commitment to OER adoption takes time and a significant amount of resources. Because OER intersects with many departments and centers on campus, stakeholders can include faculty, staff, and administrators from the Library, IT Services, Teaching and Learning Center, campus bookstore, Academic Success Center, Provost and Dean's offices, Faculty Senate, the Office of Institutional Advancement, and other campus centers (Cummings-Sauls, Ruen, Beaubien, & Smith, 2018; Doan, 2017; Ivie & Ellis, 2018; Reed & Jahre, 2019). In addition, campus attitudes towards OER may vary greatly from institution to institution depending on whether there is top-down support for OER, or whether interest is initiated from a grassroots campaign (Amaral, 2018; Dean, 2018; Hanley & Bonilla, 2016; Rolfe & Fowler, 2012; Stagg et al., 2018). How can strategic planning help account for these variables and advance the work of local OER initiatives?

While not as extensive as scholarship on OER perceptions and implementation, the literature on OER strategic planning and leadership practices offers valuable direction for those launching a new OER initiative and for those seeking greater structure and vision (Judith & Bull, 2016; Jung, Bauer, & Heaps, 2017b; Reed & Jahre, 2019; Role & Fowler, 2012; Shu-Hsiang, Jaitip, & Ana, 2015; Walz, 2015). In their discussion of OER implementation, Judith and Bull (2016) presented four different models along a continuum of scale, including 1) individual, 2) programmatic, 3) institutional, and 4) networks. They emphasize how risks

and efficiencies operate differently in each of the models. For example, when individual faculty members adopt OER for class use, they will likely experience greater freedom, greater risk, and less efficiency in the process. On the other end of the spectrum, the institutional and networked levels offer more controls (less freedom), while also granting greater efficiencies and economies of scale. Judith and Bull did not advocate for a particular model over another, but rather argued that the relative strengths and weaknesses should be taken into consideration when launching an OER initiative. It is likely that several of these models would need to operate simultaneously for an OER initiative to build momentum and become part of the fabric of an institution. Faculty who are currently using OER materials in their classrooms can be invited to help spread awareness of campus OER programs at the institutional level. Statewide resources can be used to help bring greater efficiency to the work at an individual campus.

Furthermore, it is valuable to conceptualize the project of OER adoption as a series of smaller, strategic initiatives along the path of OER implementation. Organizing an OER workshop or securing a large-enrollment course for a pilot study are distinct projects that contribute to the greater vision of large-scale institutional support. The process of adopting OER in a single class requires planning, preparation, and assessment, just as a long-term OER implementation project would. A five-step lifecycle for assessing, analyzing and finding, reviewing, redesigning and adopting, implementing, and evaluating OER programs presented by Walz (2015, pp. 27-28) helps outline critical stages of OER planning and adoption. It is crucial that OER strategic planning take place in the short- and long-term and at both individual and institutional levels.

In their depiction of OER strategic planning, Jung et al. (2017b) presented an "OER implementation model" that has proven to be a helpful guide for the authors' development of a working OER group from the ground up at UMBC. The five stages described include: 1) the analysis phase, 2) the adoption phase, 3) the optimization phase, 4) the evaluation phase, and 5) the stabilization phase. Each phase outlines specific action items and priorities. For example, the *analysis phase* is comprised of a set of 10 priorities, including determining a mission and vision for the OER initiative, "[e]stablishing an OER initiative task force," outlining a time frame, and taking stock of the resources and partners needed (p. 79). The *adoption phase* then moves from the planning stage to milestones, such as developing a project budget, implementing an OER pilot study, and assimilating OER into the learning management system used on campus. Further *optimization, evaluation,* and *stabilization* phases resolve the work needed to secure OER implementation in the long-term (pp. 80-82). This practical, action-oriented framework proved extremely useful in helping the authors conceptualize both the long-term vision and the immediate tasks needed to initiate a successful OER collaboration.

Collaborative leadership, invisible labor, and OER

Attempting to advance an OER initiative can feel overwhelming in the face of a lengthy list of action items and responsibilities. While challenges, such as the lack of funding, expertise, time to select and create materials, and the lack of institutional buy-in, have been well documented in the literature (Annand & Jensen, 2017; Belikov & Bodily, 2016; Hanley & Bonilla, 2016; McGowan, 2019; Rolfe & Fowler, 2012; Taylor & Taylor, 2018), there is a critical need to examine these challenges through the lens of labor inequities in OER efforts. While the literature addresses the need for adequate incentives for faculty adopting OER, such as recognition for OER teaching and scholarship in the promotion and tenure process (Annand & Jensen, 2017; Doan, 2017; Taylor & Taylor, 2018; Walz, 2015), greater awareness and research is needed to document the labor of individuals working in what are often considered "academic support roles" on campus, such as librarians, instructional designers, and IT staff.

The rising reliance on the labor of adjunct faculty, graduate student, and contract lecturers—many of whom are on the front lines teaching the high enrollment courses crucial to OER adoption and success—add to the increasing precarity of labor. Hourly wage structures rather than salaries can certainly complicate how or whether the extra work required to adopt OER is even compensated (Crissinger, 2015). Given that the use of OER has shown to increase student academic achievement, the case for OER adoption is a compelling one for libraries and academic support centers. However, the virtue of the OER cause should not be weaponized against those doing the necessary, yet largely unacknowledged day-to-day work required to support an OER program.

In OER, as in library work, "vocational awe," or an ethos of self-sacrifice can come at a high cost of unsustainability and burnout (Fobazi, 2018). As Hanley and Bonilla (2016) wrote, it is important to recognize that "behind every free textbook lays a frequently invisible economy of labor and resources" (p. 139). In articles written by both librarian and non-librarian scholars, librarians are sometimes cast as reliable supports that can step in and rescue overburdened faculty by providing time-intensive labor to make possible the selection or development of OER materials, without considering the existing workloads of the librarians (Belikov & Bodily, 2016; Crozier, 2018; Davis et al., 2016; Goodsett, Loomis, & Miles, 2016). Libraries are sometimes designated as the main stage for the OER rollout, whether through an affordable textbook program or OER initiative, all of which require vast amounts of financial support, training, and additions to already-stretched library resources (Bell & Salem, 2017; Reed & Jahre, 2019; Salem, 2017; Smith & Lee, 2017). At many institutions, however, the critical support that librarians provide is completely unrecognized. Bell (2018) found that faculty rarely consider turning to librarians for OER assistance. Braddlee

and VanScoy (2019) described how faculty frequently value the OER assistance provided by librarians, but do not think of them as OER leaders. Not only is OER labor often invisible, but it can also be devalued.

It is vital that the work of librarians, instructional designers, IT professionals, adjuncts, and other marginalized laborers on campus is not made invisible and shuffled off in unnamed OER support teams. As Thomas (2018) wrote in a recent post, the "lack of awareness of the work that goes into open advocacy can be an obstacle to translating its value into traditional measures or objectives." Recognition and resources should be granted to everyone involved in an OER project. As two recent Rebus Community office hour discussions on combating invisible labor demonstrated, greater awareness and attention is beginning to be paid to this issue, which needs to increase as OER efforts continue (Rebus Community, 2019; Rebus Foundation, 2019). Care should be taken to respect and honor workloads of the individuals serving on a collaborative committee, keeping in mind that in many cases the work is voluntary and often not directly included in job descriptions.

While studies of change management and strategic planning outline priorities and support needed to advance innovation within higher education, it is crucial that OER workflows and processes are made visible and the responsibilities shared. While OER certainly lowers costs for students, it requires significant financial and personnel investment at the institutional level. The allocation of sufficient resources is critical in making the transition from an ad hoc grassroots campaign to a fully sustainable OER institutional program. This need for funding and resources should be fully articulated to campus leaders and decision-makers (Grayson, 2019; Hanley & Bonilla, 2016; Rolfe & Fowler, 2012). What follows is a discussion of the authors' experience in navigating power inequities while working to establish a collaborative OER working group on campus.

Case Study

Like many collaborations, the impetus for an OER initiative at the University of Maryland Baltimore County was started by a conversation that took place between the Senior Director of Instructional Technology (IT) and a Reference and Instruction Librarian in the spring of 2019. Both the IT director and librarian were aware of regional and state OER initiatives and were eager to advance the financial and academic benefits of OER for the students at their university. Prior to their meeting, the librarian had discovered a lack of OER training resources and support for faculty and staff and had prepared an online OER LibGuide and materials for an OER workshop in March 2019 (Durham, n.d.). In her efforts to advertise the workshop more broadly across campus, she reached out to the IT director for assistance in getting the word out. In the course of this initial email conversation, the IT director invited the librarian to participate in the

upcoming campus TechFest symposium organized by the IT division on campus. This allowed for two initial outreach opportunities—a library-sponsored OER workshop and the IT TechFest symposium. Both events proved useful in identifying faculty members and staff who were interested in OER at UMBC.

Following the workshop and TechFest events, the librarian and IT director recognized the need to take a more strategic approach to organize campus efforts related to OER. They set up an initial one-on-one meeting in April 2019 to discuss how to bring representatives from various campus stakeholder groups together to form an OER working group. During the meeting, the IT director and librarian discussed the overall purpose of the group. Rather than focusing merely on textbook affordability, they determined the need to highlight OER as a path to increasing student academic success and advancing innovative teaching and learning on campus, thus tapping into the national emphasis on the relationship of OER to student success (Colvard, Watson, & Park, 2018) and open pedagogy (Jhangiani, 2019).

As they grappled with the task of building an initiative from the ground up, the librarian and IT director found descriptions of OER implementation and strategic planning that were useful in providing a foundational framework. During their first meeting in April, they discussed how their work fit with the *analysis phase* as discussed by Jung et al. (2017b). As they referred to the action items in the *analysis phase*, the librarian and IT director worked to align the purpose of the group with UMBC's Mission and Vision, organize communication and record-keeping processes, and identify key stakeholders and invite them to join the OER initiative.

Both the IT director and librarian were aware and concerned about the lack of initial institutional support, and recognized that the work would be entirely voluntary. They discussed fears of overburdening themselves and members of the working group and addressed strategies to mitigate the strains of taking on such labor-intensive work. To this end, the IT director and librarian set up the OER working group to function as a collaborative team, with shared leadership responsibilities in their roles as co-chairs of the group. They realized that setting forth a central mission and vision, establishing transparent communication channels, sharing documents, and setting up collaborative task assignments would be vital to the success of the working group. While there would need to be a substantial investment of time in their role as co-chairs, especially during the critical initial phase of establishing the group, the authors also recognized that the summer months were more conducive to allowing for a greater investment of time outside of the busy fall and spring semesters. They identified priorities of the working group, including the importance of educating faculty, students, and staff about the possible impact of OER adoption, and identifying and implementing processes and practices to facilitate the adoption of OER at UMBC. In this way, the co-

chairs positioned the working group as a means to build awareness of OER at the individual and department levels to work towards the goal of securing more sustainable OER adoption and top-down leadership, funding, and support.

Following this initial meeting in April, the co-chairs reached out directly to invite representatives from the following institutional offices and academic departments: the Faculty Development Center, STEM and Humanities faculty, and Division of Information Technology. Potential members were identified from the list of attendees from the library OER workshop held earlier that spring. The IT director also met with the Vice President of Information Technology to secure higher-level leadership support for the initiative. The co-chairs soon recognized the need for student representation, and as a result, invited a recent graduate working in the IT department to join the group.

During this period, the statewide OER initiative managers sent an invitation to campus leaders at all the universities and community colleges to select a team of OER leaders to serve as representatives for the upcoming 2019 OER State Summit (University of Maryland System William E. Kirwan Center for Academic Innovation, n.d.-a). The IT director helped recommend OER leaders for the summit team, which included two instructional designers from the IT department, the Reference and Instruction Librarian co-chair, and a staff member from Disability Services. By attending the event, these campus representatives learned about several state-level OER initiatives and resources available to them. These representatives also served as a base of support in the months following the summit to help advance the newly initiated OER work at the local level.

As the co-chairs prepared for the inaugural OER working group meeting on campus, they drafted the mission, purpose, and initial priorities of the group and decided on logistical strategies the group would use for meeting organization, communication, and record-keeping. Meeting participation would be possible through either face-to-face or virtual attendance. Schedules, shared documents, and records would be achieved via Google applications. The co-chairs identified a set of action items the working group could prioritize as short-term projects and goals. These initiatives included faculty outreach and education by way of participating in the annual Provost's Teaching and Learning Symposium, providing a one-day OER introduction as part of a week-long program offered by the Office of Instructional Technology, and offering a range of OER professional development options including workshop and lunchtime discussions. Longer-term goals were identified such as building a larger OER community group open to all interested faculty, conducting an OER pilot study in a high-enrollment course, and working on establishing a no- or low-cost course designator in the registrar's course schedule.

By June, the co-chairs established the initial membership of the working group and scheduled the group's first meeting. As a result of the inaugural

meeting and subsequent email communications, the working group members finalized their mission statement, solidified the short-term project list for Fall 2019 with group members volunteering to collaborate on the various action items, and outlined a roadmap and vision for the long-term. Several short-term projects were initiated in August. Those projects included establishing an OER communication group within the campus web portal, surveying the faculty to determine current use of and interest in OER, participating in the Provost's Teaching & Learning Symposium in September, and planning activities focusing on OER during National Distance Learning Week in November. The university web portal, myUMBC, enables various administrative offices, academic programs, clubs, and interest groups to share and posts, events, and other information with the university community. The portal provides the ability to disseminate materials and inform the campus stakeholders of activities and upcoming initiatives in which they may want to participate. The working group created a subcommittee charged with establishing and populating the OER discussion group within the university portal. Thus far, the portal has been used to announce upcoming OER webinars and workshop events at the state and institutional levels, such as the OER Lunchtime Roundtable event in November during National Distance Learning Week.

To gain a greater understanding of the level of faculty awareness and use of OER at UMBC, the OER working group prepared a survey of 15 branched questions using the Qualtrics platform (see Appendix for survey questions). Questions were collaboratively drafted and revised using a shared Qualtrics group project, and then distributed via email by the Director of the Faculty Development Center, also a member of the OER working group. The director sent out the survey the week prior to the start of the fall semester, and once again during the third week of the semester. The survey included questions such as "What challenges do you face or anticipate regarding OER adoption?" and "How would you rate your awareness/use of OER?" As of October 15, 2019, the working group has received 104 faculty responses from the survey, which represents about a 12.5% response rate from the total population of about 830 full and part-time instructional faculty on campus (University of Maryland Baltimore County, n.d.-a).

The survey results provide a snapshot of faculty awareness and use of OER as it currently stands across a wide range of departments and disciplines at UMBC. While information-gathering regarding faculty awareness needs to be ongoing, the survey provides insight into the level of OER involvement at UMBC within the first six months of the initiation of the campus OER working group. The survey responses indicate that there is an interest in OER professional development events and programs on campus. When prompted at the end of the survey to include their contact information to learn of OER resources, events, and grants, 69 respondents did so. This is anindication that a number of faculty may be willing

to become more involved in OER programs and possible adoption initiatives in the future. Given Rogers' (2003) diffusion model that a significant portion of adopters is required to bring about change (as cited in Sterling Brasley, 2018, pp. 19-37), the number of faculty who expressed an interest in potentially participating in future OER events is promising. As the OER working group members move forward with plans for an OER lunchtime panel event during the November National Distance Learning Week, they will specifically reach out to faculty who expressed interest and invite them to participate. As OER events and programs are planned and presented in the coming year, it is hoped and anticipated that levels of awareness and involvement will increase among UMBC faculty.

Results from the faculty OER survey were shared in part during a poster presentation at the UMBC Provost's Teaching and Learning Symposium held in September 2019. Three members of the OER working group shared their poster presentation, "Access & equity: What can OERs do for your students?" to introduce faculty to OER and its connection to improved student learning and graduation rates (Durham, E., Braxton, S., Biro, S., Manni, M., 2019). The poster included results from the UMBC faculty survey to illustrate levels of current faculty awareness and use of OER (see Figures 1 and 2). At the time of the poster presentation in September, 97 faculty had participated in the OER survey. In response to the question, "How would you rate your awareness/use of OER? (Select all that apply)," 44 respondents indicated that they had never used OER before, while 23 stated that they had selected OER for use in a class (see Figure 1).

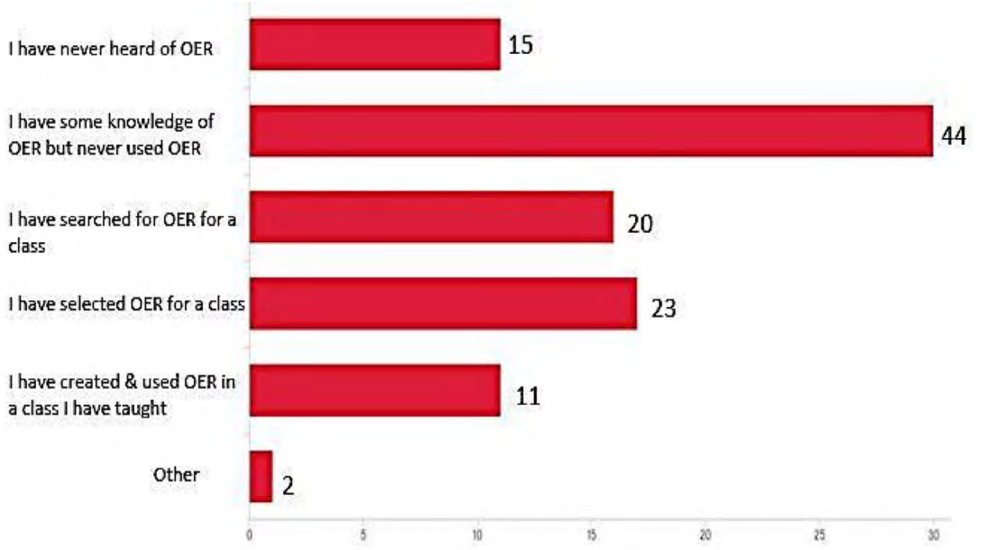

Figure 1. Survey Question 5. Q5: How would you rate your awareness/use of OER? (Select all that apply). Out of 97 responses as of September 19, 2019.

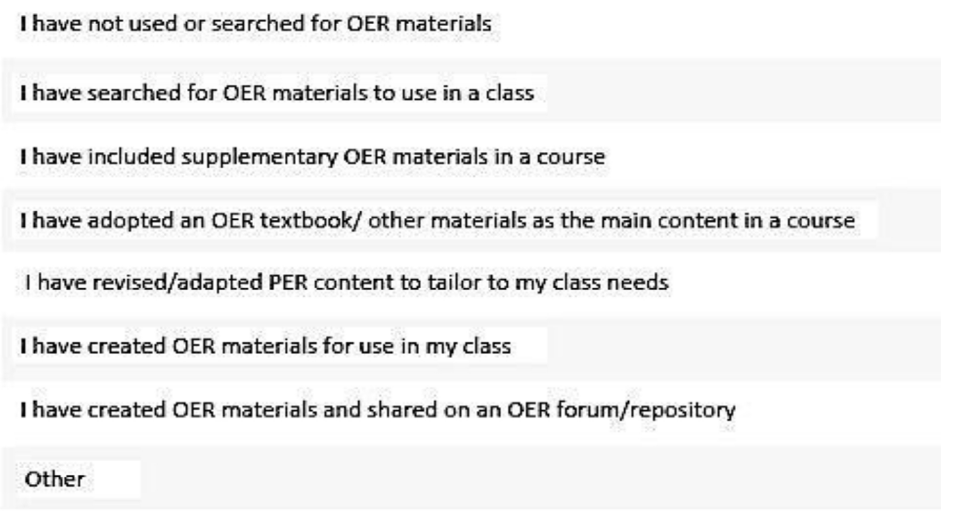

Figure 2. Survey Question 7. Q7: In what ways have you used OER materials in your courses at UMBC? (Select all that apply). Out of 97 responses as of September 19, 2019.

In addition to sharing survey results, the presenters announced the launch of the OER working group on campus and shared how faculty could get involved by joining the OER web portal and attending the OER lunchtime roundtable during National Distance Learning Week.

Annually on campus, the Office of Instructional Technology recognizes National Distance Learning Week, an opportunity to highlight best practices in distance learning, with programming that focuses on providing sessions on topics related to online teaching and learning. As part of this year's activities, the department will sponsor two sessions focusing on OER. A lunchtime roundtable will include a panel comprised of faculty currently using OER, a member of the OER working group, and the director of the University of Maryland's Center for Academic Innovation (University of Maryland System William E. Kirwan Center for Academic Innovation, n.d.-b). A second session will feature representatives from the Maryland Open Source Textbook (M.O.S.T.) Commons, a digital library of open education resources (M.O.S.T. Commons, n.d.). Faculty will not only have the opportunity to hear about lessons learned from their colleagues, but they will also be introduced to the latest OER support and resources in the state of Maryland.

Additionally, the OER working group is planning to host a faculty OER Lunch and Learn event in March 2020. While past Lunch and Learn events have helped familiarize faculty with new educational technologies, this will be the first to feature OER. As the OER working group members move forward with plans for an OER roundtable event during the November National Distance Learning Week and a Lunch and Learn event next spring, they will specifically

reach out to invite the faculty members who in the OER survey expressed an interest in learning more about OER. As OER events and programs are planned and presented in the coming year, it is hoped and anticipated that levels of awareness and involvement will increase among UMBC faculty.

Challenges

The initial steps and successes were not accomplished without challenges and opposition. Engaging stakeholders from within the institution who have varying motivations, goals, interests, and personalities requires clear identification of the value proposition for each participant. This is especially true when convening an all-volunteer working group with no formally established mandate from the institution. Thus, it is imperative to provide flexibility in scheduling meetings and identifying milestones as the work moves forward. Providing ways to contribute both virtually and asynchronously allows the group's members to contribute when and where they are able to find the time.

Recognizing that not all faculty are currently open or willing to consider OER adoption, the co-chairs follow a mantra of working with those who are interested in participating and using that energy to build broader interest and support. This applies to both faculty and academic leadership within the institution. Having the support of mid-level institutional cabinet members as well as Vice Provosts and Deans is essential to gaining greater traction (Rolfe & Fowler, 2012). Additionally, identifying early adopters and faculty champions who can act as ambassadors is a strategic approach in this effort. To that end, faculty members from key academic departments were identified and serve as members of this working group.

Beyond the working group, this OER initiative faces challenges related to traditional institutional protocols and figurative "walls" that impede the forward momentum of this work. The lack of incentives for tenured and tenure-track faculty to participate in this type of academic transformation, especially if it is not in conjunction with their research focus, continues to be a challenge. Additionally, the lack of support, incentives, and motivation provided to non-tenure track faculty, historically most often those faculty involved in the early adoption of innovative pedagogical approaches, stifles the progression of these efforts. For example, in one instance, the co-chairs served as advocates for a part-time, non-tenure track faculty to make it possible for him to receive financial support to participate in an OER creation and adoption grant program when the traditional institutional protocols stymied his participation. Identifying ways to simplify compensation processes will be one of the topics the working group will need to address. Finally, the invisible labor required to develop and sustain this work is unaccounted for in these initial stages. Volunteerism has been the foundation of the group's work to date; future expansion will require a more formalized support structure that includes the

incorporation of the shared governance model of the institution.

Recommendations

As the co-chairs have worked to develop a collaborative OER initiative on campus, they found that transparent, flexible, and scalable processes that provide mutual benefits have been key to the endeavor. In addition, maintaining awareness of bandwidth and labor capacities has helped moderate the workflow and pacing. These values permeate the work at two levels, both in the shared responsibilities of the co-chairs and in collaboration with the working group as a whole.

Shared communication and planning platforms have cultivated transparency within the group. As part of the initial kick-off meeting, the co-chairs created a Google Drive with shared folders and a group calendar. Action items were listed on an editable group spreadsheet, which allowed group members to see and volunteer for tasks and to brainstorm additional tasks of interest. The initial group meeting times were determined based on feedback from a Doodle poll, and periodic meetings and email updates have allowed for shared communication with the group.

Understanding the many competing demands for time, the authors also prioritized flexible options for participating in the group. A virtual conference link was sent out to all group members for the first meeting and was embedded as a permanent option for all future group meetings. Knowing that there has been some resistance from some sectors of the campus community, the co-chairs moved forward first in working with those who are actively invested in advancing OER and using that energy to build greater interest and support within the wider campus.

Considering the different strengths and interests of the group members has helped prioritize initiatives with mutual benefits. As the co-chairs considered the significant time and labor investment needed to facilitate OER adoption within a single course, they realized the importance of working with faculty members who are already invested in adopting OER. Rather than being a burden, the OER project then becomes beneficial both to the faculty member and the greater OER initiative. For example, when the state OER grant awardee met with resistance at the institutional level, the co-chairs reached out to the state level to resolve the conflict, thus allowing his OER implementation to move forward for his fall course.

Scalability has been of critical importance throughout the creation of the campus OER initiative. Some practical strategies have included selecting a few top priorities for the upcoming semester from the action item spreadsheet. Tasks more suited for future work have been slated for future start dates, ensuring that the workload is reasonable for the capacity of the working group. By inviting collaboration on concrete action items, the authors work to facilitate the buy-in of all group members. In ad-

dition, state resources are utilized when possible to help streamline efforts at the local level.

To further scale the OER initiative, the group aligned tasks with scheduled campus events as a way to embed OER efforts into ongoing campus structures. For example, rather than planning an OER training program as an entirely separate event, the working group chose to schedule the OER panel presentation during the National Distance Learning Week events organized by the instructional technology team on campus. This reduces labor by allowing the group to tap into the advertising and planning efforts of the larger event. It also increases the potential for reaching a larger, more diverse audience of faculty, some of whom may already have an interest in OER and others for whom it may be a first-time introduction to open education.

Conclusions and future directions

Rather than take on more tasks than would be possible in the beginning, the co-chairs prioritized two major purposes for the working group, that of first informing and educating faculty, staff, and administrators about the academic and financial benefits of OER, and second, that of establishing processes and practices to facilitate the adoption of OER on campus. These goals, however, are not intended as an end in themselves, but rather as catalysts for realizing sustained institutional adoption in the future. By mapping out both short-term goals and a long-term vision, the working group is actively taking steps to complete the first *analysis phase* (Jung et al., 2017b) of OER implementation and set a course for institutional adoption. Given the considerable investment of time and labor to implement an OER initiative from the ground up, it is vital to make visible the hidden labor of academic support personnel on campus. As the OER initiative continues to mature, the co-chairs are committed to working to identify and break down institutional barriers by introducing measures that would secure resources and recognition to all OER adopters on campus, regardless of faculty or staff status.

By centering the priorities of the OER initiative on building awareness of OER and capacity for adoption, the members of the OER working group seek an end goal of long-term sustainability and the buy-in of high levels of campus leadership. By embedding OER within already existing campus structures and by utilizing state resources when possible, the working group is working to achieve a greater reach than would be possible on their own as they advance academic student success and the commitment to social justice on campus.

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Appendix

UMBC Faculty OER Survey

Start of Block: General Questions

This brief, 15 question survey should take less than 10 minutes to complete. Thank you very much for sharing your feedback on Open Educational Resources (OER).

Sincerely,
The OER Working Group at UMBC

Q1 What is your department?

Q2 Select what best describes your job position (Select all that apply):

- ▢ Tenure track (1)
- ▢ Adjunct faculty (2)
- ▢ Lecture/Contract (3)
- ▢ Full-time (4)
- ▢ Part-time (5)
- ▢ Library faculty (9)
- ▢ Staff (10)

Q3 What kind of teaching have you provided during your time at UMBC? (Select all that apply):

- ▢ Online or distance learning (1)
- ▢ Hybrid or blended teaching (2)
- ▢ Face-to-face teaching (3)

Q4 **Open Educational Resource (OER) Definition**
Open educational resources are "teaching, learning or research materials that are in the public domain or released with intellectual property licenses [such as Creative Commons licenses] that facilitate the free use, adaptation and distribution of resources."

—UNESCO, 2002

Q5 How would you rate your awareness/use of OER? (Select all that apply)

- ▢ I have never heard of OER (1)
- ▢ I have some knowledge of OER, but I have never used OER (2)
- ▢ I have searched for OER materials for a class I have taught (3)
- ▢ I have selected OER materials for a class I have taught (4)
- ▢ I have created and used OER content for a class I have taught (5)
- ▢ Other (6) _____

Skip To: Q9 If How would you rate your awareness/use of OER? (Select all that apply) = I have never heard of OER

Q6 Where have you heard about OER before? (Select all that apply)

- ▢ Colleague at UMBC (1)
- ▢ Colleague not from UMBC (2)
- ▢ Department chair or admin (3)
- ▢ UMBC event or communication (4)
- ▢ External event or communication (5)
- ▢ Listserv (6)
- ▢ Professional or academic organization (7)
- ▢ Conference (8)
- ▢ Blog or news (9)
- ▢ Other (10) _____

Q7 In what ways have you used OER materials in your courses at UMBC? (Select all that apply)

- ▢ I have not used or searched for OER materials (1)
- ▢ I have searched for OER materials to use in a class (2)
- ▢ I have included supplementary OER materials in a course (3)
- ▢ I have adopted an OER textbook/ other materials as the main content in a course (4)
- ▢ I have revised/adapted OER content to tailor to my class needs (5)
- ▢ I have created OER materials for use in my class (6)
- ▢ I have created OER materials and shared on an OER forum/repository (7)
- ▢ Other (8) _____

Q8 What types of OER materials have you used? (Select all that apply)

- ▢ Open Textbooks (1)
- ▢ Whole course (2)
- ▢ Sections or units of a course (3)
- ▢ Lectures (4)
- ▢ Lesson Plans (5)
- ▢ Video (6)
- ▢ Audio (podcasts, etc.) (7)
- ▢ Images or visuals (8)
- ▢ Supplementary readings (9)
- ▢ Quizzes or tests (10)
- ▢ Tutorials (11)
- ▢ Data sets (12)
- ▢ Adaptive learning (13)
- ▢ Ebooks (14)

- Library course reserves (15)
- Other (16) _____

Q9 Which specific type(s) of OER would you be interested in using in your teaching practice (Select all that apply)

- Open Textbooks (1)
- Whole course (2)
- Sections or units of a course (3)
- Lectures (4)
- Lesson Plans (5)
- Video (6)
- Audio (podcasts, etc.) (7)
- Images or visuals (8)
- Supplementary readings (9)
- Quizzes or tests (10)
- Tutorials (11)
- Data sets (12)
- Interactive/Adaptive learning (13)
- Ebooks (14)
- Library course reserves (15)
- Other (16) _____

Q10 What challenges do you face or anticipate regarding OER adoption (Select all that apply)

- Unsure how to get started (1)
- Lack of time to prepare OER materials (2)
- Unaware of where to find OER materials (3)
- Unsure about the quality of OER (4)
- Lack of departmental/collegial support (5)
- Need for funding (6)
- Need for training and/or professional development (7)
- Lack of suitable material in specific teaching area (8)
- Other (9) _____

Q11 Which resources/events would you be most interested in? (Select all that apply)

- OER faculty support community (1)
- On-campus OER workshop or event (2)
- One on one consultation to assist with OER creation (3)
- Website of OER trainings, readings & resources (4)

- Applying for an OER-related grant (5)
- Not interested at this time (7)
- Other (8) _____

Q12 What is your level of interest in adopting OER in your teaching in the next 1-3 years?

	Not Interested (1)	Somewhat Interested (2)	Undecided (3)	Interested (4)	Very Interested (5)
Please select one option (1)	o	o	o	o	o

End of Block: General Questions

Start of Block: Logic Questions

Display This Question:

If What is your level of interest in adopting OER in your teaching in the next 1-3 years? = Not Interested

Or What is your level of interest in adopting OER in your teaching in the next 1-3 years? = Somewhat Interested

Or What is your level of interest in adopting OER in your teaching in the next 1-3 years? = Undecided

L1 Which of the following, if any, are reasons you answered "not interested," "somewhat interested," or "undecided" about adopting OER in your teaching in the next 1-3 years? (Select all that apply)

- Difficult to find what I need (1)
- Lack of resources for my subject (2)
- Concern about updates (3)
- Not high quality (4)
- Questions on permissions to use or change (5)
- Lack of track record (6)
- No good print options (7)
- Lack of associated materials (8)
- Not used by other faculty (9)
- Not current/up-to-date (10)
- Lack of time/opportunity to experiment with OERs (11)
- Lack of institutional support/incentives (12)

- Resources not aligned with professional standards or regulations (13)
- Other (14) _____

Display This Question:

If What is your level of interest in adopting OER in your teaching in the next 1-3 years? = Interested

Or What is your level of interest in adopting OER in your teaching in the next 1-3 years? = Very Interested

L2 Which of the following, if any, are reasons you answered "interested" or "very interested" in OER adoption in the next 1-3 years? (Select all that apply)

- Exploring OER course materials (1)
- Including supplementary OER materials in a course (2)
- Revising OER materials to tailor them to your class (3)
- Adopting an entire OER course (4)
- Creating an OER textbook or other content (5)
- Sharing materials you have created on an OER repository (6)
- Working towards department-level adoption of OER for core course (7)
- Participating in OER assessment and research (8)
- Applying for a OER-related grant (e.g. M.O.S.T., Hrabowski) (9)
- Other (10) _____

End of Block: Logic Questions

Start of Block: Optional Questions

Q13 Additional comments or questions about OER:

_____
_____
_____
_____
_____

Q14 Would you be interested in the following (Select all that apply)

- OER Resources (1)
- OER Events (2)
- Hrabowski Innovation Grant proposal for OER adoption (3)

Display This Question:
If Would you be interested in the following (Select all that apply) = OER Resources
Or Would you be interested in the following (Select all that apply) = OER Events
Or Would you be interested in the following (Select all that apply) = Hrabowski Innovation Grant proposal for OER adoption

Q15 Enter your contact information here:

- First Name (1) _____
- Last Name (2) _____
- UMBC Email address (3) _____

End of Block: Optional Questions

Know Your Audience(s): Collaborating for Copyright Education

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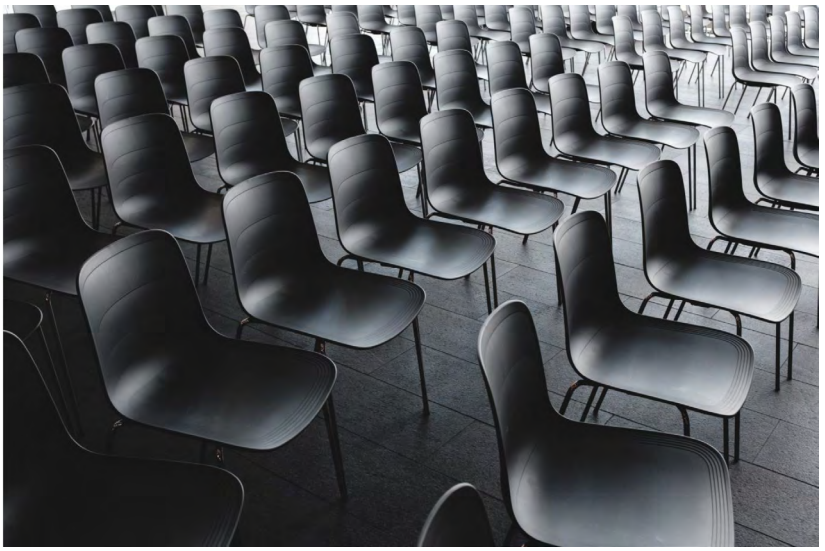

Abstract

This paper reflects on the experiences of a collaborative open educational resources (OER) project on the topic of copyright literacy, with content development led by librarians and aimed at multiple primary audiences. With these audiences in mind, the project team aimed to create engaging instructional material that communicates complex concepts clearly and concisely, models the effective and flexible use of copyright-protected materials in OER, and maximizes the potential for future re-use and re-mixing by other people or institutions. The authors propose that these generalizable OER goals form an "iron triangle" of precision, engagement, and re-usability, and share lessons and recommendations for future OER development through project reflections and examples. Key reflections involve challenges arising from an intentional reliance on openly-licensed content, creating concise material that adheres to best practices for online video creation, crafting inclusive and acces-

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sible narratives, and working as much as possible with open source software to reduce barriers for content re-use. Maximizing all five of David Wiley's "Rs of OER" (retain, revise, re-mix, re-use, and re-distribute) requires an ongoing and reflexive approach. While limited generalizations can be drawn from a single case, it is clear that librarians have a substantive role to play as co-creators of OER.

Keywords: open educational resources, case study, re-usability, copyright, engagement

Conozca a su(s) audiencia(s): Colaborando para la educación en derechos de autor

Resumen

Este documento reflexiona sobre las experiencias de un proyecto colaborativo de recursos educativos abiertos (REA) sobre el tema de la alfabetización de derechos de autor, con desarrollo de contenido dirigido por bibliotecarios y dirigido a múltiples audiencias primarias. Con estas audiencias en mente, el equipo del proyecto tuvo como objetivo crear material didáctico atractivo que comunique conceptos complejos de manera clara y concisa, modele el uso efectivo y flexible de materiales protegidos por derechos de autor en REA y maximice el potencial para la reutilización y el re-mezclado futuro por otras personas o instituciones. Los autores proponen que estos objetivos de REA generalizables forman un "triángulo de hierro" de precisión, compromiso y reutilización, y comparten lecciones y recomendaciones para el desarrollo futuro de REA a través de reflexiones y ejemplos de proyectos. Las reflexiones clave involucran desafíos que surgen de una dependencia intencional en contenido con licencia abierta, creando material conciso que se adhiera a las mejores prácticas para la creación de videos en línea, elaborando narrativas inclusivas y accesibles, y trabajando lo más posible con software de código abierto para reducir las barreras para el contenido. -utilizar. Maximizar las cinco "Rs de REA" de David Wiley (retener, revisar, mezclar, reutilizar y redistribuir) requiere un enfoque continuo y reflexivo. Aunque se pueden extraer generalizaciones limitadas de un solo caso, está claro que los bibliotecarios tienen un papel sustantivo que desempeñar como cocreadores de REA.

Palabras clave: Recursos Educativos Abiertos, estudio de caso, re-utilización, derechos de autor, participación activa

了解你的受众：版权教育协作

摘要

本文就一项针对版权素养主题的协作式开放教育资源（OER）计划得出的经验进行了反思，这项计划的内容开发由图书管理员完成，并以多个主要受众为目标。考虑到这些受众，该计划小组旨在创造有趣的教育材料，后者能清晰准确地传播复杂概念，对“OER中拥有版权保护的材料进行有效且灵活的使用”进行建模，并将未来由其他人或机构对材料进行重复使用和重新混合的可能性最大化。作者表示，这些概括性的OER目标形成了一个由精准、参与和再利用性组成的“铁三角”，同时通过项目反思和实例为未来OER开发提供了经验和建议。关键的反思包括：因有意依赖开放许可内容而产生的挑战，创造能遵守在线视频制作最佳实践的简洁材料，制作具备包容性和可获取性的叙事，以及尽可能地使用开源软件，以减少内容重复使用方面存在的阻碍。将戴维·威利（David Wiley）提出的五个“OER流程”（重新保存、重新改编、重新混搭、重新使用、重新分发）最大化，需要一种不断发展的反思方法。尽管从一个单一案例中仅能进行有限的归纳，但清晰的是，图书管理员作为OER的共同创造者发挥着相当大的作用。

关键词：开放教育资源，案例研究，再利用性，版权，参与

Introduction

The rhetoric on open educational resources (OER) often extols the range of benefits of making teaching and learning materials openly available. Two commonly stressed advantages are the ability for collaboration (whether between institutions, students, and faculty or among various academic staff) and enabling resources to reach vast audiences. For example, the Cape Town Open Education Declaration (Open Society Institute and Shuttleworth Foundation, 2007) is replete with phrases that underscore OER's ability to reach "each and every person on earth" and the declaration emphasizes "the kind of participatory culture of learning, creating, sharing and cooperation" that characterize OER.

While statements such as the Cape Town declaration may intentionally overstate the case for OER (not every person on Earth will benefit), collaboration and broader audiences are certainly important factors in motivating OER creation and use. However, it is important to critically examine the interaction and potential tensions betwixt these two perceived benefits. What happens when different collaborators on an OER initiative have different motivations or want to reach different audiences?

This paper reviews the experiences of a multi-unit collaborative open education project to develop instructional copyright modules as OER. It aims to explicate the value, tensions, and limitations of collaborating to develop resources for multiple audiences. Specifically, these modules are used for in-class instruction in graduate courses, but are also deployed more generally as copyright instructional modules for staff, students, and faculty of the university and available to the general public. This paper's unique contribution is that it focuses on how collaboration can lead to the development of OER that can be used for in-class instruction, general copyright instruction across campus, and also serve as an informational resource for the general public.

The paper begins with a review of relevant literature, followed by a discussion of the case and project methodology. The paper focuses on exploring tensions created by collaboration and multiple audiences within the case by examining the themes of modelling best practices, the tension between precision and engagement, how inclusivity is achieved, and the limits of maximizing design for re-use. The paper concludes by highlighting several general recommendations from the project.

Literature Review

The following analysis is informed by several related bodies of literature. First, we review the literature on multiple and secondary audiences in OER, followed by a discussion of engagement with respect to online videos. We then turn to focus on collaboration, highlight the literature on librarians' roles in OER creation, and finally the rise of librarians as content creators and their role in copyright literacy.

The OER literature often notes that two of the primary benefits of openness are the prospects for greater collaboration (among institutions, between faculty members and other university staff, and even among students and teachers) and the ability to reach broader audiences. Although the argument that openness allows for larger audiences than traditional resources is straightforward, there is only a small body of literature examining how OER creators should address multiple audiences. Several sources underscore the fact that considering secondary users or audiences must be an important element of OER design (Bates, 2011; Christiansen & McNutt, 2016; McNally & Christiansen, 2016; Ossiannilsson & Creelman, 2011). DeVries (2013) noted that faculty members must be prompted to consider

larger, secondary audiences comprised of an invisible group of learners studying in different modalities.

While the literature on developing OER for multiple audiences is limited, there is an extensive body of literature dealing with engaging primary audiences in relation to online videos (the medium employed in this case study). The extensive literature on online information literacy instruction is replete with best practices for the creation of online videos. Common considerations include: having learning objectives (Evans, 2014, p. 14; Lo & Dale, 2009, p. 151; Weeks & Davis, 2017, p. 185); keeping videos to a short length, with a common suggestion that the length be no longer than three minutes (Evans, 2014, p. 14; Martin & Martin, 2015, p. 48; Weeks & Davis, 2017, p. 186); using scripts (Clossen, 2014, p. 34; Weeks & Davis, 2017, p. 185); including interactivity (Lo & Dale, 2009, p. 151; Martin & Martin, 2015, p. 47; Smith, 2010, p. 151); minimizing cognitive overload through chunking and avoiding jargon (Clossen, 2014, p. 34; Lo & Dale, 2009, p. 151; Martin & Martin, 2015, p. 48; Smith, 2010, p. 154; Weeks & Davis, 2017, p. 186); ensuring narration is conversational (Martin & Martin, 2015, p. 52); avoiding large blocks of text on screen (Clossen, 2014, p. 34); making content available in multiple formats and ensuring accessibility (Courtney & Wilhoite-Mathews, 2015, p. 273; Martin & Martin, 2015, p. 50; Weeks & Davis, 2017, p. 186); and, where possible, forming collaborations that include librarians, faculty, and instructional designers (Lo & Dale, 2009, p. 152).

The recommendation for collaboration in developing instructional videos is congruent with the OER literature on the subject. Collaboration is often underscored as a superior approach to developing open resources (Arimoto, Barroca, & Barbosa, 2016; Casserly & Smith, 2008). Faculty subject matter expertise is a necessary, but often insufficient, element in the design of effective OER; other examples highlight the importance of iterative development processes, robust workflow management tools, and ongoing incorporation of feedback from user communities (ISKME, 2008). Instructional designers and educational developers are valuable OER collaborators given their expertise in ensuring learning objects adhere to the principles of sound instructional design (Camilleri et al., 2014). Librarians can contribute expertise that aids in developing content, particularly related to copyright and discoverability, in addition to being advocates for openness (Bueno-de-la-Fuente et al., 2012; Kazakoff-Lane, 2014). Librarianship's role in the OER movement is typically expressed through program leadership, facilitation, or dissemination, through liaison work or incentivized creation of OER like open textbooks (Salem, 2017; Smith & Lee, 2017; Walz, 2015). Information professionals often contribute to the development and delivery of OER by locating existing material, providing repositories for OER material, facilitating discovery and stewardship of OER, or providing guidance on issues of copyright. Indeed, in most cases librarians are cast in a supporting role, with faculty, who often create content, being

centred in discussions. Despite the literature emphasizing the importance of collaboration featuring a variety of skill sets beyond the subject expertise of faculty members, such fully collaborative projects are rare (Lane & McAndrew, 2010). One other important element of successful OER collaborations, beyond ensuring diverse skillsets, is positive relations among collaborators (Goodsett, Loomis, & Miles, 2016). Although the literature on librarian collaboration in OER tends to portray librarians in a supportive role, there is a growing body of literature on the role librarians can play as OER content creators. The open education/OER movement has been increasingly embraced within library and information studies, particularly by academic libraries, where it is commonly seen as an extension of concerns about open access and open scholarship more generally. For example, the Canadian Association of Research Libraries (2019), representing the 29 largest academic libraries in Canada, made advancing open scholarship, including OER, the first of its strategic priorities for 2019-2022. There is a role for librarians and other information professionals in the creation of OER when the subject matter bridges the field's core competencies (such as information literacy and digital literacy) (ALA, 2009). Intellectual property and copyright issues are pertinent here, since librarians often deal with patrons as users and creators of copyright-protected materials. Moreover, while materials like subject guides are freely available and typically created with specific audiences in mind, librarians are also called upon to provide educational guidance on a broad range of topics. Other examples in this area include research data management, scholarly-led publishing, and the use of institutional repositories by both content creators and information seekers.

While librarians are often called upon to help facilitate awareness and use of OER and think of their contributions to larger academic communities as a form of open educational practice, it is rarer for librarians to be creators of dedicated OER content, as in the case study that follows.

Project Context and Description

The University of Alberta is one of the 10 largest research institutions in Canada, with nearly 400 undergraduate programs, over 500 graduate programs, and more than 40,000 students (University of Alberta, 2019a). Historically, the university, and in particular its Faculty of Extension, has had a clear mandate to bring higher education to all citizens in the province. One notable initiative was the creation of the Extension Library, a travelling library established in 1913 to serve all communities in the province. A year later, a trove of visual resources (in the form of projector slides) were made available to communities across the province through what was called the Magic Lantern program. Open Education in an early form emerged from the University of Alberta in the 1920s, when lectures were made available over the radio (University of Alberta, 2006).

Nearly a century later, however, creation of and advocacy for OER at the University of Alberta has been moderate. The Centre for Teaching and Learning provides some program support (Centre for Teaching and Learning, 2019a) and operates a modestly funded ($75,000 in both 2018/2019 and 2019/2020) OER Awards program designed to encourage OER creation and adoption. This support has funded several small OER projects (Centre for Teaching and Learning, 2019b). In addition, two advocacy groups—one driven by the undergraduate student union, and the other comprised of interested staff and faculty from the university—were developed following a grassroots and short-lived interest group. Overall, existing resources are aimed more at university faculty and staff than at students and members of the general public. This modest interest and support for OER stands in contrast to the university administrations' more active effort to establish the university as a leader in MOOC development. For example, the university has partnered with Coursera to create and deliver over a dozen MOOCs in the past decade (University of Alberta, 2019b).

The University of Alberta is increasingly embracing OER, with several OER projects emanating from the university, including the case at the focus of this paper. The OER project under examination is a multi-year, grant-funded project focused on developing copyright OER: the Opening Up Copyright (OUC) project. OUC was created with three goals in mind: enhance the quality of copyright instruction provided to students at the University of Alberta; strengthen copyright education for faculty, staff, and students in the broader University of Alberta community; and develop resources that can be used and adapted by members of the public and other Canadian institutions.

The project, which was initially funded by the university's Teaching and Learning Enhancement Fund (Centre for Teaching and Learning, 2019c), is a collaboration among several University of Alberta units, including the Copyright Office, the School of Library and Information Studies (which is the source of the sole faculty member on the project), the Centre for Teaching and Learning, the Libraries, and Technologies in Education. Within this partnership, the majority of the work is centred between the Copyright Office and the library school. The diverse team of collaborators, following the recommendations laid out in Lo and Dale (2009), include an Open Education Program manager, a Digital Projects librarian, the Copyright Librarian, the Director of the Copyright Office, a learning facilitator, multiple graduate research assistants, two educational developers, and an associate professor. While the overall group involved in the project is large, most of the work is carried out by a smaller content team comprised of the Copyright Librarian, Director of the Copyright Office, the associate professor, and the graduate research assistants. Collaboration has been facilitated by regular weekly meetings of the professor and the graduate students and biweekly meetings of the content team. Full team meetings are a less frequent occurrence.

The OUC project has also attempted to facilitate input with those outside of the University of Alberta. The primary mechanism for enabling such feedback is through a series of publicly editable Google Docs that allow anyone to contribute to the development or evolution of the educational materials. However, use of these interactive documents by those outside of the university has been limited.

Since its inception, OUC has released 16 freely available, video-based modules between six and 10 minutes in length, with as many as 50 other topics planned for coverage. All of the project's content has been released under the Creative Commons Attribution 4.0 International License and is available at https://sites.library.ualberta.ca/copyright/. Since January 2019, content has been linked to, re-used, or repurposed by a number of other post-secondary institutions, including St Mary's University, Mount Allison University, Northern Lakes College, Tyndale University College & Seminary, and Dalhousie University.

What is notable about this case is that while many OER projects have their genesis in a specific course, the OUC project modules have, from the outset, been designed for both an academic class-based audience and broader communities of interest. To manage these varied audiences, the project has focused on modular design and accessibility and has categorized modules at various levels depending on the depth of subject matter. Close collaboration among individuals working in the Copyright Office and the faculty member has led to a broader range of subjects being covered, including modules focused on practical or "on the ground" copyright literacy issues (e.g., Finding and Choosing Open Content) and more academic analyses of copyright (e.g., Theoretical Foundations for Copyright). The dual emphasis on theoretical elements of copyright and more "practice-based" copyright instruction is a reflection of the breadth of the material's audience, resulting in higher resource and time demands from the project's numerous contributors.

Subsequent events of national significance have increased the project's relevance and applicability to a more general audience. Changes to the Canadian *Copyright Act* (R.S.C. 1985, c. C-42) that limit the access to and use of technologically-protected materials (s. 41) and a recent federal court ruling against York University over its reliance on fair dealing guidelines for the use of copyright-protected material (Loriggio, 2017) have created a "copyright chill" in Canada: individuals are discouraged from exercising their legal rights for fear of potential sanction. The OUC project is now becoming an instrument for battling this chill, since accessible education on issues of copyright, aimed at a wide range of audiences, may improve users' understanding of their rights under the *Copyright Act*—especially in the context of its fair dealing provisions (s. 29)—and minimize risk avoidance on the part of institutions that use copyright-protected materials (Wakaruk, 2018).

Method

This paper expands on the existing literature through a critical reflection on the University of Alberta's OUC project. Defined by Fook (2012) as a "way of learning from and reworking experience" (p. 56), critical reflections are a means of improving the effectiveness and quality of professional practice. Drawn from Duncan (2004), the approach used in this reflection can be seen as auto-ethnographic, since it embraces the subjective experiences of the people directly involved with the project.

While this approach is not without limitations and the proximity to the work by the authors is a source of bias (Flyvberg, 2004), such closeness facilitates a more intimate understanding of the technology and processes involved in the creation of the materials necessary for the analysis that follows. The reflections presented in this paper should transfer well to any OER project that uses video and related interactive features to provide educational material to multiple audiences with differing needs and interests.

Key Reflections: An "OER Triangle"

While the multi-unit collaborative approach has many advantages, there are also some important challenges in designing for multiple audiences, including minimizing domain-specific language for highly legalistic subject matter, and balancing accessibility and comprehensiveness. These challenges must, in turn, be balanced against the project's emphasis on the re-usability and adaptability of material. Taken together, these factors form a triangle of occasionally competing interests, with "precision," "engagement," and "re-usability" at each apex.

The analog to project management's "iron triangle" of scope, schedule, and cost (Atkinson, 1999) is intentional, based on recurring themes that arose in discussions about the design and implementation of each OER module. Maximizing precision, engagement, and re-usability equally during the OER development process is nearly impossible, since overemphasis on any one interest comes at a cost to one or both of the other two when the project has an over-arching goal of creating content for multiple audiences.

The recognition of trade-offs in OER design stems from one of the project members' ongoing scholarship in this area (Christiansen & McNally, 2018; McNally, 2014; McNally & Christiansen, 2019), and a brief overview of the tensions created by these trade-offs illustrates their trilateral nature. First, there is the balance of precision and engagement. Here, high attention to the subject's connections to detailed legal language and jurisprudence—more appropriate and digestible for academic audiences—may hinder engagement for members of the general public. The second tension is inherent when reconciling engagement and reusability: an overreliance on advanced multimedia production techniques to foster interest in and engagement with the material can create barriers for other insti-

tutions who wish to adapt the content for their own purposes, since adaptation would require advanced skills or technical knowledge that the new user may not have. The tension between precision and reusability is the least direct of the three relationships but manifests itself in two ways. It first appears when considering the breadth of the intended audience for the resource. When the intended audience is narrow and specific (for example, "library and information science students in Canada"), the content can be precise and targeted. This limits the potential for re-use in other contexts (for example, "users of public library makerspaces") due to the level of additional customization required. The second manifestation of this tension is particularly thorny when considering "people who may want to reuse this resource" as an additional audience: generally focused (and therefore less precise) resources are more likely to be selected by downstream educators due to their broad applicability. The prevalence of trade-offs formed by triangle of precision, engagement, and reusability suggests it is a model that may be worth considering by others creating OER, and in particular those designing for multiple audiences.

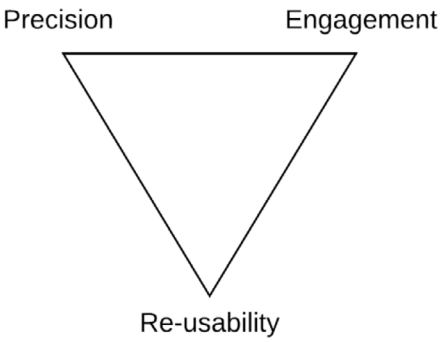

Figure 1: Precision, engagement and re-usability relationship.

The project team's experience with content creation and development has revealed four key areas of influence associated with balancing the three sides of the "OER triangle." Almost every module developed for the project faced the following pressures:

1. Capturing and modeling best practices for copyright compliance within the modules;
2. Delivering engaging, accurate and occasionally complex material in a way that doesn't violate recommendations for module length (as advised in the literature);
3. Ensuring that narratives and examples employed within the modules are reflective of the diversity of their desired audiences; and,
4. Relying as much as possible on tools and materials that are themselves

open and accessible so that people who want to remix or adapt content have the freedom and flexibility to do so.

Modeling Use of Copyright-Protected Content

An OER on the topic of copyright not only serves as a resource for content creators and users, it also serves as a model for how copyright-protected materials can most flexibly be used and attributed as part of an OER. Since one of the project's goals is to maximize the ability for others to re-use or adapt the material, the team agreed on a scheme of using openly licensed content that would not hinder content re-use.

As part of the effort to effect maximum re-usability, the project team created guidelines for the selection and citation of openly-licensed works used in the modules. This follows the findings of Santos-Hermosa (2014), who noted that educators found OER more usable when no copyright clearances were required. To maximize the ability for downstream users to re-use and remix the material without having to acquire additional permissions from copyright holders, the team expressed a strong preference for images, videos, and other materials that were already in the public domain or were licensed under Creative Commons Attribution (CC-BY) terms. Citations for all sources were provided on slides at the end of each module, and in cases where slightly more restrictive forms of Creative Commons licences were used, the licence type was noted in context. For example, an image licensed under an Attribution-NonCommercial (CC-BY-NC) licence would have its matching Creative Commons licence logo placed directly adjacent. Even for public domain material, attribution and source information was provided to facilitate future use of the same resources by other people.

A secondary objective of the project has been to combat copyright chill in Canada by advocating for users' rights under exceptions such as fair dealing (similar to "fair use" in some other jurisdictions); however, the project did not want to rely heavily on fair dealing exceptions in its own use of copyright-protected material. Though the modules themselves advocate for the value of users' rights in the Canadian *Copyright Act*, the project does not seek to force downstream users of the material to shoulder the risks or responsibilities associated with such choices. The decision to avoid reliance on fair dealing (or similar) exceptions has a significant consequence: it reduces the amount of copyright-protected material that can be reasonably incorporated into the modules for the sake of increasing engagement. As a result, the decision to forgo fair dealing is one point where concerns over re-usability have trumped engagement concerns in the OER triangle.

Additionally, the team's desire to maximize the quality and engagement potential of the modules has led to painstaking selection of visually- and thematically-coherent imagery, diagrams, and icons for video presentations. This preference was not solely

aesthetic: in order for ideas to be clearly understood, it is important that related concepts be visualized in consistent ways, following recommendations in the literature (Plumb, 2010).

For example, one module about the rights afforded to copyright holders used 10 different symbols to represent those rights, and a learner's ability to "mentally group" these rights was judged to be negatively impacted when a draft version of the visuals used a mix of black-and-white line drawings and photographic elements to represent all 10 rights on the same screen. To support visual coherence, designers chose an internally consistent set of images or icons for key concepts and then styled the rest of the visual presentation to match those choices. Moreover, the same icon or image was then used to represent the same concept across all of the modules developed for the project.

In general, more flexibility was afforded when central concepts or terms were represented with basic black-and-white icons; however, the lack of available and openly-licensed material appropriate for these purposes occasionally created dissonance between an envisioned module design and its practical implementation. Although the wide variety of openly licensed content in the Commons is notable, the desire to create a consistent look and feel within and across modules, without investing extensive time and effort in the customization of openly licensed material, occasionally limited material selection.

Balancing Precision and Engagement

A narrative-based approach to instruction has been shown to foster engagement and understanding of instructional material (Laurillard, 1998). Wherever possible, the project team framed each module from the perspective of a central character (often a proxy for one of the module's primary audience members) and used this frame to guide a story-based narrative. The team found that some topics lent themselves to this storytelling approach better than others. Modules associated with important court cases in Canada provided a good fit for narrative, since the presentation could trace the origins of the court case, key arguments made during trial, and details of the decision and (if present) subsequent appeals. Less suitable for narrative fit but still manageable were modules that provided guidance on working with copyright-protected materials. In these situations, the team could focus on the experiences of a content creator or user as they navigate the complexities of copyright jurisprudence. In some other situations—such as modules dedicated to the meaning and interpretation of specific sections of the *Copyright Act*—crafting a narrative is much more difficult, and designers would either invent a scenario to explain the section, discuss the origin of the section, or frame the discussion in terms of related court cases, judgments, or Copyright Board of Canada rulings.

The narrative focus of the OER modules creates tension between precision and engagement. For example,

as the project has evolved, the team has begun to employ humour as a component of the narrative in each video's visual presentation, narration, or both. This approach significantly enhances the enjoyment and engagement level of modules but runs the risk of creating vague or possibly even incorrect interpretations of nuanced and complex aspects of the Canadian *Copyright Act*. As a result, great care must be taken with the scripting of each module, with scripts and visual presentations subject to multiple reviews by the core content team. Modules were often reviewed by the full team, as works-in-progress, up to eight or 10 times. A conversational or colloquial approach to the visual presentation that emphasizes engagement for audiences such as graduate students and the broader public was invariably chosen. While this approach may reduce clarity, it was preferred over strict adherence to academic or legal-sounding narrative. Although a more academic or legal sounding narrative would have greater precision for audiences such as academic staff or legal scholars, it can sound "scripted" and unnatural in the final product. This balance is difficult to achieve on a module-by-module basis, and demands discussion in forums, where all members of the project team can be present to flag issues and resolve concerns.

Over time, the team developed two approaches to balancing precision and engagement. First, central or key copyright topics with the broadest interest (or multiple primary audiences) were identified as "flagship" modules, and these modules were used in novel forms of visual presentation that received in-depth review and revision. For example, one module was created using Powtoons animation, and another module was created by filming puppets in a university library. These novel forms of presentation led to a second approach, which was the incorporation of team members with theatre or live performance backgrounds to serve as a counterbalance to more traditional, academic approaches. The value of skills contributed by students with theatre backgrounds to the development of engaging modules dramatically improved engagement quality of the modules.

Increasing engagement by using novel forms of visual representation has a negative impact on the re-usability of project content (the engagement vs. re-usability axis of the OER triangle), since the convention of making downloadable slides for the module is often broken with the use of different media. The team has discussed possible alternatives to address this concern, such as creating a parallel set of slides or making raw video and audio content available for download, but the value and effectiveness of these options has not yet been assessed. In one case, such as a Powtoons-based module on using images, the project team has decided that an updated version of the module will re-focus on re-usability by replacing the animated material with a more versatile PowerPoint plus narration approach.

Achieving Inclusivity

In order for the project material to be effective across multiple primary audi-

ences, it needs to be reflective of the diversity and scope of those audiences. A storytelling approach mandated the creation of a set of characters that could be used as first-person proxies for the audience, and so an array of personas was developed for the team to use within and across modules for the purpose of consistent and interconnected storytelling (in essence, "OUC world-building"). Examples of selected personas, which reflect the variable audiences for the content, included a librarian, a content creator, a graduate student, and an employer. Visual representations of these personas needed to embody non-normative facets of ethnicity and gender, and every effort has been made to question default assumptions of what (as an example) an "employer" looks like.

The project team's interest in diverse visual representation has added another layer of complexity to the selection and use of openly licensed materials, affecting the OER triangle's tension between precision and re-usability. The selection of representative icons and images requires considerable care, but freely-available icons and photos—much like their commercially-available counterparts—bias representation towards white, male, able-bodied depictions of people and situations (Model View Culture & Daniels, 2016; NPR, 2017). Though rigorous searches were often able to surface appropriate material for use by the project, such as a non-binary student named Sandy who appears in several modules, alternate sources of openly licensed content were eventually added to the team's repertoire. These included *The Gender Spectrum Collection* (https://broadlygenderphotos.vice.com/), *Representation Matters* (http://representationmatters.me/), and the *Women of Color in Tech* photo collection on Flickr (https://www.flickr.com/photos/wocintechchat/).

Maximizing Availability for Re-Use, Revision and Re-Mixing

A critical focus for the project team, with a view towards animating all five of Wiley's (2014) "R's of OER"—especially re-mix and re-use, which form one apex of the OER triangle—was the desire to complement our preference for broad, openly-licensed content with the use of free open source software (FOSS) to write, produce, and distribute project modules. This commitment increases access to module content by making it easy for downstream users to adapt or re-use material without having to make additional investments in proprietary tools, software, or distribution platforms. This commitment to FOSS tools is not purely ideological or absolute, however. In an earlier phase of the project, the project team examined a wide range of open source tools for collaboration, scripting, video production, and interactivity. Though applicable tools exist for every step of the project team's workflow, some proprietary software has still been used to balance the accessibility of material with the skills and knowledge required to adapt it to new contexts. For example, the team relies on Microsoft PowerPoint, which is not *gratis* but is widely viewed as a *de facto* standard for the creation of

presentations. Open alternatives such as OpenOffice Impress do exist, but its user interface is not as mature, and its feature set is not as robust. More importantly, it presents a learning curve to new users that may create a barrier to the downstream use of the content. While adopters who have no previous experience with Microsoft products face a similar learning curve learning to use OpenOffice vs. PowerPoint, given that the majority of adopters would likely be based in universities, a degree of familiarity with Microsoft products was assumed.

General Recommendations

The work of balancing precision, engagement, and re-usability across the project modules has resulted in one overarching recommendation for others who are trying to achieve similar goals in OER development: a reflective approach of examining material intentionally through all three lenses of balance is key. There is no one "answer" for resolving the tensions uncovered in the project, and decisions typically depend on the characteristics and learning objectives associated with the topic of each module.

Perhaps most importantly, a slavish adherence to the 5 Rs of OER, with a view towards maximizing re-usability, can have a limiting impact on the ability for OER content to achieve optimum levels of precision and engagement. Following the advice of McNally and Christiansen (2019), sometimes "open" has to mean "open enough." The project team could, for example, make a firm commitment to using purely open tools and purely open content, with no exceptions or risk tolerance as it pertains to fair dealing, but this ideological approach could easily get pushed too far, leaving other aspects out of balance and hampering the material's ability to achieve its educational objectives. At some point, the commitment becomes ideological and dogmatic and may harm rather than help; accordingly, decisions such as using PowerPoint instead of OpenOffice Impress and not generally relying on fair dealing exceptions in the *Copyright Act* in challenging situations are, in our view, acceptable.

The second overall recommendation, aimed at providing the most flexibility in balancing all of the tensions outlined in this paper, is to use a "layered" approach to content creation that emphasizes openness at different levels. Since text transcripts, slides, videos, and interactive materials are all created separately and are each made available for re-use, it is possible to add precision, interactivity, elements of narrative, or local customization in one layer without creating complex dependencies in any other layer. Additional detail, emphasizing precision, can be added at any or all of these layers, and re-usability is emphasized by allowing materials to be downloaded and partially adapted, for any derivative purpose or context, as needs arise. Experience with occasional updates to existing material have resulted in only one layer-to-layer dependency that the project team has uncovered: leaving whitespace on presentation slides (following the advice of Clossen, 2014, pp. 34-35) provides

more flexibility for the addition and alteration of interactive H5P elements.

Conclusion

The University of Alberta's OUC project reveals that collaborative OER development for the benefit of multiple audiences highlights the role of openness for re-use as a balancing factor, ensuring that content is both accurate and engaging for the broadest possible range of audiences. Moreover, a stronger OER development focus on downstream re-use and content customization, which has been noted as a weakness in existing OER development practices, seems to serve as a synergistic means of improving both the appeal and reach of open educational content.

There are also some important limitations to note in drawing general recommendations from a single case study. This OER project is not necessarily comparable to others, particularly given the size of the project in terms of budget and team members involved. More importantly, one factor driving the success of the project has been the cordial and positive nature of the collaborations among the team members. Personal dynamics are a key aspect of any successful collaboration, and some degree of the project's success is reflective of the fact that several of the individuals involved had previously collaborated in various capacities. Such internal dynamics are not easily reproducible.

As indicated by this case study, there is a clear role for librarians as substantive collaborators on OER projects, particularly where those projects align with LIS subject expertise such as copyright in this case, or in areas including information and digital literacy, data management, and scholarly communications.

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Bridging the Gap: Rural Librarians' Journey to Understanding Students' Role in OER Outreach

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Abstract

Literature detailing how small, rural academic institutions have implemented initiatives for Open Educational Resources (OER) is limited; most articles focus on university systems, state schools, and R1 research institutions. Our outreach—conducted over the past year at rural Adams State University—initially targeted faculty. However, after encountering silence from this group, we sought to explore the largely uncharted possibility of engaging students as advocates. While our continuing efforts will certainly seek to promote faculty awareness and address barriers to adoption, we have come to understand two things: that faculty engagement is not enough and that student advocacy can play a great role. The librarians' first goal in our nascent OER initiative is to educate and empower the student body, and by doing so, help bridge the gap between librarian advocates and faculty adopters. Our initial outreach effort to measure student awareness and interest had two aspects: in-person and online. The first step was to talk to students face-to-face about textbooks and associated costs, while informing

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them of the existence of OER and alternative textbook sources. The second step was to engage students online via a survey. This helped us gain insight into their perspectives regarding the problems they face due to textbook prices. Going forward, we plan to create a two-pronged outreach method: some continuing education of faculty, but more emphasis on students. Our goal is to equip students with the knowledge to advocate for OER to faculty, administration, peers, and even family. Final takeaways from this project include the need to involve students in outreach efforts and to encourage them to participate in future OER planning and projects. No single group can solve the problem of outrageous textbook costs; it is only by faculty, librarians, and students working together that Adams State University will join the nationwide OER movement, not just as participants, but as contributors.

Keywords: librarians, student advocacy, OER/open educational resources, outreach, faculty

Cerrar la brecha: el viaje de los bibliotecarios rurales para comprender el papel de los estudiantes en la promoción de REA

Resumen

La literatura que detalla cómo las pequeñas instituciones académicas rurales han implementado iniciativas para los Recursos Educativos Abiertos (REA) es limitada; La mayoría de los artículos se centran en los sistemas universitarios, las escuelas públicas y las instituciones de investigación R1. Nuestro alcance, realizado durante el año pasado en la Universidad Estatal de Adams rural, inicialmente se dirigió a la facultad. Sin embargo, después de encontrar el silencio de este grupo, buscamos explorar la posibilidad en gran parte desconocida de involucrar a los estudiantes como defensores. Si bien nuestros esfuerzos continuos ciertamente buscarán promover la conciencia del profesorado y abordar las barreras para la adopción, hemos llegado a comprender dos cosas: que el compromiso del profesorado no es suficiente y el gran papel que puede desempeñar la defensa de los estudiantes. El primer objetivo de los bibliotecarios en nuestra incipiente iniciativa REA es educar y capacitar al cuerpo estudiantil y, al hacerlo, ayudar a cerrar la brecha entre los defensores de los bibliotecarios y los adoptantes de la facultad. Nuestro esfuerzo de divulgación inicial para medir

la conciencia e interés de los estudiantes tuvo dos aspectos: en persona y en línea. El primer paso fue hablar cara a cara con los estudiantes sobre los libros de texto y los costos asociados, mientras les informaba sobre la existencia de REA y fuentes alternativas de libros de texto. El segundo paso fue involucrar a los estudiantes en línea a través de una encuesta. Esto nos ayudó a comprender mejor sus perspectivas sobre los problemas que enfrentan debido a los precios de los libros de texto. En el futuro, planeamos crear un método de alcance doble: cierta educación continua del profesorado, pero más énfasis en los estudiantes. Nuestro objetivo es equipar a los estudiantes con el conocimiento para abogar por los REA ante el profesorado, la administración, los compañeros e incluso ante la familia. Las conclusiones finales de este proyecto incluyen la necesidad de involucrar a los estudiantes en los esfuerzos de divulgación y alentarlos a participar en la planificación y proyectos futuros de REA. Ningún grupo individual puede resolver el problema de los costos de libros de texto escandalosos; es solo por profesores, bibliotecarios y estudiantes que trabajan juntos que la Universidad Estatal de Adams se unirá al movimiento nacional de REA, no solo como participantes, sino como contribuyentes.

Palabras clave: bibliotecarios, abogacía estudiantil, REA/Recursos Educativos Abiertos, Promoción, Profesorado

缩短差距：帮助农村图书管理员理解学生在开放教育资源（OER）外展服务中发挥的作用

摘要

有关小型、位于农村地区的学术机构如何实施开放教育资源（OER）倡议的学术文献为数不多；大多数文章都聚焦于大学体系、州立学校和R1研究型大学。去年我们在亚当斯州立大学开展的外展服务最初将大学老师设定为目标。然而，在遭遇该群体的沉默应答后，我们试图对学生作为倡导者这一基本未被研究过的可能性进行探究。尽管我们不断的努力一定会提升大学教师的意识，解决在采用OER外展服务上遭遇的阻碍，但我们已经理解了两件事：教师参与度不够、和学生倡导所能发挥的巨大作用。在我们初期的OER倡议计划中，图书管理员的第一个目标是教育学生并对其赋权，由此帮助减少图书管理员倡导者和教师采纳者之间的差距。为衡量学生意识和兴趣，我们最初的外展服务工作包含两方

面：面对面及线上。第一步是与学生面对面谈论课本和相关成本，同时告诉他们OER的存在与替代课本源。第二步是让学生参与一项网络调查。此举帮助我们从学生视角了解其因课程费用而面临的问题。下一步，我们计划提出具备两个方向的外展服务方法：即继续对教师施以教育，但将更多重心放在学生上。我们的目标是让学生拥有知识，以对教师、行政、同龄人、甚至是家庭倡导使用OER。该计划的最终结论包括：需要将学生纳入外展服务工作，并鼓励他们参与未来OER规划和相关计划。任何单一群体都无法解决高昂的课本费用问题；只有通过教师、图书管理员和学生的共同努力，亚当斯州立大学才能以不单作为参与者，同时还是贡献者的身份加入全国OER运动。

关键词：图书管理员，学生倡导，开放教育资源（OER），外展服务，大学教师

Background and Initiative Context

With the rise of technology in education has come the idea that everything on the Internet is (or should be) freely accessible. While librarians and faculty know that this is far from the truth, through OER we can take steps towards making this stereotyped perception a little bit closer to reality, with the removal of cost, copyright, and other access barriers. Already, resources like OER Commons and OpenStax provide textbooks free of charge to students. In the last two decades alone, the amount of information that has been published on how to incorporate OER into higher education has increased exponentially. This literature has become a great resource for many libraries trying to start their own campus OER initiatives. Despite this new wealth of information, there seems to be a notable lack of smaller or more rural universities attempting to incorporate OER into campus practice. For all of this lack of representation, the need for OER at these schools is immense. Many rural schools face the same financial problems as larger institutions—such as underfunding—but lack the workforce required to apply for the grants that can alleviate the strain. OER grants are becoming more prevalent, but each one takes time and effort to apply for, and few faculty or staff members are able to dedicate their limited resources when outcomes are not guaranteed. Although inconclusive, publishing our findings will hopefully help fill a gap in the literature regarding rural universities' implementation of OER initiatives.

Adams State University is a small, Hispanic Serving Institution (HSI) located in rural Colorado, specifically in the San Luis Valley, home to some of the poorest counties in the nation. It is because of the community's general poverty that bringing OER to our campus has become a priority for the library; more affordable textbook options are something our students desperately need. At the same time, it is also one of the largest hurdles: we lack the ability to offer the financial incentives that can encourage faculty adoption at larger institutions.

The school was built on the idea that Adams State would be able "[t]o become the university community of choice for diverse, historically underserved groups, and all who value quality education and inclusivity" (Adams State University, n.d.). That means we need to address the specific needs of traditionally underrepresented populations. Research done by California's Channel Islands shows that it is minorities—specifically Latinx—and first-generation students who suffer the most when it comes to high textbook costs (Hannans, 2018, slides 7 & 9). With those costs increasing 88% between 2006 and 2016 (Bureau of Labor Statistics), the situation is becoming critical. Another issue that needs to be addressed in order for Adams State to live up to its mission statement is the varied impacts that information privilege has upon our students. Information privilege is defined as the "ability to access information others cannot" (Hare & Evanson, 2018, p. 726), due to socioeconomic status, enrollment in or affiliation with higher-education institutions, reliable internet access (including access to tech devices to view information), even proximity to local public libraries, or a combination of these and other factors.

"Opportunity and access for all" is a universal institutional value (Adams State University, n.d.), yet equitable access to information is impossible without a paradigm shift. Senack and Donoghue (2016) made the compelling point that, "[y]ears of dominance by profit-maximizing publishers have created a value system around false measures of quality. Traditional textbooks face no standardized test of efficacy, or student success" (p. 12), and yet, OER are expected to prove their comparative value. Unless we work to overcome the instinctive sense that traditional textbooks have inherently *better* information than Creative-Commons or openly licensed material, the *all* will never have the *opportunity and access* we strive to provide.

OER can help combat the cultural norms that support the ongoing and worsening nature of information privilege, the divide between the haves and have-nots. Not only is openly licensed academic information available to students at no charge, whole courses are available to the public, in support of equitable education for all. The UN declared fundamental education a basic human right in Article 26 (United Nations, 1948), but so many citizens are prevented from continuing their education due to cost that information privilege remains prominent. In most cases, OER offer perpetual access, which combats both the economic cost

and academic enrollment criteria of information privilege, some of the biggest limiters when it comes to accessing quality academic resources.

Early OER Failures

Three Adams State faculty members had previously adopted OER without institutional support, and with very uninspiring results. One professor claimed that his upper-division math texts were traditionally published and later rereleased under CC License and were of good quality; however, he felt the lower-division texts from OpenStax were "of lower quality than I'd like and we are probably going back to 'normal' for those two classes." He finished with, "I'm definitely not passionate about OER but I am committed to lower costs for students when its [sic] prudent" (A. Langdon, personal communication, Feb. 19-20, 2019).

The second professor reiterated the shared lack of passion, but agreed that student costs need to be lowered "whenever feasible." His opinion was that the quality of material was "in the middle of the pack." He also noted that "in most cases, the students do not seem to read it," referring to *all* texts regardless of price or licensing. While learning outcomes are outside the scope of this paper (Grimaldi, 2019 and Hilton, 2016 pointed out flaws in recent studies), it is worth noting that this professor felt that "switching to the lower-cost option has not seemed to impact student learning" (A. Langdon, personal communication, Feb. 19-20, 2019). The third professor merely said that the department was looking at TopHat, pending an institutional subscription (A. Langdon, personal communication, Feb. 19-20, 2019). (TopHat is an affordability option that offers low-cost textbooks and educational resources.)

In the beginning stages of implementing a concerted OER initiative, the librarians advocated exclusively to the faculty. We were guest presenters at the monthly meeting of all campus department heads. We defined OER and used several slides from Hannans, Jenkins, and Leafstedt's (2018) webinar, which demonstrated how Latinx and first-generation students were most heavily impacted by high textbook costs. The faculty members were largely disinclined to take on a project that would disrupt their already frenetic semesters. We hoped that a seed had been planted and that there might be a trickle-down of information and encouragement to each department.

The following month, we held a free lunch-and-learn session. Fewer than 10 faculty members attended, but they were the most interested in adoption. Without financial incentives—which have been lacking up to this point—almost no one is choosing to adopt OER. During the summer of 2019, 10 faculty members were given Title V grants for course redesign, in order to modify them for the Fall 2019 launch of our new first-year experience. The redesigns emphasized Latinx Studies; Crime & Forensics; and Health, Sports, & Wellness. The library reached out through the Title V office

to offer assistance in choosing open material for these revamped courses, but there was sadly no response. This may have been due in part to the fact that for some of those 10 faculty members, the whole course-redesign was to take place in one month's time. When met with such silence—inspired by unfamiliarity with Open Educational Resources, in addition to heavy course loads and other responsibilities—the librarians at Adams State have turned to the underserved students themselves to encourage advocacy.

We acknowledge the necessity of faculty involvement in our continued OER outreach; however, we have decided to shift most of our focus from the faculty to the students. Woodward (2017) and Senack and Donoghue (2016) recommended that students advocate for themselves, but aside from one mention of "workshops and seminars" (Senack, 2014, p. 14) and "a student advocacy session" (Woodward, 2017, p. 211), we have found nothing in the literature about librarian-led outreach to students that has lead to successful student advocacy and notable change. If students understand both the financial/economic costs of higher education, as well as the other dynamics that play a role in information privilege, they can begin the slow process of addressing the disparities such privilege perpetuates, both on this campus and in the wider San Luis Valley community. It is also our hope that using the student outreach data we have collected, our next grant proposals will stand out from the crowd and perhaps provide us with desperately needed resources.

Barriers to Faculty Adoption

Most of the literature pertaining to OER-advocacy agrees that it is librarians who lead the charge for campus-wide OER adoption and instruction. Bell's article title, "It's up to the Librarians," is quite apt, as we are often the first and strongest advocates for this change. Braddlee and VanScoy (2019) called it a "professional responsibility" (p. 429), and it is undeniable that we are in the best position to find new and better resources, to curate and catalog them, to add metadata and make them findable. A portion of the librarians' charge is aimed at debunking misconceptions held by faculty regarding the quality of open resources and at attempting to *educate the educators*, understanding and addressing the barriers to faculty adoption. The first seems to be ignorance of open options (Belikov & Bodily, 2016, p. 239), with "time and effort to find and evaluate" OER (Allen & Seaman, 2014, p. 4) being a close second.

FlatWorld, a low-cost textbook publisher, performed a study in May of 2019, finding that 90% of surveyed faculty were aware that there was a problem with rising textbook costs, but 59% were unaware of campus programs or initiatives to rectify the problem (FlatWorld, 2019, p. 3). In part, it was this apparent lack of awareness that has shaped our plans for marketing and outreach going forward. In a report entitled *Opening the Curriculum: Open Educational Resources in US Higher Education, 2014* by Allen and Seaman (2014), their first key finding is that

"[f]aculty are not very aware of open educational resources ... between two-thirds and three-quarters of all faculty classify themselves as unaware on OER" (p. 2). It is very likely that same unawareness is behind faculty reluctance to change to OER at Adams State, but more research needs to be conducted to ascertain the best approach to use as we develop our initiative. It seems that an institutional strategic direction promoting OER could help offset faculty hesitancy, but at this time, our administration remains equally unaware of the OER movement.

Opinions in the literature regarding quality of OER are mixed, and we believe the trend is that faculty unfamiliar with OER mistrust the quality, believing free is bad, while those who have experimented with it tend to find it comparable to, if not better than, traditional textbooks. Braddlee and VanScoy (2019) showed that the second greatest *perceived* deterrent to OER adoption, at 26.5%, is "Resources are not high-quality or up-to-date" (p. 434, emphasis added). On the other hand, Allen and Seaman (2014) found that while only about 12% of faculty surveyed felt that open resources were superior, 61.5% felt that they were comparable (p. 38). Belikov & Bodily (2016) claimed that "only 3% of those surveyed stat[ed] that the OER were worse than traditional textbooks" and 97% felt that OER were equivalent to (56%) or better than (41%) traditional textbooks (p. 236). Cooney's (2017) response rate was comparable to Belikov and Bodily's, with 3% feeling that OER are "somewhat worse" (1.5%) or much worse (1.5%). Library Journal (2019) suggested "more faculty education on the quality and safety of OERs" is needed (p. 25), and that seems like a good direction to take when starting an OER initiative at any institution.

Overall, in both our findings and the literature, the greatest barriers to faculty adoption are faculty courseloads and a lack of financial incentives. Small, rural universities tend to have a larger percentage of adjunct faculty/visiting appointments. These employees have fewer ties to the school, less long-term commitment to new initiatives, and less time on campus with students. This is not to say that adjunct faculty do not *care*, but the constraints on their time limit their ability to engage.

Student Outreach: Methods and Discussion

We want to emphasize "a focus on student choices, not just student *voices*" with our ongoing outreach. Students are regularly polled regarding the impact traditional textbook and course-material prices have on them (Brandle et al., 2019; Cooney, 2017; Florida Virtual Campus, 2018; Senack, 2014; Senack & Donoghue, 2016; among others), but there the student input seems to end. Academic writers seem to solicit student opinions in order to talk *about* the findings, rather than with any intent to talk *to* the students—or, more importantly, to give students a *voice* in the one aspect of steadily rising academic costs that students have a modicum of control over: textbooks and related course ma-

terials. Once polled, most students are relegated to the proverbial "kiddie table," while the "grown-ups" (librarians and faculty, sometimes administration) talk about how students are expected to spend *their* money.

While we sought and obtained IRB approval for our research, the results were secondary to the outreach itself. The purpose of both the research and this paper was to discuss the need for documented methods of creating student outreach that go beyond soliciting numbers or statistics and into engaging students in conversation about textbook costs and the consequences thereof. The multifold benefits of such dialogue include promotion of the library and librarians as valid resources for students' educational needs; increased student awareness of information privilege and how it impacts them, both positively and negatively; and, of course, knowledge of open resources so that they can advocate for a shift away from traditional textbooks and toward more open sources.

The first round of research was poorly timed, with summer classes finished and fall classes not yet in session. We spent four days visiting various campus buildings with two laptops (the campus coffee cart, the School of Business atrium, and the Student Union Building), asking students if they had time to discuss textbook costs with us, and to take a brief, one- to two-minute Google Forms survey. We offered candy as thanks for those who participated, but many declined the reward. The students were open and willing to talk, and the interactions as much as the results told us they were actively engaged with what we were saying. The interest generated by placing the students at the center of our outreach efforts seemed to increase faculty interest as well; several professors stopped to ask for more information. This solidified our hypothesis that students advocating for themselves may bring better results than librarians working with faculty alone.

In a second form of outreach, we emailed a link to the survey to all enrolled students, undergrad and graduate, on-campus and off-campus. It is possible for students to have completed more than one survey per person; no email addresses were gathered; but it is felt to be very unlikely. The email's subject line—"Are you impacted by high textbook costs? Tell us about it!"—caught far more attention than we had hoped, and when we gathered the data for the paper, we had 159 results in fewer than 10 days. While this is only about 6% of our total student body, it was a decent number of respondents during so short a window, when students are far less likely to be checking their school email accounts or thinking about buying books. The survey contained 12 questions; all except *ethnicity* were required. We asked them to provide their year in school and major to ascertain some basic demographic information. However, the focus was upon those questions involving student perceptions of textbook costs.

Our first non-demographic question asked them to rate their stress

level when purchasing textbooks. 75.4% (120 students) reported feeling stress *frequently or always*; 18.2% experienced it *sometimes*, and only 6.3% reported feeling stress *rarely* or *never*. One student told us that his mother worked for a textbook company, so while he didn't have to worry about obtaining material, he acknowledged that he was uncommonly fortunate and understood the advantage he had over his classmates in that regard.

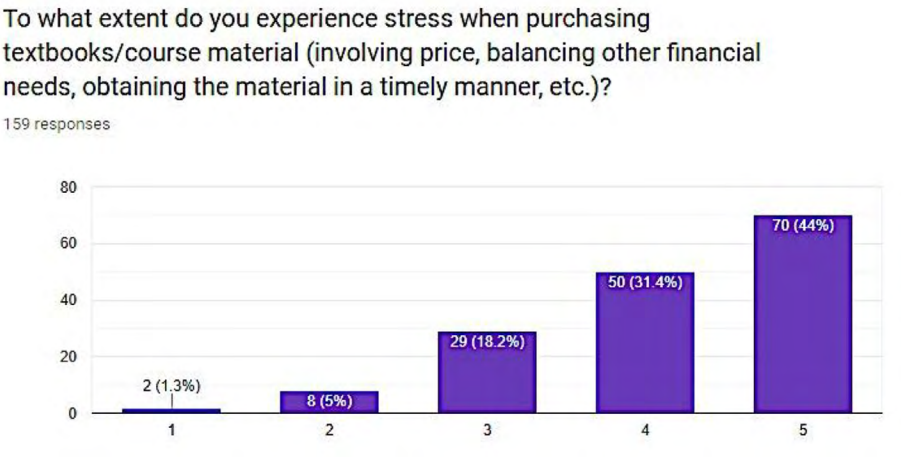

Figure 1. Stress.

One factor sometimes addressed in the literature, which we felt was of some importance, is the idea of student preference regarding format of reading materials. Brandle et al. (2019) reported that 58% of students at City University of New York (CUNY) printed all or some of the online material. 353 CUNY students did so because they wanted to be able to annotate, and 322 simply preferred paper for readings. Forty-four CUNY students reported limited or no access to either tech devices or the Internet as the reason for their preference (Brandle et al., 2019, p. 92). Here again is a tragic example of the "double-edged sword" nature of information privilege: students have greater access to information subscribed to by the academic library, but without computers, phones, tablets, or reliable internet, information remains beyond reach. Continuing Brandle et al.'s trend, 77% of students polled by Petrides et al. (as reported by Cooney, 2017), prefer print (p. 163). Library Journal's (2019) findings are slightly different, citing that *faculty perception* is that "students prefer print to digital texts" (p. 5, emphasis added).

Our own findings show that 79.9% of students prefer print; 51.6% prefer video/visual, with 47.8% desiring graphic/pictorial form, and the least preferred format is sound/audio at 28.9% (multiple answers were permitted). For textual material, we asked our students to rate their paper/screen preference (screens include computers, tablets, phones, etc.). A total of 7.5%

require paper for readings; nearly half (49.1%) can read from screens but prefer paper; 36.5% can read from screens and paper equally; 5.7% prefer screens but can read from paper; and only 1.3% (2 students) require screens for reading.

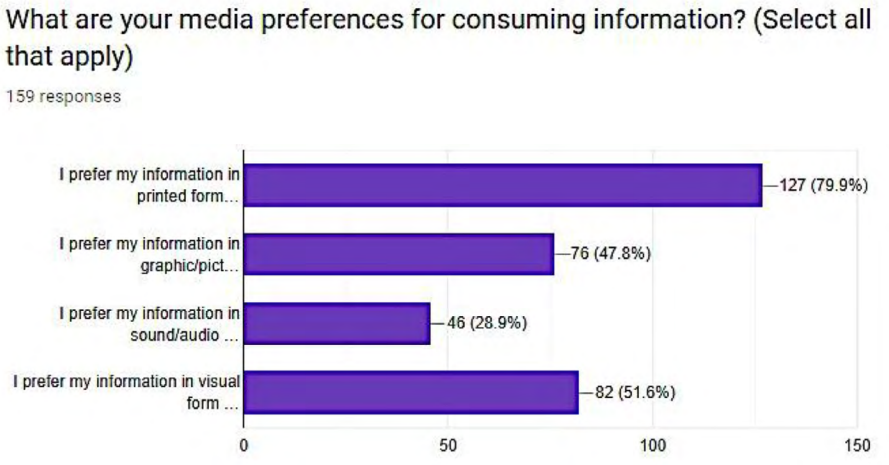

Figure 2. Media Preference.

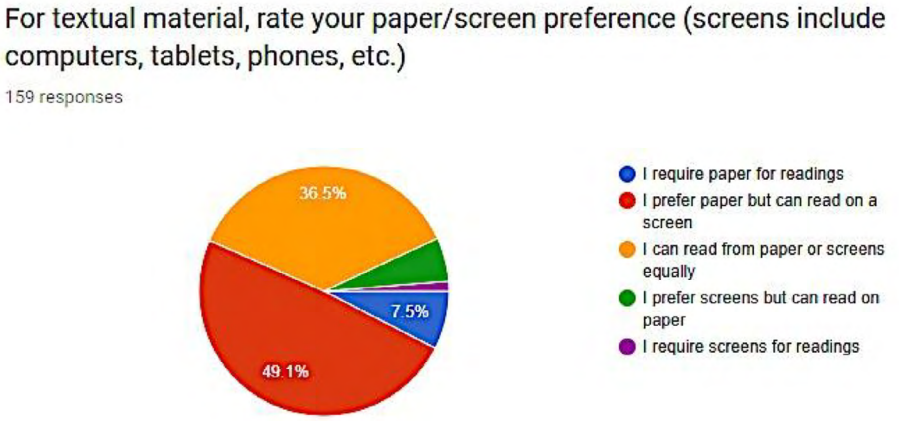

Figure 3. Paper/Screen Preference.

With this preference for paper—despite the perception of digital natives doing nearly everything on their screens—the need for printed texts is clear. Faculty unfamiliar with OER may very well lack "the knowledge that OER have the capacity to be printed or purchased and are not inherently digital" (Belikov & Bodily, 2016, p. 240); faculty may believe that traditional textbooks are therefore the only way to provide students with material in the format they prefer. While the shift from print to digital by traditional textbook com-

panies may seem like it has the ability to save students money, the fact of the matter is that digital books come with digital "locks," effectively preventing students from printing, downloading, or annotating the material (McGreal, 2017, p. 295).

Looking at Brandle et al.'s (2019) statistic of 353 students wanting to annotate their readings, we asked how many of our own students were aware that annotations could be made within some e-readers. Nearly one-third (32.7%) said that they were not aware; this provides faculty with an opportunity to increase students' technological skills and make better use of digital texts.

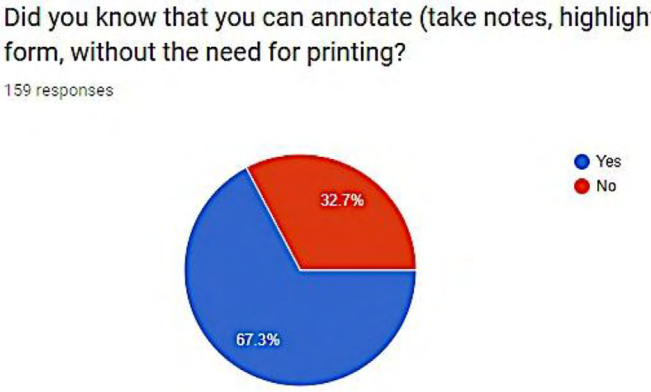

Figure 4. Ability to annotate.

Another of Brandle et al. (2019)'s statistics is worth keeping in mind at our rural institution: 44 CUNY students reported limited or no access to tech devices or the Internet (p. 92); how many of our affiliates would answer the same way? This is a question we intend to include in future outreach, although shame may downplay the results to some extent. We need to ensure that inexpensive print options are not only available, but also clearly explicated, either in the course catalog or in the syllabus on the first day of class. This offers librarians the opportunity to work more closely with the campus bookstore (Follet-based) to look into print-on-demand options for Open Educational Resources. Jhangiani (2017a) called the inaccurate assumption that all students have equal access to digital resources "digital redlining," which is an insidious aspect of information privilege.

Reinforcing this concern are the results of our next question: When it comes to digital content, how important is it to you to be able to download content and save it for use when you're not connected to the network (offline availability)? A total of 9.5% (14 students) answered *not important* or *only a little important*; 17.6% answered *neither important nor unimportant*, while 73% (116) ranked it as *important or very*

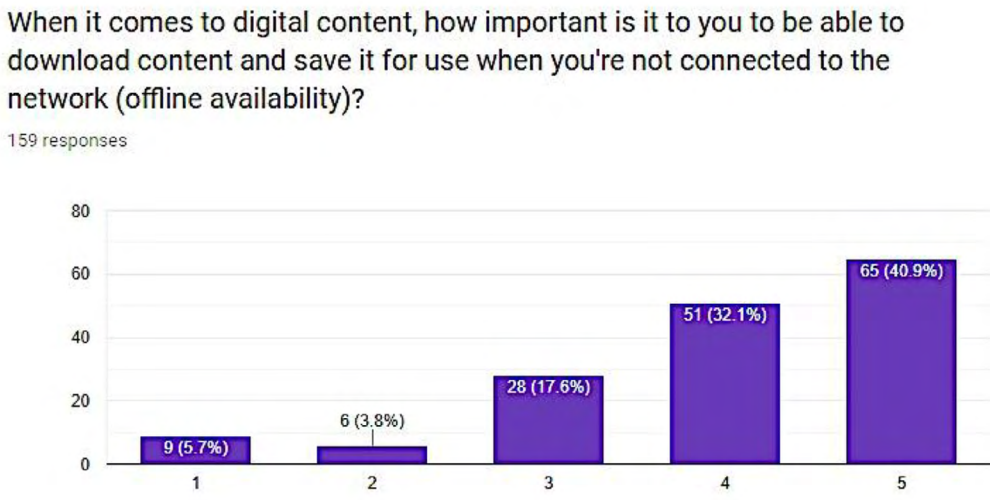

Figure 5. Offline access.

important. This reinforces the fact that reliable Internet access is a concern for our students. Many traditional publishers restrict downloads or other offline access modes for protection of copyright and to ensure that students do not share or distribute the material illegally. While that is a valid concern, it also perpetuates information privilege.

Thompson, Cross, Rigling, and Vickery (2017) posed the theory that "introductory courses assign materials that some students would prefer not to purchase," in contrast to materials for higher-level courses that would "be valued as part of a personal or professional library" (p. 122). Our data supports that hypothesis: 38.4% of our respondents were Master's students, with 30.2% classified as "upper classmen" (third, fourth, or fifth year undergraduates). This correlates quite closely with 51.5% of students saying that it was *important* or *very important* to be able to keep their texts (books, research articles) after the end of the class/end of term/after graduation/after leaving the university. A total of 26.4% said that they had *no feeling of importance*, with less than one-quarter (22.1%) saying that it was *unimportant* or *not very important*.

Most encouraging for our outreach was the feedback on our last question: How interested are you in learning more about affordable/accessible course material, which can support your education and financial needs, and the needs of others (peers, friends, family)? One student said *not at all interested*, three students said *not very interested*, eleven students (6.9%) said *neither interested nor disinterested*, 27% said *interested*, and 63.5% stated that they were *very interested* in learning more. We hope that this interest will translate into partnerships with librarians and student leadership groups that will learn about and spread the word regarding open course material options.

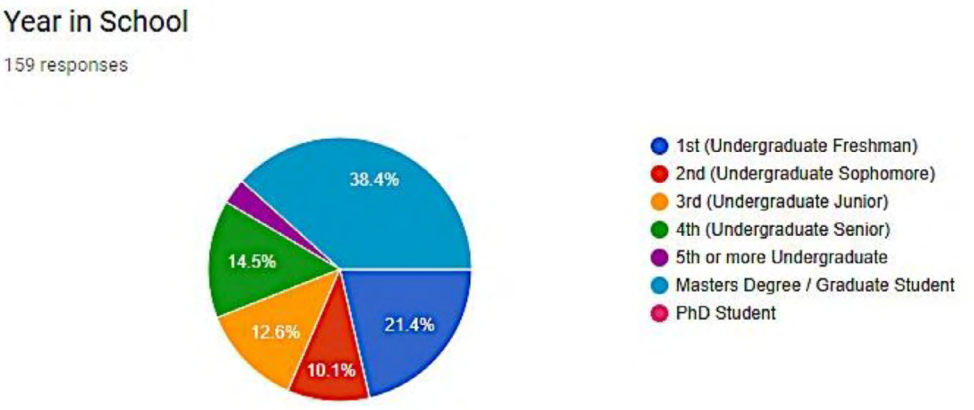

Figure 6. Year in school.

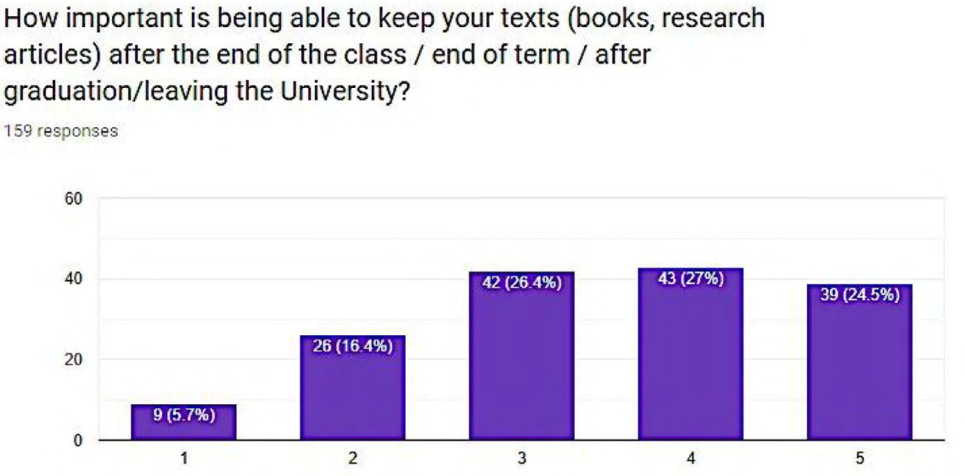

Figure 7. Perpetual access.

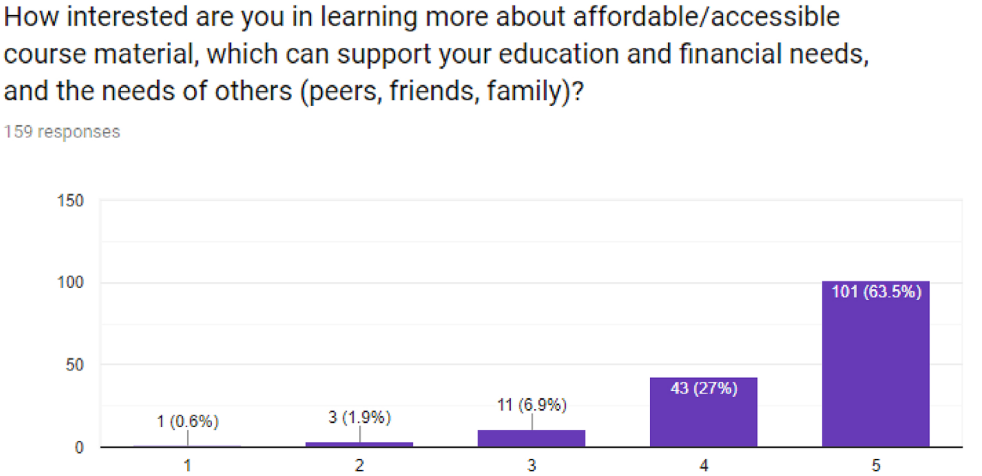

Figure 8. Learning more.

Continuing and Expanding Outreach

Just as our background work involved both faculty and students, so will our outreach going forward. To best address faculty barriers to adoption, it is our intent to develop a faculty survey based on questions asked by Allen and Seaman (2014), Belikov and Bodily (2016), and Braddlee (2019). We hope to ascertain what Adams State's faculty know or perceive about OER, and utilize the information gleaned to help shape our future outreach efforts. In addition, we have a $1000 dollar grant stipend, which we hope to use to incentivize five faculty members to spend 10 hours reviewing an open text in their field. Faculty members who are skeptical about the quality of open textbooks/resources are often pleasantly surprised when they dig into the material in order to review it (Ernst & Cohen, 2019). Many open texts are openly licensed versions of well-known, core textbooks in the field, were produced at "good" institutions (perceived as being of inherently better quality than lesser-known schools), or were highly reviewed by leading professionals in the field (e.g., MIT professors). With continued and persistent outreach and education, as well as clearly outlined ways in which librarians can assist instructors with finding resources, we hope the initiative will gain momentum.

However, our primary focus will be to develop working relationships with student representatives on campus, including Adams' Associated Student & Faculty Senate (AS&F). This group can help us interpret our survey results, make effective use of the data we have collected, and identify the ways students can effectively communicate their needs. We would also like to form an OER advisory committee that includes representatives from all four campus groups: students, faculty, librarians, and administration. We want to emulate North Carolina State University Libraries' efforts to "connect with our students over their experience ... [and] engage them in conversations that empower student advocacy for open educational resources" (Thompson et al., 2017, p. 123). Even more, the library could directly benefit from these kinds of connections. Thompson et al. (2017) further stated "[t]hese conversations have also helped us to spread the word about the Libraries' commitment to textbook affordability ... engendering recognition and appreciation of the Libraries." Most campus libraries would no doubt find that kind of appreciation advantageous.

In addition to our faculty survey, we intend to revamp our initial student survey to include some of the following questions:

- Did you consider textbook costs when registering for classes?
- Have you chosen not to enroll in a required course due to textbook costs?
- If so, what level was the course?
- How many courses have you ___ because you couldn't afford textbooks or course materials (including access codes)?

    - Not registered for
    - Failed
    - Withdrawn from
- How have you sought to mitigate high textbook costs?
    - Decided not to purchase material at all
    - Rented digital (online) copy
    - Rented print (physical) copy
    - Bought used copy from the campus bookstore
    - Bought used copy from another source (Amazon, Chegg, friend, classmate, etc.)
    - Shared a copy with classmates/friends
    - Used a library copy (Reserve or general stacks)
- Do you have consistent, reliable access to both a tech device and Internet service in order to access material online?

Conclusion

Our research and survey results have provided us with greater knowledge of the challenges inherent in student outreach and advocacy, and in tailoring faculty promotion of OER. It has given us direction for future outreach, both to students and faculty. It has also shown us how far we have to go before OER will be a fully realized practice on our small, rural campus.

More institutional support will be essential to increase student and faculty engagement, although we acknowledge that support—given the location and size of our school—is far easier said than done. While the results of our advocacy efforts with faculty were mixed, we acknowledge the necessity of faculty involvement with OER initiatives. And we have come to understand that the presence of students advocating for themselves to those faculty members is also essential. Our desire is to educate students about faculty barriers to adoptions and to show how students can take an active role in advocating for more support. More engagement from students through student government and participation in an OER Advisory Committee will further our goals of having student voices heard. We must strive to bridge the gap between librarians and faculty through student advocates if we are to bring OER to Adams State University.

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Collaborative Partnerships between State Agencies and Institutions of Higher Education: Working Together to Save Students Money through OER

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Abstract

Auburn University at Montgomery (AUM) recently collaborated with the Alabama Commission on Higher Education (ACHE) and the Alabama Community College System (ACCS) to engage in two open educational resources (OER) projects designed to educate higher education faculty and staff and to provide affordable access to education for students in Alabama.

This article highlights the two grant projects the authors spearheaded, and their impact and relationship with the statewide OER initiative focused on education, promotion, and content development over the course of a year. The first project was a statewide OER workshop the AUM Library hosted. This workshop brought together speakers and researchers from the national and local OER movement, who educated students, faculty, and staff from Alabama institutions about OER. The second project involved the creation and publication of the first open textbook published on the newly formed statewide Alabama OER Commons.

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The authors describe the purpose of the grant projects, and how their work aligned with global OER strategies like those agreed upon in the Paris OER Declaration 2012. The authors also explore how building relationships with ACHE/ACCS, higher education institutions in Alabama, and departments across their campus allowed them to obtain funding and participation in the projects. Additionally, the authors detail the outcome of the three workshops, which were the catalyst for a successful statewide OER initiative. Moreover, the authors examine the standards that must be followed when creating an OER textbook, how technology such as Pressbooks help facilitate the ease of development for an electronic text, and how they incorporated and openly licensed multimedia for engagement. Finally, the authors discuss publishing the textbook in the Alabama OER Commons, while tracking global usage with Google Analytics to gauge the impact of the project.

Keywords: Auburn University at Montgomery**,** Alabama OER Commons, OER**,** open educational resources

Asociaciones de colaboración entre agencias estatales e instituciones de educación superior: trabajando juntos para ahorrar dinero a los estudiantes a través de REA

Resumen

Auburn University at Montgomery (AUM) colaboró recientemente con la Comisión de Educación Superior de Alabama (ACHE) y Alabama Community College System (ACCS) para participar en dos proyectos de Recursos Educativos Abiertos (REA) diseñados para educar al profesorado y al personal de educación superior y proporcionar acceso asequible a la educación para estudiantes en Alabama.

Este artículo destaca los dos proyectos de subvención que encabezaron los autores y su impacto y relación con la iniciativa REA a nivel estatal centrada en la educación, la promoción y el desarrollo de contenido en el transcurso de un año. El primer proyecto fue un taller de REA en todo el estado organizado por la Biblioteca AUM. Este taller reunió a oradores e investigadores del movimiento nacional y local de REA, quienes educaron a estudiantes, profesores y personal de instituciones de Alabama sobre REA. El segundo pro-

yecto involucró la creación y publicación del primer libro de texto abierto publicado en el recién formado estado de Alabama OER Commons.

Los autores describen el propósito de los proyectos de subvención y cómo su trabajo se alineó con las estrategias globales de REA como las acordadas en la Declaración 2012 de REA de París. También exploran cómo construir relaciones con ACHE / ACCS, instituciones de educación superior en Alabama y departamentos a través de su campus les permitió obtener financiación y participación en los proyectos. Además, los autores detallan el resultado de los tres talleres, que fueron el catalizador de una exitosa iniciativa REA en todo el estado. Además, los autores examinan los estándares que uno debe seguir al crear un libro de texto REA, la manera en que la tecnología como Pressbooks ayuda a facilitar el desarrollo de un texto electrónico y cómo incorporaron y licenciaron abiertamente multimedia para el compromiso. Finalmente, los autores discuten la publicación del libro de texto en Alabama OER Commons, mientras rastrean el uso global con Google Analytics para medir el impacto del proyecto.

Palabras clave: Auburn University at Montgomery, Alabama OER Commons, REA, Recursos Educativos Abiertos

州政府机构与高等教育机构之间的协作式伙伴关系：通过开放教育资源（OER）共同为学生省钱

摘要

奥本大学蒙哥马利分校（AUM）近期与阿拉巴马州高等教育委员会（ACHE）和阿拉巴马州社区学校体系（ACCS）共同协作参与两个开放教育资源（OER）项目，这两个项目的设计是用于教育从事高等教育的教师和员工，并为阿拉巴马州学生提供可负担的教育机会。

本文强调了一年时间内这两个由作者带领的经费项目、项目产生的影响，以及项目与该州OER倡议计划之间的关系，后者聚焦于教育、推广和内容开发。第一个项目是AUM图书馆主办的全州OER研讨会。研讨会汇聚了来自国家和地方OER运动的发言人和研究学者，他们曾对阿拉巴马州各机构的学生、教师、员工进行过OER知识教育。第二个项目涉及在刚

成立的阿拉巴马州OER共享资源（Alabama OER Commons）上发行的第一本开放课本的创建和出版。

作者描述了经费项目的目的，以及他们的工作如何与全球OER战略保持一致，例如那些在2012年《巴黎开放教育资源宣言》中所达成的战略。作者还探究了与ACHE/ACCS、阿拉巴马州高等教育机构、以及校园各部门之间建立伙伴关系如何能允许其获得经费和项目参与。此外，作者详细描述了三个研讨会得出的结果，这三个研讨会推动了全州OER倡议的成功实现。并且，作者检验了创建一本OER课本时所必须遵循的规则，检验了例如Pressbooks等技术如何帮助促进电子内容的轻松开发，检验了其如何整合多媒体、并对多媒体实现开放许可，以促进参与。最后，作者探讨了在阿拉巴马州OER共享资源中出版图书，同时用谷歌分析（Google Analytics）追踪全球对OER的使用，以估计该项目所产生的影响。

关键词：奥本大学蒙哥马利分校，阿拉巴马州OER共享资源（Alabama OER Commons），OER，开放教育资源

Introduction

Academic institutions have long recognized that student loan debt is a complicated issue, and many have recently taken steps to help alleviate some of the financial pressures experienced by their students. Open educational resources (OER) quickly became a topic of discussion at most institutions of higher education when the American Enterprise Institute (AEI) reported in 2012 that the cost of textbooks over the past 35 years had increased 812%. Using Bureau of Labor Statistics and Census Bureau data, AEI concluded "college textbooks [had] risen more than three times the amount of the average increase for all goods and services" (Perry, 2012, p. 1). This oft-quoted information was certainly not lost on families already struggling to meet the high cost of education, and marked a turning point in the intensity of those conversations (Perry, 2012).

This paper highlights the two grant-funded projects the authors spearheaded, and their impact and relationship with the statewide OER initiative focused on education, promotion, and content development. Project 1: OER Statewide Workshops involved an OER workshop hosted by the Auburn University at Montgomery Library in collaboration with the Alabama Commission on Higher Education (ACHE)

and the Alabama Community College System (ACCS). The workshop brought together speakers and researchers from the national and local OER movement, who educated students, faculty, and staff from state institutions about the many aspects of OER. Project 2: ACHE/ACCS Open Educational Resources Grant resulted in the creation and publication of the first open textbook published on the newly formed Alabama OER Commons.

The textbook, *Composing Ourselves and Our World: A Guide to First-Year Writing*, was created by Auburn University at Montgomery as part of the grant program. Along with its partner institutions, Bishop State Community College and the University of South Alabama, a reported 4,148 students in English 1010 and 1020 saved an estimated $386,841 off the cost of textbooks as a result of the project. A reported 1,102 students saved an estimated average of $88.45 each in English 1010, for a total of $97,471. A group of 3,046 had an average savings of $95.00 for English 1020, for a total of $289,370.

Project 1: OER Statewide Workshops

In the State of Alabama, student loan debt has long been a topic of intense discussion. As a result, Auburn University at Montgomery, a four-year regional school in the central part of the state, began working on ways to reduce the costs of textbooks for their students in early 2017. The impetus to reduce education expenses came when students questioned the cost of a required accounting textbook. In response, Auburn University at Montgomery created the Required Reading Cost Committee, an ad hoc Faculty Senate Committee dedicated to evaluating options that faculty members could use to reduce the high costs of required textbooks. One of the many affordability options discussed by the committee involved OER materials.

At the same time Auburn University at Montgomery was forming their committee, the Alabama Commission on Higher Education hired a new executive director, Dr. Jim Purcell. A native of Alabama, Dr. Purcell obtained degrees from three separate universities within the state, and was thus uniquely familiar with many of the issues facing higher education in Alabama. As a result, he was quick to announce efforts to combat the high cost of education via cost-saving measures such as the Free Application for Federal Student Aid (FAFSA) Completion Project and the use of OER materials (Alabama Commission on Higher Education, 2018a). Not only did ACHE implement the OER program, it showed commitment to OER initiatives by adding them to its strategic plan. According to the ACHE's 2017-2018 annual report, the program "will help to replace expensive, commercial print textbooks with free digital learning tools for general education courses that have high enrollments" (Alabama Commission on Higher Education, 2018b, p. 3). The projected outcome of the program was a cost savings of more than $2,000,000 that would affect over 18,000 students (Alabama Commission on Higher Education, 2018b). Moreover, to ensure

the projects had the necessary support to succeed, Dr. Purcell appointed Ron Leonard, the Director of the Network of Alabama Academic Libraries, to the newly created position of Director of Special Initiatives. Thanks to his new position, Leonard was ideally situated to further state OER efforts.

The OER initiatives put forth by ACHE would eventually encompass two vastly different efforts. The first was a learning initiative designed to educate librarians and faculty members on the use of OER materials. This effort included both the Alabama Community College System and four-year institutions, blanketing the state in an effort to provide coverage to as many librarians and educators as possible. To accomplish this, ACHE made three $5,000 grants available to academic libraries willing to host all-day OER workshops. The intent of each grant was to cover deliverables such as reimbursement for speakers and their travel expenses, honorariums, food, and other related expenses. Geographically, Auburn University at Montgomery made it an ideal choice for a workshop in the center of the state; Athens State University covered the northern portion and the University of South Alabama covered the southern portion.

The workshop at Auburn University at Montgomery brought together a diverse group of speakers and researchers from the national and local OER movement, who educated nearly 150 librarians, students, faculty, and staff from state institutions about OER. The Dean of the Library brought in nationally known OER speakers to open and close the March 2018 workshop. David Ernst, Director of the Center for Open Education and Executive Director of the Open Textbook Network (OTN), was the keynote speaker. OTN is a vibrant OER community of over 630 higher education institutions committed to improving access, affordability, and academic success through open education (Falldin & Lauritsen, 2017, Community Support). Moreover, OTN has been a key mentor in helping the OER movement spread in the state. In a bookend approach, Jeff Gallant, the Program Director for Affordable Learning Georgia (ALG), agreed to close out the workshop. ALG, a University System of Georgia Library Services initiative, aims to lower the cost of textbooks for students and contribute to their course retention, progression, and completion. Gallant focused on best practices as learned from ALG's long history of working to save students money.

To round out the workshop speakers, a number of Alabama educators involved with OER discussed their efforts to save students money. In addition, Charles Lee, an Alabama student directly impacted by the high cost of college education, told his real Horatio Alger story. Lee's story, previously published in *Forbes*, provided perfect context to the OER workshop. In the article, Lee describes living with the burdens of financial pressure related to the high cost of education. He detailed how in the past he had not been able to afford classroom materials, and even had to decide between paying for gas and food for the week (Lee, 2017).

The remainder of the morning session consisted of a panel discussing successful OER initiatives at their institutions, followed by an educator who discussed a survey of the prevalence of OER in the Southeast. *OER on Your Campus: Challenges & Solutions* was the topic for the table discussions conducted during lunch. In the afternoon, another panel discussed the initial steps they undertook that resulted in OER success at their institution. To give a different perspective on OER options, a vendor discussed turnkey solutions for open and e-Textbooks that they make available to higher education institutions.

In response to the discussions generated by the three statewide workshops, the Council of the Alabama Virtual Library stepped in to begin developing a plan for a statewide OER repository using a common publishing mechanism. The effort had significant backing from ACHE, ACCS, and public and academic librarians, which quickly led to the Council reviewing a number of possible options for the repository. Eventually, the Council developed a partnership with OER Commons to create the Alabama OER Commons. After considerable work by the Alabama OER Commons Hub Design Group, the site went live in April of 2019.

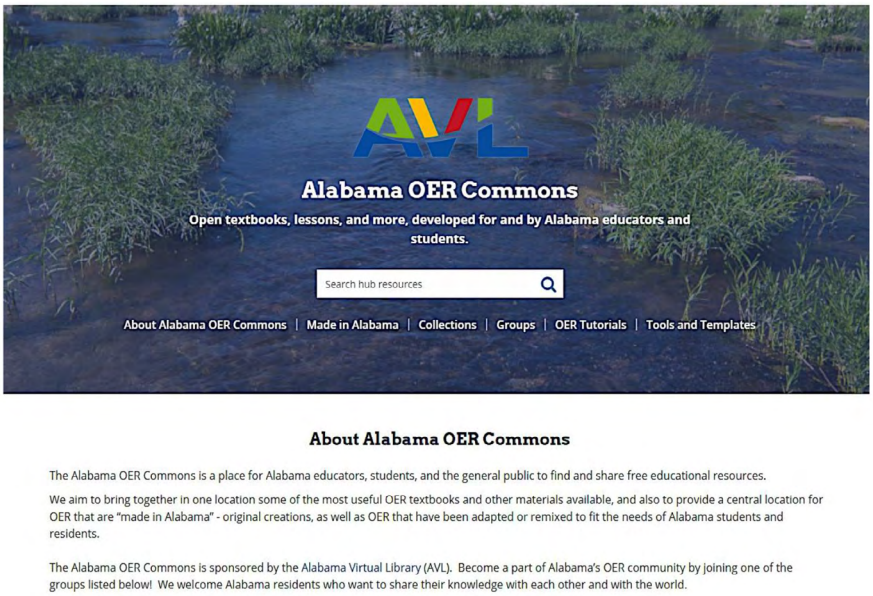

Figure 1. Alabama OER Commons website.

Shortly after the completion of the workshops, ACHE and ACCS developed a collaborative program to provide project grants ranging from $250 to $5,000 to public two- and four-year institutions interested in authoring OER materials (ACHE/ACCS, 2018). The joint Open Educational Resources Grant Program funded 23 of 37 proposals submitted in 2018. The projected

outcome of the projects would involve 18,000 students with a cost savings to those students of over $2,000,000. One requirement of the program was that all resources developed as a result of the grants had to be uploaded to the newly developed Alabama OER Commons. Auburn University at Montgomery was the recipient of two grants out of the twenty-three awarded throughout the state in 2018.

Project 2: ACHE/ACCS Open Educational Resources Grant

ACHE and ACCS offered multiple grants to develop OER to replace textbooks and other costly teaching and learning materials at Alabama higher education institutions. At Auburn University at Montgomery, a collaborative team of English Composition faculty, librarians, and instructional designers submitted a proposal to replace the English Composition I and II required course materials with an open textbook. Besides saving students money, the project would ultimately provide timely access to course content. This is particularly important to the students at Auburn University at Montgomery, where approximately 68% of the undergraduate population receives financial aid (U.S. News & World Report, 2019). It is well documented that some students do not have their textbooks purchased on the first day of classes as they deal with the high costs associated with purchasing commercial textbooks (Richard, Cleavenger, & Storey, 2014). Additionally, students at some institutions are unable to purchase books until after the first or second week of classes due to late disbursement of financial aid. Moreover, despite having funds to purchase textbooks, some students elect not to purchase them as a way of saving money to put themselves through school. As numerous studies have shown, students who do not have timely access to course content have greater challenges achieving successful learning outcomes (Colvard, Park, & Watson, 2018). Thus, having an OER available on the first day of classes ensures all students have access to the course materials they need to be successful. Utilizing OERs, Auburn University at Montgomery sought ways to lighten the financial pressures of students, create measurable improvement of student learning outcomes, and improve student retention.

Project 2: Inspire Engagement and Empower Results through OERs

Because the commercially published English Composition I textbook at Auburn University at Montgomery cost $60.00, the OER project team sought to adapt and create an open textbook for this required high enrollment freshman composition course. The purpose of English Composition I is to teach students the essentials of composition and rhetoric in order to prepare them for ongoing writing instruction in English Composition II. In Composition I, students learn a fundamental approach to writing (and reading) tasks at the college level with an emphasis on developing proficien-

cy in the writing process, writing with a variety of purposes for various audiences, and writing in a variety of genres. Project 2, aptly named Inspire Engagement and Empower Results through OERs, sought to develop a textbook using a compilation of existing open content and original content developed by Auburn University at Montgomery faculty. To keep costs at a minimum, the team planned to create the textbook on the Pressbooks platform. To provide students with easy access, the textbook would be made available through web links in Blackboard, the University's learning management system (LMS).

The first phase of the project was to develop the textbook in anticipation of a pilot project during the Spring 2019 semester in both the online and on-campus English Composition I and II sections. Based upon the feedback received from students after the pilot semester, it was anticipated that the open textbook would be offered for all sections in Fall 2019. Once the open textbook is available in all sections, the estimated savings impact for students at Auburn University at Montgomery will be over $100,000 annually.

The projected timeline for the development of the open textbook was four months, which was met. A schedule of milestones and tasks were assigned to the faculty and instructional design teams to keep the project on track. That project plan, shown below, provided a logical sequence of events during development and implementation.

1. Conduct baseline pre-implementation textbook survey during the Fall 2018 semester.
2. In a shared document, create a table of contents with links to the specific OER content.
3. Create a style guide.
4. Create a Pressbook title.
5. The instructional designers will verify the Creative Commons rights and place content with attribution into Pressbooks.
6. The team will curate university photographic resources and contract with a student to create cover art.
7. Faculty team will review textbook, provide feedback, and sign off on changes.
8. Pilot the textbook during Spring 2019 semester and implement a qualitative textbook survey.

Project 2: Open Textbook Creation

The mantra of the Rebus community is, "The idea that books are the work of a single person, the author, is a bit of a myth, really. In reality, it takes a village to create any book" (Ashok & Hyde, 2018, p. 1). During the creation of the textbook, the team relied on this mantra and the work of the Rebus community. To facilitate the creation of the Auburn University at Montgomery open textbook, an intensive outline was created using tables inside of Google Docs. This gave the

entire team the ability to add structure, such as chapters, sections, chapter objectives, key terms, and exercises. Using the shared document, faculty provided the design team with links to open resources that were to be included in specific areas of the textbook. The final column in the table provided an area to communicate notes and receive sign off on final edits before content was moved into the textbook.

As previously mentioned, Pressbooks was selected for the creation of the open textbook. Ideally suited for creating OER materials, Pressbooks' slogan is "The Open Book Creation Platform" (https://pressbooks.com/). Pressbooks was also chosen due to the designers' experience with the platform, and because it is built on WordPress, which allows for the creation and sharing of electronic textbooks. Moreover, Pressbooks is one of the most commonly used platforms for publishing open textbooks globally (Falldin & Lauritsen, 2017). Pressbooks is also extremely affordable. Auburn University at Montgomery chose their PDF + EBOOK Pro plan, which has a small fee of $99.00 per developed book title. This plan includes hosting, software, and public access, along with the ability to provide a printable PDF for students. This demonstrates that with minimal initial investment, a university can see a major return in savings for their students.

To highlight the need to differentiate a work that is intended as a classroom learning resource from a novel, Daniel K. Schneider created a textbook writing tutorial where he identified three areas of a textbook: openers, closers, and integrated pedagogical devices (Schneider, 2008). The project team implemented these instructional design elements to assist faculty with adoption of the open textbook.

The University of Minnesota (n.d.), in their open course entitled *OTN Publishing Curriculum*, defined openers as items such as learning objectives, introductions, and focus questions. When creating a digital textbook today, one might also expect to see an introductory video that relates to the chapter or section content. These videos add a layer of student engagement and can be embedded from sites such as YouTube in the electronic version or linked via the use of QR Codes in an offline format.

The University of Minnesota described closers, which can help learners reinforce their learning. These items can be chapter summaries, review problems, and links to further reading. Closers in Project 2 were titled Important Concepts and Reflective Writing Prompts. Other development recommendations may include reinforcement tools like Key Takeaways and Chapter Review Questions.

The University of Minnesota described Integrated Pedagogical Devices (IPD) as instructional design elements in a textbook that assist with student learning. IPD could include things like bolded vocabulary words that are important concepts in a chapter. IPD can also be biographies of an author discussed in the open text. Case studies can also be created to provide students

a bridge from the readings to real world examples.

Creating a textbook involves planning design elements that help students process content material in order to gain knowledge. These elements are particularly important when developing open textbooks, which often lack ancillary resources that may be found in commercial publishing.

Project 2: Openly Licensing & Including Multimedia

Auburn University at Montgomery's staff photographer, Frank Williams, played an integral part in the creation of the open textbook by providing access to his digital collection of photographs hosted on SmugMug. The photos date back over a decade and number in the thousands. In return, he simply asked for attribution for providing the team with permission to use the photographs.

Culling a group of photos from the larger archive, the design team developed a collection of photographs on Flickr, an online tool used to organize and embed the media in Pressbooks. Flickr contains built-in tools that allowed the team to select all of the images and license them using Creative Commons Licensing. Attribution (CCBY), the license chosen for the images, is a license from Creative Commons that "lets others distribute, remix, tweak, and build upon your work" (Creative Commons, n.d., p. 3). At the beginning of each chapter, the team placed images of students in a variety of settings around Auburn University at Montgomery. This added a level of engagement and familiarity to the text for their students.

Figure 2. The design team used images of Auburn University students for each chapter.

For the textbook cover art, the team hired a student from the University's Fine Arts Department. She produced a variety of concepts while gaining valuable experience working with Auburn University at Montgomery as a client. For her efforts, she was provided attribution in the acknowledgement section of the open textbook. A link to her personal website was also provided in the acknowledgment section, so that everyone who reads the book has the opportunity to view other work she has completed in her portfolio.

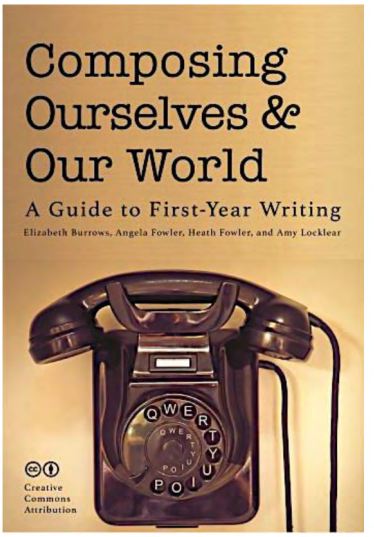

Figure 3. Cover artwork created by a student from the Fine Arts department at Auburn University.

To provide engaging learning material that aligned with the textbook, educational YouTube videos were embedded in Pressbooks preceding the body of each chapter section. Each video was embedded directly below the section objectives so that students did not have to follow outside links that could distract from their readings.

Following the creation process of the textbook, it was sent back to the faculty for final review and feedback. The project then moved to the pilot stage for implementation in classes.

Project 2: OER Pilot Implementation Survey Results

Two different surveys were distributed to students in the English Composition I and II classes. The first survey was distributed in Fall 2018 before the open textbook pilot implementation. This survey was used to set a baseline for comparison. At the end of the Spring 2019 pilot semester, a second student survey was distributed to capture data on satisfaction and achievement of learning outcomes. This survey measured the changes and im-

pact of introducing the open textbook.

In Fall 2018, the Pre-Pilot Open Textbook survey was distributed to the English Composition I and II students, for both those taking on-campus and online courses. When students were asked if they had a textbook on the first day of class, 64% of respondents reported they did not. Of this group of students, 22% were waiting for Financial Aid or VA money, 19% indicated the book was too expensive, and 13% were waiting for their paycheck. The survey results support the efforts of Auburn University at Montgomery to develop an open textbook and show that with it the gap of nearly 64% of students without a textbook on the first day of class can be closed (See Table 1).

The second survey, the Open Textbook Preference Survey, was sent to a mix of participants and measured students' reaction to the open textbook after the pilot semester. English Composition I represented 18% and English Composition II represented 82% of the surveyed students. Of this group, approximately 75% of the students attended on-campus classes and about 25% attended online. The Spring 2019 survey asked students about their preference for using the open textbook compared to purchasing a textbook. Students indicated they preferred access to free digital textbooks at a rate of 77%. Of those surveyed, 71% indicated they liked using the free digital textbook. The results of the second survey indicate that students have a strong preference for using and accessing free digital textbooks.

The survey also asked students about their learning experience with the open textbook. Of the respondents, 76% felt they were able to get better grades during the course by having a free digital textbook. Having the free textbook on the first day of class was important to 71% of students surveyed. For 74% of the students surveyed, responses showed they felt the free textbook enhanced their learning experience. This evidence demonstrated that students value OER, and Auburn University at Montgomery used the results to encourage further development of OER materials (see Table 2).

Project 2: State OER Commons and Google Analytics

Because of the OER projects funded by ACHE and ACCS, the growth of OER in the state, and generous support from the Alabama Virtual Library, the Alabama OER Commons was developed. The Alabama OER Commons contains a collection area called Alabama Open Textbooks, which is specifically designated for textbooks created within the state. The textbook from Project 2 was the first to be published in this area.

Upon completion of the open textbook and subsequent publishing in the Alabama OER Commons, ways to measure usage were explored. A focus on the potential audience and what the impact could be on students was at the forefront of the discussion. After performing research, the team decided to use Google Analytics. The process was

Table 1. Pre-Pilot Open Textbook Survey

Fall 2018		
Course Name	**Percentage of students participating in survey**	**Number of students participating in survey**
English Composition I	80%	330
English Composition II	20%	84
Total	100%	414

Course Delivery		
On-campus	93%	383
Online	7%	31
Total	100%	414

Did you have your textbook on your first day of class?		
Yes	36%	151
No	64%	263
Total	100%	414

If you did not have your textbook on the first day of class, which of the following best describes the reason?		
Survey Options	**Percentage who chose this option**	**Number of students who chose this option**
Waiting for Financial Aid or VA money	22%	58
Too expensive	19%	50
Waiting for my next paycheck	13%	35
I do not plan to purchase the textbook	8%	21
Bookstore did not have the textbook	4%	10
Purchased the book online and waiting for it to arrive	3%	8
Enrolled late for the course	3%	8
Other	28%	73
Total	100%	263

Table 2. Open Textbook Preference Survey

Spring 2019		
Course Name	**Percentage of students participating in survey**	**Number of students participating in survey**
English Composition I	18%	16
English Composition II	82%	73
Total	100%	89

Course Delivery		
On-campus	75%	67
Online	25%	22
Total	100%	89

Statement	**Agree**	**Somewhat Agree**	**Neutral**	**Somewhat Disagree**	**Disagree**
The free digital textbook enhanced my learning.	61.80% (55)	14.61% (13)	10.11% (9)	0.00% (0)	13.48% (12)
Having the free digital textbook on the first day of class is important to me.	59.55% (53)	11.24% (10)	15.73% (14)	3.37% (3)	10.11% (9)
I feel I'm able to get better grades during the course by having a free digital textbook.	64.04% (57)	10.11% (9)	14.61% (13)	0.00% (0)	11.24% (10)

Statement	**Agree**	**Somewhat Agree**	**Neutral**	**Somewhat Disagree**	**Disagree**
I like using the free digital textbook.	65.17% (58)	5.62% (5)	13.48% (12)	7.87% (7)	7.87% (7)
I prefer access to a free digital text-book.	67.42% (60)	10.11% (9)	13.48% (12)	0.00% (0)	8.99% (8)
I prefer purchasing a textbook.	23.60% (21)	5.62% (5)	20.22% (18)	3.37% (3)	47.19% (42)

simple to initiate because the book was already hosted by Pressbooks. Once Google was provided with the link to the textbook, the team was able to track usage by country, users, sessions, and more.

Google Analytics also offers the ability to track the book by referral. If Google Analytics reports a referral, it means that the work was published on another site and a user is accessing it from a link from within that site. Between January 2019 and October 2019, records indicated that 4,683 users accessed the text from referrals. Of those users, 3,158 accessed the textbook from the Auburn University at Montgomery Blackboard system, and 47 accessed it from a link sent via email. Over 900 users accessed the textbook from a LMS outside Auburn University at Montgomery, while the remaining users accessed the textbook from a variety of sources such as Facebook and Internet search engines. The fact that so many users accessed the book from an LMS other than the Auburn University at Montgomery Blackboard system suggests that other universities are already using the textbook in their courses. Moreover, reports from Google Analytics show the textbook has been accessed by users in 52 countries and counting.

Conclusion

Students in Alabama have suffered significantly in terms of high education costs. The state is in the top tier for cutting appropriations to higher education, and students also fall into the top tier for debt load, averaging $35,364 per graduate (Purcell, 2019). According to Census Bureau estimates, the state has a median income of $48,123, which is well below the nationwide median household income of $61,372 (Gore, 2019). These disparate numbers highlight the hardship suffered by many graduates as they struggle to pay off their student loans.

Thanks to the vision of ACHE, ACCS, and state institutions of higher education, collaborations to reduce the cost of educational materials have sprung up throughout Alabama. Moreover, with schools and higher education agencies collaborating effectively, students are already benefiting from substantial savings in a very short period of time. The results of the statewide workshops and OER grant projects prove that making education affordable can be accomplished with a small amount of seed money. As evidenced by the partnerships established from Project 2, students in the state saved an estimated $386,941 in 2019 alone. However, sustainability becomes the key issue to be addressed as Alabama seeks to adopt, adapt, create, manage, and continuously support OER efforts.

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A Community-Based Collaborative of OER programs: A Case Study of University Initiatives Tied Together by Open Oregon Educational Resources

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With special consideration to Amy Hofer, Open Oregon Educational Resources

Abstract

At the grassroots of open educational resources (OER) are students. For many faculty and OER leaders, our introduction to OER is a desire to save students money on textbooks in an effort to help them get through college with less debt. In Oregon, grassroots efforts and inter-institutional collaboration are supported by the state through Open Oregon Educational Resources. While programs are often conceived of at the institutional level, they grow because of centralized support. This article discusses five different academic initiatives that were all inspired individually, yet collaborate and grow together through statewide coordination.

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The University of Oregon is investing in OER adoption in strategically targeted courses, providing faculty and departmental incentives for long term OER adoption, partnering with major institutional initiatives, and leveraging consortial memberships and support provided through Open Oregon Educational Resources to ensure alignment with best practices and statewide initiatives.

Western Oregon University leveraged stipends provided by Open Oregon Educational Resources to create engagement on campus and to advocate for OER funding with the University Budget Advisory Committee.

Oregon Institute of Technology set aside a portion of the library budget to give mini-grants to faculty supporting open resources in upper division science and technology classes. The program is self-propagating both in terms of marketing and in new converts to the open movement. Southern Oregon University conducted a "course material affordability" survey of students, which led to highly constructive conversations with faculty about students' use of required course materials in the classes they teach. The "Course Design Academy," an effort to improve learning outcomes in gateway courses with high DWIF rates, included adoption of OERs as part of the course redesign.

Treasure Valley Community College joined with the Oregon Community College Library Association to launch a grassroots OER initiative. Utilizing Open Oregon Educational Resources funds for textbook review workshops and grant stipends to get adoptions and expand the project, the college established a growing program that includes student outreach, library provision of OER materials, research assistance, professional development opportunities, and instructional design support.

Each of these programs represents an individualized approach tailored to very different campus environments, yet the overlaps in practice and statewide coordination enable us to tell a bigger story about student savings in Oregon since 2015.

Keywords: community-based, OER programs, case study, Open Oregon Educational Resources

Una colaboración basada en la comunidad de programas REA; Un estudio de caso de iniciativas universitarias vinculadas por Open Oregon Educational Resources

Resumen

En la base de los recursos educativos abiertos están los estudiantes. Para muchos profesores y líderes de REA, nuestra introducción a REA es un deseo de ahorrar dinero a los estudiantes en los libros de texto en un esfuerzo por ayudarlos a terminar la universidad con menos deudas. En Oregon, el estado apoya los esfuerzos de base y la colaboración interinstitucional a través de Open Oregon Educational Resources. Si bien los programas a menudo se conciben a nivel institucional, crecen debido al apoyo centralizado. Este artículo analiza cinco iniciativas académicas diferentes que se inspiraron individualmente pero que colaboran y crecen juntas a través de la coordinación estatal.

La Universidad de Oregón está invirtiendo en la adopción de REA en cursos estratégicamente dirigidos; proporcionar incentivos docentes y departamentales para la adopción de REA a largo plazo; asociarse con las principales iniciativas institucionales y aprovechar las membresías consorciadas y el apoyo brindado a través de Open Oregon Educational Resources para garantizar la alineación con las mejores prácticas e iniciativas estatales.

Western Oregon University aprovechó los estipendios provistos por Open Oregon Educational Resources para crear participación en el campus y abogar por la financiación de REA con el Comité Asesor de Presupuesto de la Universidad.

El Instituto de Tecnología de Oregón apartó una parte del presupuesto de la biblioteca para otorgar pequeñas subvenciones al profesorado que apoya recursos abiertos en las clases de ciencia y tecnología de la división superior. El programa se autopropaga tanto en marketing como en nuevos conversos al movimiento abierto.

Southern Oregon University realizó una encuesta de "asequibilidad del material del curso" a los estudiantes, lo que condujo a conversaciones altamente constructivas con el profesorado sobre el uso de los materiales del curso requeridos por los estudiantes en las clases que imparten. La "Academia de diseño de cursos", un esfuerzo para mejorar los resultados de aprendizaje en cursos de

acceso con altas tasas de DWIF, incluyó la adopción de REA como parte del rediseño del curso.

Treasure Valley Community College se unió a la Asociación de Bibliotecas de Oregon Community College para lanzar una iniciativa de base REA. Utilizando fondos de Recursos Educativos de Open Oregon para talleres de revisión de libros de texto y estipendios de subvenciones para obtener adopciones y expandir el proyecto, la universidad estableció un programa en crecimiento que incluye divulgación a los estudiantes, provisión de materiales de REA en la biblioteca, asistencia de investigación, oportunidades de desarrollo profesional y apoyo de diseño instructivo.

Cada uno de estos programas representa un enfoque individualizado adaptado a entornos de campus muy diferentes; Sin embargo, las superposiciones en la práctica y la coordinación a nivel estatal nos permiten contar una historia más grande sobre el ahorro estudiantil en Oregón desde 2015.

Palabras clave: basado en la comunidad, programas de REA, estudio de caso, Open Oregon Educational Resources

一项基于社群的开放教育资源（OER）项目协作 ；通过俄勒冈州开放教育资源而联系在一起的大学倡议计划—一项案例研究

摘要

开放教育资源（OER）的基层是学生。对许多教师及OER领导者而言，我们引入的OER是一个为学生节省课本费用的愿望，旨在帮助他们以更少的债务完成学业。通过俄勒冈州开放教育资源（Open Oregon Educational Resources），该州对基层工作和跨机构协作进行支持。尽管项目的构想经常在机构层面进行，但项目的发展受到了集中化的支持。本文探讨了五个独立提出的学术倡议，它们通过全州性的协调进行协作和共同成长。

俄勒冈大学正努力将OER采纳到战略性目标课程中；为长期OER的采纳提供教师和院系激励；与主要机构倡议建立伙伴关系，同时充分利用由俄勒冈州开放教育资源提供的大学联盟成员身份及支持，以确保与最佳实践和州倡议保持一致。

西俄勒冈大学充分利用由俄勒冈州开放教育资源提供的津贴，建立校园参与，并争取从学校预算咨询委员会处获得OER基金。

俄勒冈理工学院将一部分图书馆预算用于为支持高年级科学与技术课程使用开放资源的教师提供小型经费。该项目的自传播性体现在OER运动推广和首次采纳OER的学校两方面。
南俄勒冈大学开展了一项针对学生的“课程资料可负担性”调查，与教师就学生对教师所要求的课程材料的使用进行了具有高度建设性的对话。“课程设计学院”是一项用于改善高DWIF率入门课的学习成果的工作，其包含了将OERs的采纳作为课程再设计中的一部分。

宝藏谷社区学院与俄勒冈社区学院图书馆协会共同启动了一项基层OER倡议。通过使用俄勒冈开放教育资源为图书评价专题讨论会所提供的基金，以及为采纳和扩大该项目所提供的津贴，宝藏谷社区学院建立了一个不断发展的项目，该项目包括学生外展服务、图书馆对OER材料的提供、研究协助、专业发展机会和教育设计支持。

上述每个项目都代表了一种为不同校园环境量身定制的个性化方法；然而项目实践方面的重叠和全州性的协调让我们能更清晰地展现自2015年以来俄勒冈州学生的开支节省情况。

关键词：基于社区的，开放教育资源项目，案例研究，俄勒冈州开放教育资源（Open Oregon Educational Resources）

Introduction

Open educational resources (OER) and textbook affordability are growing concerns across the higher education community. Textbook affordability is often a starting place for OER support. The case studies described here are examples of programs that started under this concern. While they may have started as individual projects or grassroots efforts at the university and college level, they grow and are supported through Open Oregon Educational Resources.

In 2015, Open Oregon Educational Resources came onto the OER and textbook affordability scene. Originally created by the Oregon Community College Distance Learning Association and funded by the higher education commission's Community College and

Workforce Development program. This was a result of two years of planning and advocacy by the 17 Oregon community colleges. In 2015, Oregon House Bill (HB) 2871 established an OER grant program through the state higher education coordinating commission. The earliest blog post on the site, "OER Regional Conferences: Registration Open," was published on February 16, 2015 (Open Oregon, 2015). In 2017, the two state funding sources were officially brought together into Open Oregon Educational Resources.

Open Oregon Educational Resources is the tie that brings the initiatives described herein together. Later House Bills 2729 in 2017 and 2213 and 2214 in 2019 continue the funding and backing from the State of Oregon. These legislative actions not only provided a framework and resources to ensure compliance with student-focused educational initiatives, but also inspired and catalyzed efforts at public institutions throughout the State of Oregon.

Through the coordinating efforts of Open Oregon Educational Resources, two-year and four-year colleges scattered throughout the state came together regularly to share ideas, combine efforts, and support and inspire each other to help more students afford college and achieve their educational and career goals. This paper examines five such institutions and their individual efforts, along with connection through state funding and Open Oregon Educational Resources.

The University of Oregon leverages educational programs offered through Open Oregon Educational Resources and strategically extends faculty grant programs to high-enrollment upper division courses. Southern Oregon University supported Open Oregon Educational Resources OER grant winners with additional funding and course redesign support through the "Curriculum Design Academy." With support from the Open Oregon Educational Resources "Textbook Sprint," 11 courses at Western Oregon University were transformed to more open pedagogical practices. Oregon Institute of Technology based an internally funded support program on the Open Oregon Educational Resources applications with an upper division spin. Earlier on, though, Treasure Valley Community College was able to significantly grow its OER adoption and use rates through textbook reviews and state-level stipends.

Literature Review

Although the work described here began in 2015, OER was not a new concept. As early as 2001, the William James & Flora Hewlett Foundation funded OER initiatives. In 2019, the foundation has given more than $2.5 million toward OER initiatives as of the writing of this article (Grants, 2019). Non-profit entities, such as Scholarly Publishing and Academic Resources Coalition (SPARC) and Open Oregon Educational Resources, have given financial support, as have individual institutions. There is still a known disparity in student text costs that such initiatives attempt to alleviate (Florida

Virtual Campus 2019). However, with textbook costs continuing to rise and publishers of academic texts changing models from rights of first purchase to short-term licensing, the barriers in access to education not only continue to exist, but widen (McKenzie, 2019). UNESCO (2012) acknowledged that OER and open pedagogy increase access to education and empower students in the learning process. International support and state and community activities lend more weight to new projects.

Open Education has the continued ability to impact higher education. Addressing access and affordability for students is just one area of impact. Open educational practices in the classroom can improve student success and student retention rates (Clovard, Watson, & Park, 2017). Open practices, from open pedagogy to more finely designed courses, are making waves in student learning (DeRosa & Jhangiani, 2018). Engaging students in their own learning environment has been a focus of academia for decades, through elements of instructional design and course quality review. Utilization of OER in courses does more than make materials affordable. It also provides instructors with a platform to customize content specific to their course and style of teaching and provides students with the opportunity to learn in a less overwhelming environment that is more about content and less about information absorption (Lashley, Wesolek, & Langley, 2018). Further, open pedagogical practices are designed to increase application and engagement in the material, while creating understanding in students about their role in scholarly communication and academic publication practices (Bliss & Smith, 2017). All of these elements make participation in open education a necessity for academic institutions.

Recently, publishing and library vendors have attempted to step into the OER field with less than open products. These attempts to colonize OER initiatives are often referred to as openwashing and diminish the impact that grassroots efforts can have. Openwashing as a term is derived from the idea of greenwashing. An openwashed item has the appearance of being open sourced or openly licensed, while continuing to involve proprietary practices (https://openwashing.org). A recent event in the U.S. Pacific Northwest asked participants what open meant to them. Many respondents wrote, "free" or "nothing." Another common theme was on access (Duell, 2019). The wide variety of responses and lack of knowledge could stymie efforts, but in many cases, they offer an opportunity to grow and spread the word more (Wang & Towey, 2017). Librarians and libraries have many opportunities (and challenges) to support and develop OER (Smith & Lee, 2016). In the case of Open Oregon Educational Resources, many, if not most, advisory committee members are librarians from universities or colleges represented on the steering committee.

Academic libraries have proven to be important partners and leaders in the field. Already purveyors of social justice in their conduction of access to information and academic resources,

libraries are key sources of outreach for creating and/or furthering OER initiatives (Smith & Lee, 2016). Their interdisciplinary role on campuses makes them natural partners for faculty and students. Libraries are also innate spaces for collaboration (Dewey, 2017). Open educational efforts, while largely on the backs of faculty to complete, are successfully and sustainably created when partnerships are formed across campus departments to also include areas such as libraries, instructional technology, instructional design, bookstores, student government bodies, and the administration. This type of strategic collaboration is not necessarily simple or intuitive on individual campuses. The need for overarching aid in creating these connections is important to the future of open education movements institutionally and beyond.

The programs discussed below represent individualized approaches tailored to very different campus environments, yet the overlaps in practice and statewide coordination enable us to tell a bigger story about partnerships and impact in OER.

University of Oregon

In Fall 2019, the University of Oregon (UO) launched a "moonshot" challenge to faculty to save students $500,000 through the adoption of OERs and library resources. To achieve this goal, UO Libraries are leading a multi-level strategy to address high textbook costs.

At the institutional level, the library partner with institutional initiatives, such as Student Success, Summer Institute, and Core Education, not only efficiently provides resources and support for faculty, but also encourages the adoption of OERs at the point of course proposal and redesign and raises awareness of the link between first-day access to OER and student success.

Partnering with the bookstore, the library encourages faculty and departmental schedulers to report all course materials adoptions to the bookstore for ordering, including no-cost and low-cost course materials and OERs. Course materials reporting has risen 10% since the UO Duck store has rewritten textbook adoption platform software, revised workflows, and increased outreach efforts to support Oregon House Bill 2871, which requires designation of courses with no-cost and low-cost materials.

At the department level, we support departmental textbook adoption committees for courses with frequent offerings, high enrollment, and high-textbook prices and invite both faculty and their departments to work with a team comprised of librarians, discipline experts, and instructional designers to adopt OERs and receive additional faculty stipends. Departments who commit to OERs in textbook adoption processes receive additional stipends.

The library also leverages faculty relationships established through the Provost's Teaching Academy—a community of practice of 200 faculty members. Dedicated to teaching excellence that is inclusive, engaged, and

research-led, Teaching Academy members recognize that OER not only alleviates high text costs, but also supports inclusivity by removing financial barriers to course materials, allowing students to engage in course and content from day 1, and is authored by leading professors and scholars in the field. When we launched the "moonshot" challenge during Spring 2019 finals week to the Teaching Academy, faculty calculated how much they could save students by redesigning a course and unprompted, began pledging their support to the challenge.

To support interested faculty in the Teaching Academy and at large, we leverage our Open Oregon Educational Resources membership with the Open Textbook Network (OTN) to incentive faculty to submit OER reviews that could lead to more OER adoptions and offer grant programs for adoption, adaptation, and authoring. A total of 30% of the incoming class enrolls in Business Administration (BA 101), the first requirement for the business major. Open Oregon Educational Resources supported the development of OER for this course, which has the potential to save over 1,000 students $75, or $87,000 in total annually. Open Oregon Educational Resources also invested in College Composition III (WR 123). While fewer students enroll in this course than College Composition I (WR 121), the conversion of the existing casebook format to a free and open format could serve as a low-cost, low-barrier publication method for OERs across a range of disciplines in future grant cycles. Building on Open Oregon Educational Resources' grant programs, UO Libraries will offer extended funding opportunities to upper-division and graduate courses with frequent offerings, high enrollment, and high textbook prices beginning in fiscal year 2020.

Through these coordinated efforts, the University of Oregon aims to increase institutional awareness, support, and grassroots adoption of library and OERs. The support of the State of Oregon, Open Oregon Educational Resources, and sister institutions throughout the state are core to the success at a local level.

Southern Oregon University

In 2014, using special funding from the Oregon State Legislature, Southern Oregon University (SOU) created a "Student Success Initiative" grant. Applicants were required to show how their proposed initiative helped deal with "obstacles to their progress from enrollment, progression, and graduation." Applicants were also required to demonstrate that their proposal was not duplicative of existing efforts on campus, established measurable metrics to assess impact, and provided detailed financials. The proposal developed by SOU's Hannon Library called for $10,000 to be allocated to faculty in Biology, Economics, Math, Physics, and Sociology to facilitate the adoption of OpenStax textbooks in those programs. While Hannon Library's Student Success Initiative was approved, no faculty applied for funding. Part of the problem was that faculty members need time to evaluate and adopt OERs more than

they need money. In addition, the grant was too prescriptive—identifying both specific programs and specific course materials.

As a result, the $10,000 was reallocated as matching funds for the 2016 Open Oregon Educational Resources OER grant. SOU was awarded two Open Oregon Educational Resources grants—one for Math 243-244 (Statistics) and one for Math 111-112 (Precalculus). SOU faculty members were also successful in the 2018 Open Oregon Educational Resources OER grant, receiving awards for Biology 101-103 (an intro sequence for non-majors) and CCJ 230 (American Criminal Justice System). Key to faculty engagement with the math grants was that, while the possibility of using OpenStax was included, consideration of other OER materials was to be part of the process. Importantly, this included not just other math textbooks, but also online homework platforms like WebWork.

In 2015, SOU's Center for Instructional Support created the Course Design Academy, a research-based project to improve student success in gateway courses with high DWIF courses. Funded by the Provost's Office, participating faculty were given $5,000 stipends to engage in "a student success initiative, a faculty development opportunity, and an investment in intentional design for key courses with the potential to substantially enhance student success" (SOU Course Design Academy, 2018). The first cohort of classes included FL 101-102 (Beginning Foreign Language), Math 243, Psychology 201-202 (General Psychology), and USEM 101-103 (a first-year writing and orientation sequence). The second cohort of classes included Biology 101-103, Biology 211 (Principles of Biology), CCJ 230, Communication 290 (Intro to Film Analysis), and GSWS 313 (Fat Studies). The third cohort, supported in part by a grant from the American Association of State Colleges and Universities, included a record 10 courses.

The first year of the CDA was a top-to-bottom course redesign and required participants to assess the ability of OERs to replace commercial textbooks. The second year was a bit less demanding of participating faculty and Center for Instructional Support staff, but still included OER assessment. By the third year, OER assessment (and top-to-bottom course redesign) had been abandoned. Although this was a disappointing result for OER adoption, the CDA had discovered that smaller interventions in courses with high DFWI rates could positively impact student success, without an enormous investment of time and other resources. In terms of interleaving multiple sources of support for OER adoption, it is worth emphasizing that three of the four Open Oregon Educational Resources grantees also participated in the Course Design Academy. The Center for Instructional Support remains a strong advocate and supporter of OER adoption on campus.

Perhaps the most novel of SOU's efforts to promote OER adoption was a survey conducted at the end of the Winter 2018 term. In an attempt to get course-level data on the impact of course material affordability, students

were given a survey for each class they were enrolled in and asked to complete each survey. The desire for course-level, or at least program-level, data stemmed from a belief that there is too much variation across programs to have fruitful discussions with faculty about course material affordability using national-, state-, or even institution-level data. In addition, the short survey was intentionally framed in terms of the "use of required course materials" instead of course material affordability or OERs. In part this was because most students don't know what OERs are, and in part it was because it is easier to engage faculty in a conversation about pedagogy than about course material affordability.

From an undergraduate headcount of 5,036, and an average enrollment rate of three courses per term, the survey generated almost 2000 responses—a response rate of about 33%. Using skip logic, the survey had the following questions:

1. Did you use the materials required for course X? If "yes" then ...
2. What required materials did you acquire for course X?
3. How did you acquire the materials required for course X?

OR

1. Did you use the materials required for course X? If "no" then ...
2. Why didn't you use the materials required for course X?

While there were not enough responses to generate valid course-level data, there were enough responses to generate useful program-level data. The results were shared in one-on-one meetings between program chairs and the University Librarian. Framing the questions in terms of course material use facilitated broader discussion of the relationship among required course materials, the use or non-use of course materials by students, and pedagogy. Faculty want their students to use the materials they assign and are therefore very interested in why students might not use them. What do the reasons that students report for not purchasing textbooks imply for course design and pedagogy? Do students see a course as structured so much around required course materials that buying them is unnecessary? Can faculty convey to students that course materials may be vital for the success of some students but largely supplemental for others? Can courses be redesigned around course materials that are relevant to and affordable for all students? Answers to these questions vary greatly across programs, courses, instructors, and students, and the survey greatly contributed to faculty seeking answers. Though not directly connected to Open Oregon Educational Resources, SOU would not have conducted the survey if not for the groundwork laid by the Open Oregon Educational Resources OER grants.

Western Oregon University

Before the 2018-19 school year, OER activities on the Western Oregon University (WOU) cam-

pus were mostly confined to individual faculty locating or creating materials on their own. Several faculty members had taken the initiative to apply for earlier statewide grants to produce open textbooks—and were successful—but there was no collective action on campus around the use of OER.

During the 2018-2019 academic year, however, things began to change. Due to Open Oregon Educational Resources' faculty stipends, WOU saw an increasing number of faculty members engage with OER. The Open Oregon Educational Resources Director traveled to the Monmouth campus to deliver an Open Textbook Library (OTL) presentation on two separate occasions. Thirty-five faculty members attended each of the presentations, 23 completed reviews of open textbooks in OTL, and 16 planned to adopt the textbook.

Open Oregon Educational Resources also launched a new initiative during Open Ed Week 2019—the Textbook Sprint. Faculty were given a week (and a $750 stipend) to redesign a course using OER. Eleven of the 13 WOU faculty members who started the sprint completed it in its entirety. One faculty member completed the required OER online training and received $250, but she was unable to finish the redesign. The other instructor reported he was experimenting with not using a textbook at all.

Courses redesigned during the Textbook Sprint varied considerably. Three are described below.

1. Math faculty members at WOU were divided over the possibilities that OER can engender, and skepticism had inhibited OER adoption efforts until Open Oregon Educational Resources introduced the Textbook Sprint. When one faculty member described the initiative at a department meeting, she was given the go-ahead to redesign Calculus I (MTH 251) using the corresponding OpenStax Textbook. The savings for students in 2019-2020, because of that change, is estimated to be over $16,000.

2. A writing instructor redesigned Workplace and Technical Writing (WR 300). The course makes extensive use of the open textbook, *Technical Writing*, and the Purdue Online Writing Lab (OWL). There is a detailed syllabus with a week-by-week list of readings and activities, several assignment prompts with grading rubrics, and a final assignment (also with a grading rubric). The final assignment allows students to choose between two non-disposable projects, both of which can easily be adapted for students at different institutions. The Writing faculty member estimates students will save $17,000 annually by moving away from a traditionally published textbook.

3. A chemistry professor who obtained an earlier Open Oregon Educational Resources grant chose to redesign CHEM 450: Biochemistry I during the Textbook Sprint. CHEM 450

students will save $3980 during the 2019-2020 academic year, but this redesign has the potential to reach many more students than just those at WOU. University of California, Davis is creating an American Chemical Society-certified B.S. degree in Chemistry using only OER textbooks and other free materials, and the CHEM 450 textbook will be used in that degree pathway.

The eleven courses redesigned during the Open Textbook Sprint will save WOU students more than $110,000 during the next academic year.

Armed with this knowledge, the Scholarly Communication Librarian submitted a budget proposal to the University Budget Advisory Council in 2019. The proposal linked OER to the University's Strategic Plan and met the University President's three institutional budgetary priorities:

- growing enrollment (i.e., attracting new students);
- improving retention (i.e., keeping the students we already have); and
- making WOU the most affordable public university in Oregon

Because of its tie-in to the University's priorities, the original proposal (which was combined with a related idea submitted by a library colleague) was funded for the 2019-2020 school year. The proposals also received additional funding (at a reduced level) for subsequent years.

In June, WOU attended an Achieving the Dream (ADT) No-Cost/Low-Cost Pathways Workshop fully paid for and supported by Open Oregon Educational Resources. Teams from a number of Oregon community colleges and universities spent the day doing hands-on work around OER action planning for the coming academic year. The WOU team included the Director of Disability Services, the Bookstore Manager, the Faculty Senate President, the Scholarly Communications Librarian, and several faculty members committed to OER efforts on campus. After identifying campus characteristics and creating a mission statement, the team set goals for the 2019-2020 school year, which include the following:

- Formalize an OER group on campus
- Gather baseline data regarding OER adoption on campus
- Increase awareness of OER on campus
- Provide guidance when awarding and tracking OER grants

The 2019-2020 school year on the WOU campus looks very promising for OER. The number of faculty who submitted proposals in response to OpenOregon Educational Resources' most recent round of grant funding increased exponentially over past years, top administrators and faculty alike have expressed interest in creating a zero textbook pathway through the university's newly redesigned Gen Ed curriculum, and the university has demonstrated a financial commitment to OER for this year and years to come.

Oregon Institute of Technology

Inspired by the activities of Open Oregon Educational Resources, a talk by Jennifer Snoek-Brown and Candice Watkins at ACRL-OR, 2017, and some of the grassroots efforts already underway at Oregon Institute of Technology (Oregon Tech), the library took on an initiative to support internally created OER.

In September 2017 at the annual Oregon Tech convocation, Dr. John Borgen and Dr. Gregg Waterman presented about OER. Dr. Waterman had been using texts he had created in math for years. Dr. Borgen was using an open text in psychology after another member of his department received an adaption grant from Open Oregon Educational Resources. Later that fall, Dawn Lowe-Wincentsen met with Amy Hofer with some ideas on getting OER into upper division sciences and engineering. In addition, a committee was formed by the library made up of a librarian, a representative from the College Commission on Teaching (CCT), and a number of teaching faculty who self-identified as already using OERs.

The initiative that came from this was an internally funded OER and a low- or no-cost material replacement mini-grant program. A total of $10,000 was set aside in the libraries budget to support faculty in the adoption, adaption, or creation of open, low-, or no-cost materials for classes. An emphasis was put on higher division Oregon Tech specific classes.

The first year of the program took on an informational campaign, engaging the community twice each term, with applications for the mini-grants due toward the beginning of Spring term. The applications were heavily based on the application that Open Oregon Educational Resources uses in the state-level grants. The committee looked at drafts of the applications before they were published. The program had support from the office of academic excellence and the provost. It was featured as an opportunity in a variety of publications to faculty. In 2018, there were 14 applications from 12 faculty members. The committee met and found a way to support all the applicants, if not all the applications. Faculty members who did not receive the full amount applied for were encouraged to seek additional funding through Open Oregon Educational Resources and CCT. In the local initiative award letter, each awardee agreed to present their activities with OER to the university committee.

Year two began by working with CCT and cultivating committee membership from people who received money in year one. The majority of people from year one presented during an OER day in February 2019. While the day was snowed out, there were up to 15 attendees at a time via online and remote locations. All presentations were eventually put online and were shared in time for the year two round of applications. The rest of the year one participants presented in pairs. One pair presented the same week as the applications were due, and the final pair presented just after the awards were announced. The timing of the presentations helped

others connect the actions of their peers to the initiatives supporting OER. All attendees of the presentations, respondents to surveys, applicants, and others who expressed interest become part of a growing list to make direct contact with. In addition to the internal program, the library received a collection of print OERs in use by Oregon Tech faculty through the Open Oregon Educational Resources OER Petting Zoo. These materials were placed on display in both campus libraries and were highlighted in university publications.

The first year of the program netted student savings more than $220,000, with every term saving an average of 335 students more than $200 each. An additional $160,000 has been saved by students since 2015 from a single Open Oregon Educational Resources grant received by Alishia Huntoon in the Psychology department. We are unable to count student savings from non-reported OER use, but we know that there are more out there in use. Despite 2019 applicant numbers and awards being lower than the first year, this number will still increase in the 2019-2020 academic year.

Based on low application numbers and other feedback from the university community, an educational program will begin in the 2019-2020 academic year. A course on OER for faculty is in development, and future cohorts will have to take this as part of their award. Funding to continue the initiative is being sought in a variety of ways from donors to grants—including grants through Open Oregon Educational Resources. While this initiative is largely independent to Oregon Tech, and somewhat organically grown among the faculty, it would not have started without the support and programs of Open Oregon Educational Resources and the statewide coordination offered.

Treasure Valley Community College

In the early 2010s, the Oregon Community College Library Association began working to develop individual initiatives on each of their 17 campuses. Treasure Valley Community College is a small, rural institution in an economically challenged region that hosts many first-generation students, as well as immigrant and migrant students. Making information pathways that bridge accessibility and affordability gaps for its students is the passion of the college library. Starting an Open Educational Resources initiative was a natural focus for investing in. The library director, Christina Trunnell, began teaching with OER texts in 2013. Utilizing lessons learned and shared knowledge among the colleges, Trunnell began outreach to individual and department faculty groups. With a few regional trainings and workshops, Treasure Valley Community College was able to get some faculty interest in the idea.

In 2015, with the creation of Open Oregon Educational Resources and its grant incentive funds, the library director and Amy Hofer hosted an OTN textbook review workshop and later an all-day OER Sprint that incorporated

OER with backward design concepts. Treasure Valley, like many other institutions, had little institutional knowledge, support, or access to innovation funds for this work. Trunnell led more unfunded textbook review workshops and outreach efforts in the following year. By the end of 2016, the number of faculty utilizing OER had gone from one to 15. For this community college, the economic impact was significant.

With the passage of legislation and the growth of the program, more areas of the institution became involved. Treasure Valley faculty members were able to participate in discipline-specific grants across institutions, professional development opportunities, and workshops. Despite the drive and commitment by faculty to see education become more accessible and to develop new dynamic teaching practices, the institution had few resources to support the program. Faculty had to seek outside sources to keep the program growing. Partnering with faculty at other institutions through Open Oregon Educational Resources grants, participating in statewide initiatives like the Open Ed week round of events, and trialing new ways to incorporate library services into making OER more accessible, the program has proved sustainable and continuously viable for growth.

Treasure Valley's OER program continues to develop new materials for courses that are not currently available in the broader open community. It also has developed a new type of instructional design course for adopters/adapters of OER that faculty inside and outside of the institution take prior to implementation. These unique efforts and continued work have proved possible only through support from the Open Oregon Educational Resources community, external funding sources such as Open Oregon Educational Resources, and the commitment by individual faculty. The library's role in supporting faculty and student educational outreach is vital to the success of open education at the institution. In the spirit of the movement, connections and partnerships across departments, campuses, and entities remain at the heart of this program.

Discussion

The open education community is a broad, global entity built on sharing, making connections, and collaborations. Yet, institutions do not start new programs or initiatives on a broad scale, but rather on a small scale, specific to their capabilities and needs. Academic institutions that embrace open education initiatives also have their own set of challenges. These can be seen in various campus cultures, access to funding, and broader awareness of the initiative. The less obvious challenges, such as access to instructional support services or administrative support, can equally hinder garnering momentum for OER. Open Oregon Educational Resources not only helps to fill these gaps unique to each institution, it provides the necessary sustenance to sustain all campus initiatives.

At its inception, Open Oregon Educational Resources, and more spe-

cifically Amy Hofer, offered education and support in the form of textbook review workshops through the OTN, individual campus support and guidance, and a statewide space for sharing. The program now includes a variety of grant opportunities for faculty, grants for institutions in course marking work (HB2871), and individual campus events. Additionally, it is a resource for publication practices, educational opportunities and support for faculty, best practices for OER, and broader research in elements of open education. It supports individual faculty, individual campuses, the state's higher education community, and open education internationally.

The breadth of its reach is due wholly to Amy Hofer's approach to this work and the supporting network that she has built. This is demonstrated in the collaborative spirit that all Open Oregon Educational Resources work is done. Hofer established a statewide OER steering committee. This is made up of volunteers from post-secondary institutions. Its members fill all types of roles on their campuses, giving the committee a complete perspective when addressing issues. This committee meets regularly to provide support and guidance to current and new directions under the leadership of Hofer. Initiatives within the Open Oregon Educational Resources program are all formed into specific committees that are volunteer as well. Members of these committees are largely made of from the steering committee or the OCCDLA membership but are always open to the broader Oregon academic community. These committee charges range from state conference or event planning, such as Open Ed Week 2019, to publishing whitepapers. This work format creates a collaborative and supportive space for open educational practices statewide. It is a key and important element of the work that Open Oregon Educational Resources provides.

The collective program that is Open Oregon Educational Resources creates a framework for sustainability. Left to themselves, initiatives on individual campuses can become stagnant or defunct. With turnover, environmental changes, or other institutional dynamics, OER initiatives fall into the realm of any other project. While student needs are increasingly significant in this area, individual institutions' abilities to meet these needs vary. Having an overarching program at the state level ensures consistency in growth and support that institutions cannot commit to. It holds all of higher education in the state together. It provides a platform for growth and change inside and outside of campuses. It provides opportunities for individual engagement external to campus commitments. Open Oregon Educational Resources is the essential element to the success of the programs mentioned here, as well as their future sustainability.

Conclusions

In 2019, the Oregon Legislature once again provided funding for sustained OER and open pedagogy at both two year and four-year colleges throughout the state through HB2214.

The programs and support from Open Oregon Educational Resources impact the larger academic community in the state exponentially each year. And yet no matter what the funding model is, the initiatives would not get off the ground without the internal creation and support at each institution. These initiatives often tie into the libraries of those institutions as well.

Represented here are only five instances. Collaborative efforts grow not just in Oregon, but across the higher education community. The Open Oregon Educational Resources connective tissue between community colleges, state universities, and the state legislature is a unique structure supporting programs in the state. Whether reported here, reported through Open Oregon Educational Resources, or not reported at all, this movement continues to grow and reach more students, easing their path to graduation.

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Jeffrey is University Librarian and Director of the Research Lab at Southern Oregon University. Collaborating with faculty, administrators, students, and the campus bookstore, he leads SOU's efforts to increase the use of affordable course materials. He also serves on the Open Oregon Educational Resources *statewide steering committee.*

What Does Free Mean? Orienting an OER Program Toward Sustainability

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Indiana State University, IN

Abstract

Good open educational resource (OER) assessment is an iterative and continuous process. While there are methodologies around assessment of OER use and quality, how an institution with an established OER program conducts an assessment of the overall program is highly localized. At Indiana State University (ISU), our library-led OER program has been in existence since 2011. The ISU initiative has identified significant cost savings to our students, the main aim of the program, while also compensating our faculty for the huge investment in time for course conversion. At the beginning of the Fall 2017 term, events transpired that necessitated a review of the program content, workflow, and process. What followed was a year of assessment, education, and reinvention. The author discusses the importance of capturing institutional memory in the overall process of assessing the program and reviewing the qualitative and quantitative data of the initiative. Strengthening cross-campus partnerships to provide participating program faculty with 360 support throughout their time in the program and beyond and the challenges of building strategic partnerships are

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explored. Revising the material to incorporate OER-specific criteria and incorporating a tailored lesson on copyright as it applies to OERs is detailed. The adoption of project management software to streamline the workflow and frame process roles with the added benefit of providing another feedback loop for further continuous assessment is described. Finally the establishment of an assessment cycle for the program going forward will be discussed. The author includes a brief summary on what has worked for ISU, future directions, and continuing challenges.

Keywords: program assessment, open educational resources (OER), libraries, librarians, open educational processes

Qué significa la libertad: orientar un programa REA hacia la sustentabilidad

Resumen

La buena evaluación de recursos educativos abiertos (REA) es un proceso iterativo y continuo. Si bien existen metodologías en torno a la evaluación del uso y la calidad de los REA, la forma en que una institución con un programa establecido de REA realiza una evaluación del programa general está altamente localizada. En la Universidad Estatal de Indiana, nuestro programa OER dirigido por la biblioteca existe desde 2011. La iniciativa de la Universidad Estatal de Indiana del Estado de Indiana ha identificado importantes ahorros de costos para nuestros estudiantes, el objetivo principal del programa, al tiempo que compensa a nuestros profesores por la gran inversión en tiempo para la conversión del curso. Al comienzo del período de otoño de 2017, ocurrieron eventos que requirieron una revisión del contenido del programa, el flujo de trabajo y el proceso. Lo que siguió fue un año de evaluación, educación y reinvención. El autor analiza la importancia de capturar la memoria institucional en el proceso general de evaluación del programa y la revisión de los datos cualitativos y cuantitativos de la iniciativa. Fortalecer las asociaciones entre campus para proporcionar a los docentes participantes del programa apoyo 360 a lo largo de su tiempo en el programa y más allá, y se exploran los desafíos de construir asociaciones estratégicas. Se detalla la revisión del material para incorporar un criterio específico de REA e incorporar una lección personalizada sobre derechos de autor tal

como se aplica a los REA. Se describe la adopción del software de gestión de proyectos para racionalizar el flujo de trabajo y enmarcar los roles del proceso con el beneficio adicional de proporcionar otro ciclo de retroalimentación para una evaluación continua adicional. Finalmente, se discutirá el establecimiento de un ciclo de evaluación para el programa en el futuro. El autor incluye un breve resumen de lo que ha funcionado para la Universidad Estatal de Indiana, direcciones futuras y desafíos continuos.

Palabras clave: Evaluación de programas, Recursos Educativos Abiertos (REA), bibliotecas, bibliotecarios, procesos educativos abiertos

免费意味着什么：一项以可持续性为导向的开放教育资源（OER）项目

摘要

良好的开放教育资源（OER）评估是一个迭代且持续的过程。尽管就OER使用和质量的评估存在方法论，但一个已拥有OER项目的机构如何对整个项目实施评估，这是一个高度本地化的过程。在印第安那州立大学，由我们的图书馆发起的OER项目自2011年便开始实行。印第安那州立大学提出的倡议已确认学生获得了显著的成本节省（这是该项目的主要目的），同时还对投入大量时间完成课程转换的教师进行了补偿。2017年秋季学期之初，一系列事件的发生促使了对项目内容、工作流程和过程的的评审。随后则是为期一年的评估、教育和再创造。作者探讨了评估该项目和评审该倡议的定性和定量数据这一整个过程中捕捉机构记忆的重要性。就强化跨校园伙伴关系，以期为参与项目的教师提供全方位的支持进行了探究，并探究了建立战略伙伴关系所面临的挑战。详细描述了修订课本材料以整合一项OER特定标准，并描述了整合一期有关OER版权的定制课堂。描述了采用项目管理软件以简化工作流程，并用“提供另一反馈环路所带来的好处”定义过程角色 ，以完成进一步的持续评估。最后探讨了建立一个用于推动项目的评估周期。作者就对印第安纳州立大学行之有效的工作、未来方向、以及持续的挑战进行了简要总结。

关键词：项目评估，开放教育资源（OER），图书馆，图书管理员，开放教育过程

Introduction

Indiana State University (ISU) is a land-grant institution of higher education that serves a population of primarily first-generation college students and hosts the most diverse student body in the state. The university also serves a high number of Pell grant recipients and 21st Century college students (ISU, 2018). Greater numbers of traditionally underserved populations means ISU students often come into college with greater financial challenges that can be barriers to successful persistence rates. It is the open education movement's principal goal of no cost, day-one access to high quality materials, which made the adoption of open educational resources (OER) significant to ISU's mission. OER are defined as "teaching, learning and research materials in any medium—digital or otherwise—that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions" (Hewlett Foundation, 2018). While the materials created and curated in the open movement are free to use, there are still additional institutional costs that go into the process of a successful open educational initiative. These costs include personnel, systems, and time to produce quality content and training; "free" comes with associated costs (Annand, 2015, p. 4). Striking the right balance between training and support is a difficult challenge but a crucial task in assuring the future stability of an OER program. In Spring 2017, the OER program administrator, the Emerging Technologies Librarian, announced her departure from ISU. At that time, the Library Dean approached the Electronic Resources & Copyright Librarian to lead the ISU open education initiative. What followed was a year of discovery, strategy, and relationship building, resulting in a more sustainable OER initiative at ISU.

History of the OER Initiative at Indiana State University

A 2011 textbook affordability study led to the creation of the OER initiative at ISU. (ISU, c.) The program was conceived with the goal of reducing the overall cost of a student's education at ISU to drive persistence rates by providing access to open and free course materials on day one. An advisory board on the initial design of the program included the ISU instructional design group, college deans, and teaching faculty. The OER initiative's administration and process was led by the library from the start as part of the ISU strategic plan. Funding for the program, from the university's strategic plan, provided for recruitment of teaching faculty, OER creation, and curation services. The program's inclusion in the strategic plan also necessitated a reporting mechanism and static measures of success for the program to capture the overall progress of the initiative in meeting its stated aims of student success through cost savings. The initial pilot in 2013 included the teaching faculty from the advisory board who were teaching courses as

part of the ISU's Foundational Studies program (ISU, 2013).

After the pilot concluded, the program evolved into its first stable iteration and included the admittance requirements and program elements that remain today. Courses eligible for the program include previously taught high enrollment major courses and those that are part of the ISU's Foundational Studies catalog. Classes admitted must have been previously delivered in at least two prior semesters. Faculty members who complete the program and successfully transform their primary course materials to OER are awarded a stipend of $3,000. Crucially, courses included in the OER program have to demonstrate the ability through previous enrollment numbers to make back the initial investment of $3,000 in two semesters, another requirement of admittance.

The OER program includes a self-paced Blackboard course that faculty are required to complete during the conversion process to familiarize themselves with the definition of OER, their associated boundaries and possibilities, and integrating them into their courses. Upon delivery of the new OER course, students in the course are invited to participate in a pre-survey and post-survey administered at the beginning and end of the semester. The surveys, approved by ISU's Institutional Review Board (IRB), include questions about students' knowledge of OERs, their use, and student budgeting practices for textbooks. Students are encouraged but not required to participate in the surveys, occasionally with extra credit or similar incentives. To-date, the program has saved students an average of $420,120.58 a semester, with an average savings per student of $113.64 (ISU, n.d.- b).

Program Review

In Summer 2017, the Librarian who championed the OER initiative decided to leave ISU. To ensure continuity of the university's OER initiative, the role of OER advocate transferred to the Electronic Resources & Copyright Librarian, who quickly began to assess the delivery of the program. The literature around the variety of roles for the library in open education efforts points to librarians' foundational experience working with academic publishing models as a strong justification for the library's continued leadership of OER programs (Borchard & Magnuson, 2017; Braddlee & VanScoy, 2019; Reed & Jahre, 2019; Salem, 2017). Previous experience providing reference services, licensing expertise, copyright guidance, and electronic resource management were extremely helpful in orienting the librarian in her new role, but the goals of the program and its desired growth made it clear that work was required beyond simple orientation. The first task was to evaluate the current state of the program.

OER efficacy and assessment studies tend to focus on the overall quality of OER artifacts (Hilton, Gaudet, Clark, Robinson, & Wiley, 2013; Ross, Hendricks, & Mowat, 2018); however, assessment of delivery of an OER pro-

gram is highly localized. The assessment and redesign of the ISU program was decided on for three very specific reasons. First, the program itself had recently lost its primary administrator, which left it without strategic direction. Second, the course delivery had not been revised or revisited since its inception nearly four years prior as the program roster continued to grow. Third, the program materials needed to evolve to reflect the fast changing landscape of OER. Assessment was conducted through two exit interviews with the departing OER Librarian, a review of the program workflow and documentation, and feedback on the program experience from program faculty alumni.

Exit interviews

Ensuring the continued success of the OER program was a significant concern for the library. Much has been written about the value of storytelling and successful exit interviews (Siewert & Louderback, 2019; Spain & Groysberg, 2016) in preserving institutional memory. As a first step, the Electronic Resources & Copyright Librarian decided to focus on storytelling via exit interviews to preserve program processes and assist in the transition. The Emerging Tech Librarian's timeline for departure was two months, during which time the Electronic Resources & Copyright Librarian scheduled two exit interviews. The desired outcome of these meetings was to establish the OER program's administrative needs, the current process of deployment, and any additional reporting mechanisms or tools that needed to be identified. Each meeting was scheduled for approximately one and a half hours, with the understanding that additional time might be needed. The first meeting was spent storytelling: the Emerging Tech Librarian was asked to write a rough outline of her process and then verbally detail the process in the meeting. Additional notes for further elaboration were taken by both the Electronic Resources & Copyright Librarian and the storyteller to further flesh out the process and provide the needed institutional memory to continue the program. The second meeting was spent going through some of the actual activities identified in the storytelling session, namely survey data manipulation, Pressbooks administration, and reviewing participating faculty journal entries. Process details and notes from both the departing Librarian and new OER Librarian were captured in a new OER program digital memory folder on the institutional computer drive. Beyond the two formal meetings, the Emerging Tech Librarian provided outreach to OER institutional contacts on behalf of the Electronic Resources & Copyright Librarian to provide for a smoother transition post-departure. It was in the two exit interviews that a key detail emerged: the program's Blackboard modules had not been reviewed since their introduction to campus over four years ago. This was due largely to the growth and demands of the program as part of the campus strategic plan. The program was under the purview of two personnel: a library faculty member and a staff member from Institutional Research (who would also

depart in Spring 2017), both with other full-time roles. Therefore, while the need for review was recognized, it had not taken place.

Data review

After the departure of the Emerging Tech Librarian, the Electronic Resources & Copyright Librarian, acting as the OER Librarian, began a deep dive into the gathered qualitative and quantitative data of the program. Going over the student reporting survey data, two main themes emerged. First, students were reporting satisfaction with using OER in class primarily because of the ease of use and cost savings. Second, in some of the course transformations, there was some frustration with the integration of the resources into course delivery (ISU, n.d.- a). Because any issue with integration of OER materials potentially impacts the success of the OER course transformation overall, the Electronic Resources & Copyright Librarian viewed it as an issue of concern. Additionally the librarian went over the data-tracking cost savings of the program. Of particular interest was the number of courses that had been converted and then reverted back to paid course resources. These courses were identified by picking a representative sample in the tracked conversions, then searching textbook holdings via the campus bookstore site. A standard letter was then written and sent out to faculty with paid resources asking if they would be willing to briefly provide feedback on why their courses reverted back to using traditional paid texts. Some indicated that there were department-wide mandated changes to all sections of the course requiring a single unified text. Others, however, stated a desire to continue with OER, but as the course continued, the materials' perceived quality lead them to make changes. Frustration was expressed at the resources' aging interface or the speed with which the resources were updated. To the Electronic Resources & Copyright Librarian, these issues needed to be addressed in the program going forward.

Revising the OER Program

Through the process of reviewing the program, it became clear that course design and the education of the copyright and licensing of OERs needed to be revisited and addressed. Additionally the exit interviews with the Emerging Tech Librarian identified a lack of time and support as a barrier to meeting the demands of the program. To strengthen delivery and sustainability of the program, the Electronic Resources & Copyright Librarian recognized that a team approach would be needed if the OER initiative was to continue to be successful at ISU. In order to provide much needed support and sustainability for the program, the Electronic Resources & Copyright Librarian met with the ISU Instructional Design Group in Fall 2017 to build trust and re-engage the group with the goal of creating a new OER team. The inclusion of instructional design is recognized throughout the OER community as a valuable strategy to successful

growth of open education initiatives (Braddlee & VanScoy, 2019; Pierce, 2013), and indeed the group was part of the original conversation around OERs at ISU. With the ISU instructional designers on board, the program revision began in earnest with a look at the Blackboard course content.

Content changes

To kick off the process, the Electronic Resources & Copyright Librarian identified areas within the current Blackboard course modules that needed revision in specific areas including issues of copyright and attribution, defining and identifying OER, and providing guidance on successful incorporation of the selected materials into a course. The librarian divided the modules amongst the team to assess and suggest redesign elements. Areas that saw significant revision during this process included the copyright and licensing lesson and the lesson on searching and identifying OER materials. Beyond specific modules, work was done on assessment materials within each lesson and a new rubric for OER assessment was incorporated to provide further guidance both during and beyond the program.

The copyright module redesign was a particular sticking point for the team, as the instructional design group's preference was to cover all areas of copyright online beyond the limited scope of OER. The Electronic Resources & Copyright Librarian had to work with the design team to help focus the materials in a more direct way around the successful engagement of OERs in the classroom. The librarian noted that significant demands on teaching faculty time meant they needed to be able to quickly orient themselves around issues of OER and copyright and then confidently move on to the course-building process in quick succession. Additionally, the instruction had to be focused enough to ensure that the information could be utilized successfully by faculty beyond a single course conversion. The lesson on defining and identifying OER was revised to include the explosion in content types and resources that had emerged since the ISU OER program's inception. Content was added around multimedia resources, identification, and attribution. Along with lesson content, module assessment pieces (SoftChalk quizzes and Blackboard journal entries) were also modified to support the new content. Another significant change to the program was the introduction of an OER-specific rubric as part of the course conversion process, adopted from the Achieve model (Achieve, 2011). Originally created to assist the K-12 environment, the rubric was adapted for higher education and specifically for ISU. The rubric incorporates accessibility, usability, copyright compliance, assessment, and objective alignment goals to provide faculty with a lens through which they can review the incorporation of OER materials beyond a single course. Content revisions identified and applied, the second phase of the course redesign discussion was initiated: designation of responsibilities in the course workflow.

Designing the team approach

To strengthen and define the new cross-campus partnership, the OER team met to discuss a new workflow map that details the alignment of a faculty member's progress through the Blackboard course and their interaction with the support team (the Electronic Resources & Copyright Librarian and one assigned instructional designer). In the previous iteration of the OER education delivery, faculty received minimal feedback via two journal entries and a single in-person meeting at the beginning of the course redesign process. After considering the changes to the program materials and desired results of the program for faculty, the team settled on three tailored meetings for faculty. The first meeting would take place after faculty had gone through the introductory module in Blackboard and before they began the process of investigating open materials, a second mandatory meeting midway through the program as they began to build their course, and a third optional meeting prior to delivery of the content, each meeting with its own goals to assist faculty in their conversions.

The first meeting's goal was to allow faculty time to address their open resource search needs and copyright concerns with the OER team prior to building their course. This first meeting effectively acts as a reference interview with faculty in which the OER Librarian can build iterative searches of open materials for the courses in conversion. Searching by librarian is a new addition to the process, with the dual goals of further guiding faculty towards how and where to find quality open materials and alleviating any information overload the faculty in the program might experience as they wade through open resource sites. The librarian shares keywords and sites where materials in their discipline are found, as well as highlighted materials for inclusion in the course. As subject matter experts, faculty members make final decisions on what materials will work or not for their course. The second meeting is scheduled as the faculty members begin to engage with the OER rubric to address their student engagement and learning outcome concerns. Here the librarian and instructional designer provide feedback on attribution, course delivery, and design. Finally, the third optional meeting is arranged after the faculty member has produced three weeks of course content for overall review of design, copyright, and appropriateness of open educational materials. If the faculty member elects not to meet in person, the librarian and assigned instructional designer each conduct a three-week review of the revised Blackboard course site and provide in-depth email feedback to the faculty member. This final review is an important new addition to the course conversion process with the intent of creating a more meaningful and lasting conversion experience, greater program accountability, and fostering faculty OER champions. With details captured in the team workflow map attention turned to documenting the program management process and imbuing the program with a flexible assessment schedule to ensure

success both for the team and the university.

Capturing the workflow & assessment schedule

A team located across different departments and physical locations requires a portable and accessible tool to capture the workflow in its entirety. Teamwork PM, project management software utilized by the library, allows for the creation and curation of documents, notebooks, custom tagging, artifact assignment, and timeline tracking for teams. The software was extended to the instructional design group as a new portal for program workflow. The newly adopted team workflow document was uploaded to the site as a living document. Teamwork PM allows the group to document their work throughout the process captured in the workflow map. Upon acceptance of an applicant to the OER program, the Electronic Resources & Copyright Librarian, as program manager, uploads the application and any feedback provided to the faculty at this stage. The faculty members going through the program are then assigned via tag to a single instructional designer. Additionally, each course conversion is assigned a notebook that includes thoughts on the process from beginning to completion.

Though some reporting elements existed in the program already (i.e., student surveys, savings data, course numbers) there was no defined review timeline for the program content or delivery. The Electronic Resources & Copyright Librarian felt an assessment cycle for program content and delivery should be established for the program to ensure that the initiative remains relevant and that the workflow functions in its most effective form possible for all involved. Program content is to be reviewed on a tri-annual basis, with links and other embedded elements assessed for quality once an academic year in the summer. The workflow itself will remain in use and adjust flexibly as institutional and departmental aims dictate. Changes to the workflow must be captured in the workflow map document. Finally, courses that go through the conversion process will have an added "check in" at the four semester delivery mark to see if faculty are still achieving their learning goals or if they need additional support in identifying new materials. Overall the inclusion of two different professional lenses to view the program (Instructional Design and Librarianship) further strengthens the program and provides greater support for faculty throughout and beyond the program.

Next Steps and Conclusions

After the departure of the institution's OER administrator, the Electronic Resources & Copyright Librarian had to acclimate quickly to provide expert consulting on OER. As part of that process, the librarian led the reexamination and redesign of the OER conversion process, strengthened cross-campus partnerships for success, and identified workflow strategies that provide greater efficiencies for the program. While several critical issues were

addressed, challenges remain: perhaps most critically, the overall desire for greater open educational support still at times outpaces the capabilities of the small team assembled. As previously touched on, while the nature of OER means the materials are free, training and resource support at the institutional level comes with significant cost. Free means providing comprehensive and effective OER services to faculty while generating more savings than costs for our students. The process of review, redesign, and partnership was challenging at times, but a rewarding one that produced a revised OER education program and a scalable team approach to support sustainable OER adoption across the university that will ultimately benefit students both financially and educationally, beyond their time at the ISU.

The revised Open Educational Resources Program has now gone through four semester cycles. The next steps for the program include possible reassessment and revision of the questions included in the OER student course pre-surveys and OER student post-surveys distributed in participating courses. As with the other program content, the IRB-approved questions have not been appraised since their initial rollout; it is crucial to review the questions posed to students regarding their learning preferences and engagement with the new open educational course content to ensure we continue to ask the right questions to measure success. With the introduction of additional support and checks for understanding by the OER team, teaching faculty feedback on the course conversion process is crucial to assess how well or poorly the changes to the OER educational modules and support system are working. Once the team goes through the first assessment cycle, more information regarding the impact of the program changes will be fully known. As the team goes through the process currently, having clarity over roles and workflow has given the team confidence in working together for faculty enrolled in the program. We have also received related positive feedback from faculty members who have participated in the program already. Outside of the OER program, the Electronic Resources & Copyright Librarian offered a workshop on OER to other interested library faculty to convert critical liaison colleagues into in-house OER champions and provide professional development for the other librarians. Further, in Spring 2019, with the support of the Student Government Association, the Electronic Resources & Copyright Librarian reestablished the Open Educational Resources Committee with ISU students, faculty, and administrators to continue to think of new ways to market OERs and encourage their adoption and creation across the ISU. The efforts taken together continue the important work of moving the ISU OER Program forward.

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Appendix A

Excerpt from OER Team Workflow Map

TEACHING WITH OERS

APPLICATION

1. Applications are directed to **eResources & Copyright Librarian,** who will vet individual applications for completeness and program eligibility.
2. **eResources & Copyright Librarian** will add application to FILES in Teamwork PM, tagging with expected semester the converted course will run and email **IDers** to make them aware of new participants.
3. **eResources & Copyright Librarian** will:
    a. Add applicant as STUDENT within Blackboard Teaching with OERs course site
    b. Email faculty member to acknowledge acceptance, provide timeline, and have faculty member request development site
    c. Email **IDers** to let them know of the new participant and need for assigned IDer.
4. **(Instructional Technology Assistant)** should check ID email box daily. If a new OER participant appears:
    a. Assign it to appropriate or available **IDer**.
    b. Email Assigned **IDer**, notifying of assignment.
    c. In Teamwork PM, tag the FILE with the assigned IDers first name.
5. Upon being assigned a participant, **IDer** will reach out to faculty member via email to introduce self and offer support throughout the process.

MODULE 1: INTRO & PURPOSE OF OERS

1. Faculty member completes **SoftChalk Lesson #1** *and* **Journal #1**.
    a. If faculty member does not earn passing grade on SC lesson, **eResources & Copyright Librarian** will email the faculty member to check on areas of concern and offer support.
2. **eResources & Copyright Librarian** will grade and provide feedback on **Journal #1**.
3. **IDers** should read/review participant **Journal #1** and gather information about faculty member and course.
4. **eResources & Copyright Librarian** and **IDer** will add notes to Teamwork PM > NOTEBOOKS (labeled with faculty member name and course number), if desired.

MODULE 2: COPYRIGHT

1. Faculty member completes **SoftChalk Lesson #2** *and* **Copyright Quiz**.
    a. If faculty member does not earn passing grade on SC lesson, **eResources & Copyright Librarian** will email the faculty member to check on areas of concern and offer support
2. **eResources & Copyright Librarian** will review and grade **Copyright Quiz**. Faculty must earn at least 80% on the quiz. They may retake quiz up to three times.
3. **eResources & Copyright Librarian** will contact faculty member (and **IDer**) notifying of assigned IDer and to schedule the **FIRST CONSULTATION:**
    a. **Suggested Week:** 3
    b. **Participants**: **eResources & Copyright Librarian**, **IDer**, faculty member
    c. Primary Goal: Learning Context Analysis, Establish Goals

Teaching Critical Thinking and Metaliteracy Through OER: Theory and Practice in a Course Collaboration

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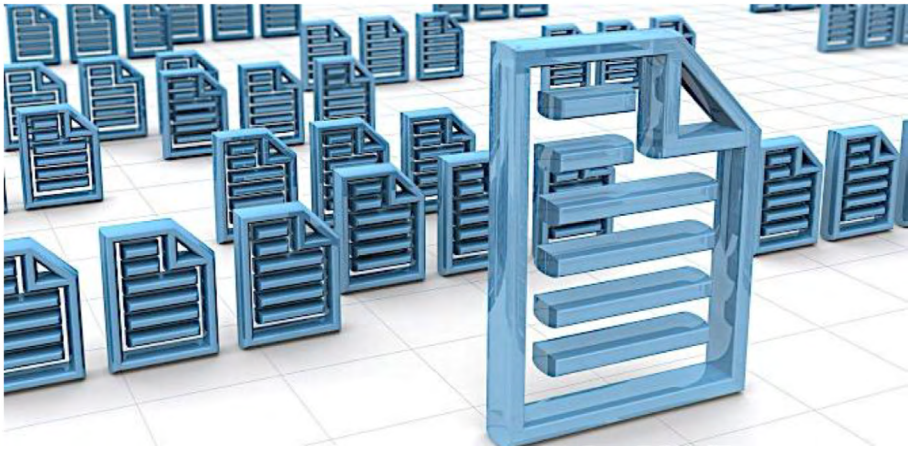

Abstract

Textbooks are often the primary reference when we think of open educational resources (OER). While these textbooks are important and offer obvious economic benefits to students, the range of OER is wide and growing. In this paper, we introduce a specific set of OER, under the rubric of the metaliteracy framework, designed to strengthen critical thinking and the overall learning capacities of students. We describe a successful collaboration between an instructor of a political science course and a librarian, which employed these resources to enhance the overall student experience and to focus student attention on becoming more active contributors to their own learning.

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Keywords: metaliteracy; OER; collaboration, critical thinking; open educational practices

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Enseñanza del pensamiento crítico y alfabetización metalúrgica a través de los REA: teoría y práctica en una colaboración académica

Resumen

Los libros de texto son a menudo la referencia principal cuando pensamos en los recursos educativos abiertos (REA). Si bien estos libros de texto son importantes y ofrecen beneficios económicos obvios para los estudiantes, el rango de REA es amplio y creciente. En este documento, presentamos un conjunto específico de REA, bajo la rúbrica del marco de alfabetización en metales, diseñado para fortalecer el pensamiento crítico y las capacidades generales de aprendizaje de los estudiantes. Describimos una colaboración exitosa entre un instructor de un curso de ciencias políticas y un bibliotecario que empleó estos recursos para mejorar la experiencia general de los estudiantes y centrar la atención de los estudiantes en ser contribuyentes más activos a su propio aprendizaje.

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Palabras clave: meta alfabetismo; REA; colaboración, pensamiento crítico; prácticas educativas abiertas

通过开放教育资源（OER）教授批判性思维和元素养:一项课程协作中的理论与实践

摘要

当我们想到开放教育资源（OER）时，课本通常是主要参考物。尽管课本很重要，并为学生提供明显的经济利益，但OER的范围很广且还在扩大。本文中，我们介绍了一组位于元素养框架下的特定的OER，这组OER被设计用于强化学生的批判性思维和整体学习能力。我们描述了一名教授政治学课程的大学教师与一名图书馆员之间的成功协作，该协作使用了这些资源，以提升整体的学生体验，并将学生的注意力集中到成为帮助自身学习的更活跃的贡献者。

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关键词：元素养，OER，协作，批判性思维，开放教育实践

Introduction

How do you design an undergraduate course emphasizing critical thinking skills when you are used to teaching classes of a more concrete nature, e.g., Introduction to American Politics or the U.S. Congress? It is of course part of your job as a professor to constantly help students to develop their ideas more clearly and to sharpen their arguments, but how do you make this kind of teaching more explicit? The collaboration referred to in this article's title began with exactly this set of questions when one of the authors was confronted with just such a challenge.

The metaliteracy framework described below provides one set of tools to enhance student critical thinking skills and overall learning. The ongoing professor-librarian dialogue that began with the need to create a new course has led to the application of this framework as a major component of the class. In this paper, we begin by pointing out the enormous potential for open educational resources (OER), we introduce the metaliteracy framework employed here as providing an important set of OER to enhance critical thinking, and we delineate the successful professor-librarian collaboration that has contributed to enhancing the overall student experience and to focusing student attention on becoming more active contributors to their own learning.

Opening Education through OER

OER benefits both learners and instructors. Students appreciate that these resources cost little or nothing and are available online at any time, while instructors value the array of resources that supplement existing materials, provide inspiration, and engage students (Weller, de los Arcos, Farrow, Pitt, & McAndrew, 2017).

While OER are commonly associated with textbooks, they take a variety of forms, from software to massive open online courses (MOOCs) to streaming videos. They range from fairly traditional in their formatting or mode of delivery to innovative and immersive. Just as the format of an OER may vary, so too will its use in a course. An OER may simply be used as a substitute for a non-open resource, with little change in pedagogical method, or it may be the catalyst—or the evidence—of a shift to a more student-centered pedagogical style.

In this regard, a number of scholars have highlighted the vast potential for OER. Gardner Campbell (2012), Associate Professor of English and Special Assistant to the Provost at Virginia Commonwealth University, used the term "opening education" to describe teaching in new ways with new technology. He contrasted it with "open education," which is doing old things with new (OER) technology (Campbell, 2012). Education that is opening "challenge[s] and develop[s] students in owning their learning, engaging with others in their learning, and in innovating ..." (Hogan, Carlson, & Kirk, 2015, Toward Innovative Pedagogies section, para. 3).

Similarly, David Wiley (2013), who developed the 5Rs framework for OER (reuse, revise, remix, redistribute, and retain; Wiley, 2014), illuminated the potential of OER in ways that align with Campbell's opening education:

> Using OER the same way we used commercial textbooks misses the point. It's like driving an airplane down the road. Yes, the airplane has wheels and is capable of driving down on the road (provided the road is wide enough). But the point of an airplane is to fly at hundreds of miles per hour – not to drive. Driving an airplane around, simply because driving is how we always traveled in the past, squanders the huge potential of the airplane.

Finally, Ebba Ossiannilsson (2018), Vice-President of the Swedish Association for Distance Education, recognized the potential of OER to emphasize 21st century competencies and capabilities, including metacognition (p. 106). She argued that OER is an important vehicle for establishing life and work competencies as identified by P21, Partnership for 21st Century Learning (2016):

- Flexibility and Adaptability
- Initiative and Self-Direction
- Social and Cross-Cultural Skills
- Productivity and Accountability
- Leadership and Responsibility

Thus, moving beyond a static textbook as a source of learning to a more expansive use of OER opens the door for a wide range of activities that shift the paradigm from student as content consumer to student as content creator and even to student as director of their own learning. These activities, under the label of open educational practices (OEP), give substance to Wiley's airplane image. Catherine Cronin (2017), a key researcher in the field, summarized OEP based on an in-depth literature review as "moving beyond a content-centered approach, shifting the focus from resources to practices, with learners and teachers sharing the processes of knowledge creation" (p. 17). Definitions and conceptions of OEP vary. Potential components include "Use/reuse/creation of OER and collaborative, pedagogical practices employing social and participatory technologies for interaction, peer-learning,

knowledge creation and sharing, and empowerment of learners" (Cronin & McLaren, 2018, slide 6).

However, there can be a continuum model of practices (Stagg, 2014) or degrees of OEP (Ehlers, 2011, as cited in Cronin & McLaren, 2018a, p. 130). In courses that employ OEP, students generally work with OER and may be active creators of knowledge that will be shared beyond their instructor and potentially beyond their current classmates. In such courses, students move beyond what is seen as the traditional role of "student" to roles that are active, collaborative, and often contribute to the learning of others. Instructors employing OEP, whether partially or fully engaged with the full range of potential practices, need to prepare students for these roles, just as they need to prepare them for the topic of the course. In order for students to succeed, learning must center not only on disciplinary content, but also on a host of competencies that span the behavioral, cognitive, metacognitive, and affective. The metaliteracy conceptualization described below provides a framework for students to better meet unfamiliar learning situations encountered through OER use and for instructors to explore pedagogical practices that allow for opening education.

Metaliteracy

In an age and information environment where knowledge practices and skills evoking critical thinking are at a premium, the concept of metaliteracy provides a framework and a broad set of OER-based tools with the potential to expand students' and others' learning abilities. The framework is aptly named. One of the meanings of *meta* in Greek is "beyond," so in the modern day, *meta*literacy is what is needed beyond the basic literacies of reading and writing. It "... suggests a way of thinking about one's own literacy. To be metaliterate requires individuals to understand their existing literacy strengths and areas for improvement and make decisions about their learning" (Mackey & Jacobson, 2014, p. 2). Metaliteracy, therefore, is a pedagogical model that emphasizes an individual's method of learning and participating in today's complex information environment (Mackey & Jacobson, 2019, p. xvii). Metaliteracy argues against passive learning, challenging students to reflect on and take ownership of a host of learner roles while acknowledging the need for incorporating four distinct learning domains.

More specifically, the metaliteracy framework has at its core four goals, each of which has a number of learning objectives (Jacobson, Mackey, O'Keeffe, Forte, & O'Keeffe, 2018). These learning objectives are underpinned by learning domains designed to emphasize the depth of the learning process: affective, changes in learners' emotions or attitudes through engagement with learning activities; behavioral, what competencies students have upon successful completion of learning activities; cognitive, what students should know upon successful completion of learning activities; and metacognitive, how students reflect on their

own learning (Jacobson et al., 2018). It can be revelatory for students to realize, for example, that how they feel about learning something new (affective) may have an impact on that learning (cognitive). They might find that they want to take action (behavioral) in the real world based on new knowledge. Thus, the metaliteracy model is a framework that organizes the domains of learning and gives students a sense that the nature of learning encompasses many more activities than the cognitive domain they likely focus on.

Metaliteracy also asks students to appreciate the different roles that they as learners occupy in today's information environment. It is most common for students—and for many of the rest of us—to think of ourselves simply as consumers of information. The metaliteracy model extends this, encouraging students, in a variety of ways, to think of themselves as information producers. Thus, part of the metaliteracy model delineates a variety of active roles that students consciously or unconsciously use in their own learning process, such as "teacher" (how many times without even thinking about it do you explain to someone else the facts of a situation or the meaning of a concept?), researcher (how many times a day do you go to Google to look up a specific set of facts?), or translator (consider times when you encounter something in one medium and then "translate" it into another medium, e.g., talk to a friend about what you have read). Thus, metaliteracy emphasizes the variety of ways that students are able to go beyond the relatively passive role of information consumer and take charge of their learning. The four learning domains and the learner roles can be seen in Figure 1: The metaliterate learner.

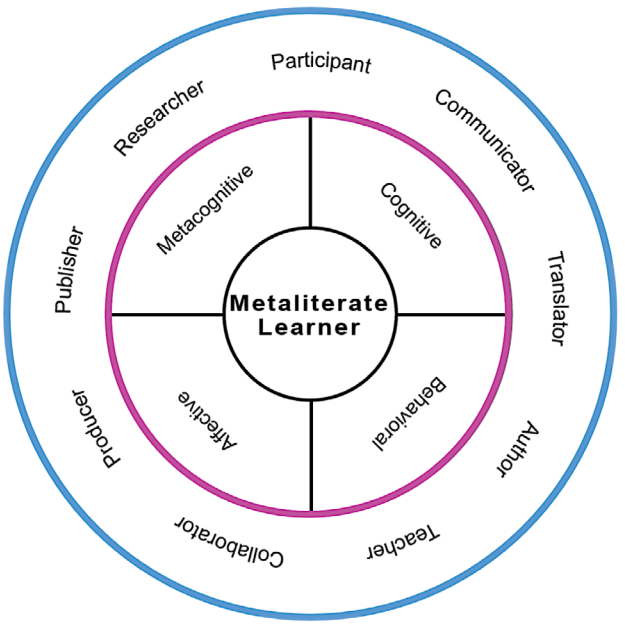

Figure 1. The metaliterate learner.

Metaliteracy goals and learning objectives

The four core goals, with selected learning objectives, are:

Goal 1: Actively evaluate content while also evaluating one's own biases

Objectives:

Critically assess information from all sources, including dynamic content that circulates online. (Behavioral)

Examine how you feel about the information presented and how this impacts your response. (Affective, Metacognitive)

Goal 2: Engage with all intellectual property ethically and responsibly

Objectives:

Responsibly produce and share original information and ethically remix and repurpose openly licensed content. (Behavioral)

Distinguish between public and personal information and make ethical and informed decisions about appropriately sharing information online. (Cognitive)

Goal 3: Produce and share information in collaborative and participatory environments

Objectives:

See oneself as a producer as well as consumer of information. (Affective, Metacognitive)

Participate conscientiously and ethically in collaborative environments. (Behavioral)

Recognize diverse cultural values and norms to create and share information for global audiences. (Behavioral, Cognitive)

Goal 4: Develop learning strategies to meet lifelong personal and professional goals

Objectives:

Value persistence, adaptability, and flexibility in lifelong learning. (Metacognitive)

Adapt to and understand new technologies and the impact they have on learning. (Affective, Behavioral)

Engage in informed, self-directed learning that encourages a broader worldview through the global reach of today's social media environment. (Behavioral, Metacognitive)

While students may not necessarily relate to the full list of goals and learning objectives (Jacobson et al., 2018), the metaliterate learner roles translate these statements into a form that students can embrace and own. The defined roles enable students to fulfill what might otherwise be unstated obligations in academic settings and through lifelong learning efforts. The range and content of these obligations drawn from the goals and learning objectives are made palpable in a way that individuals do not confront in other settings or frameworks. While metaliteracy is focused on self-directed learning, it is a framework that students are not familiar with. Therefore, the instructor's role in introducing students to metaliteracy and guiding their initial engagement with it is appropriate and necessary.

Metaliteracy's goals and attendant learning objectives speak to important knowledge, competencies, and attributes required for today's information environment. They not only address the 21st century competencies raised by Ossiannilsson (2018), but also three of the four specific "C" skills identified as the most important for student success at college, in their careers, and as citizens: critical thinking, communication, and collaboration (National Education Association, n.d.). While creativity, the fourth "C," is not a stated metaliteracy learning objective, it is inherent in those that address teaching and translating information for diverse audiences.

Metaliteracy can also serve a second purpose for courses using OEP. It has the potential to scaffold the use of these practices, asking students to reflect on their roles as learners and contributors. Courses that use OEP expand student agency, and preparation for this increased and often unfamiliar obligation assists students' ability to succeed.

Metaliteracy OER

In order to incorporate the metaliteracy framework in courses, the Metaliteracy Learning Collaborative has created a wide range of OER for teaching and learning metaliteracy. The collaborative is comprised of State University of New York librarians, disciplinary faculty members, and instructional designers, each of whom brings particular knowledge and perspectives to the creation of OER. The resources include a digital badging system with tiered content in the form of quests and challenges, MOOCs, a Lumen Learning college success module for high school seniors/college first year students, and more. The collaborative encourages student collaboration in OER creation, and several components of these resources have been developed by students who are credited in the resources themselves. All of these OER are available to interested librarians and disciplinary faculty members and readers are invited to explore, use, and adapt them.

Metaliterate learner badging system

The badges from this multi-tiered resource include activities based on the metaliteracy goals and learning objectives that culminate in four badges: Master Evaluator, Producer and Collaborator, Digital Citizen, and Empowered Learner, as shown in Figure 2. The Master Evaluator badge includes two units: Content Analysis (search strategizing, evaluation, packaging and sharing of information) and Perspectives and Responses (author's voice, individual and collaborative creation). The Producer and Collaborator badge includes a Global Contributor unit (participate, listen and learn, and share) and a Creator unit (produce, expand horizons). Digital Citizen has Information Ethics content (intellectual property and information use) and a Social Identity section (online personas and personal privacy). The fourth badge, Empowered Learner, has three sections (metacognitive reflection, critical thinker, and learner as teacher). Learners are able to demonstrate understanding

through the written assignments that accompany each activity submitted to instructors for review. Metacognition plays an important part in the increasingly reflective activities students are asked to complete as they move from the entry level content to more integrative material. While the badge-tracking component of the platform is currently under development, the content of all activities and assignments is freely available to any interested instructor or learner (https://sites.google.com/view/metaliteracy).

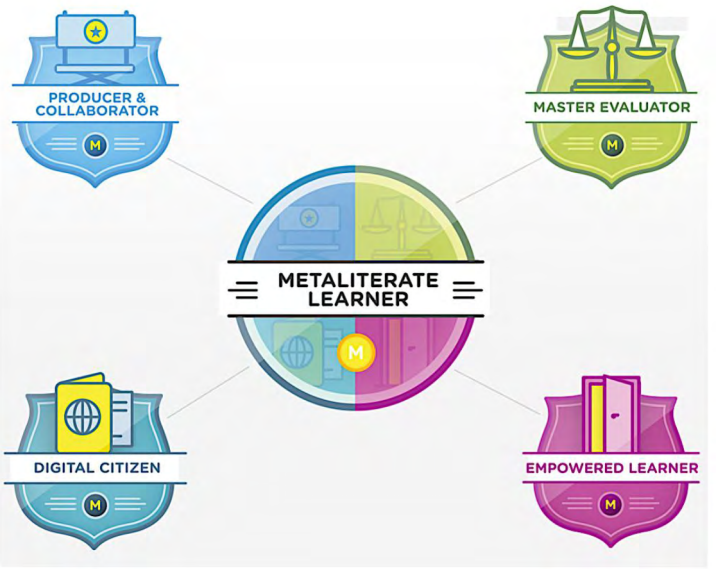

Figure 2. Metaliterate learner badges.

Metaliteracy: Empowering yourself in a connected world MOOC

This MOOC features videos, readings, discussions, and learning activities that promote metaliteracy competencies. It is available on the Coursera platform, with frequent course start dates. There is no charge for the course unless one would like to earn a Coursera certificate of completion (https://www.coursera.org/learn/metaliteracy).

Empowering yourself in a post-truth world MOOC

This 2019 self-paced MOOC addresses issues connected to the post-truth world in which factual information has been displaced by subjective and biased viewpoints. It asks participants to gain insights into their own biases and preconceptions. It uses metaliteracy to teach self-reflective, metacognitive processes and examine fixed mindsets, and empowers learners to be responsible consumers and producers of information. It was first offered on the Open edX platform, and is now available on Coursera (https://www.coursera.org/learn/empowering-yourself-post-truth-world).

Metaliteracy iSucceed module

This learning resource, offered via Lumen Learning, consists of five units that introduce high school and first year college students to components of metaliteracy. The units include the following activities and self-check questions:

- What Does it Mean to Be a Metaliterate Learner?
- Metaliteracy and Your Role as a Researcher
- Your Role as an Information Producer and Collaborator
- Your Life as a Metaliterate Digital Citizen
- Being a Lifelong Metaliterate Learner

(https://courses.lumenlearning.com/isucceed-wm-collegesuccess/)

Metaliteracy learner roles prompts

These questions prompt students to think about each metaliterate learner role more deeply, and are designed so that students will make connections between what they know and do and the roles (https://metaliteracy.org/ml-in-practice/metaliterate-learner-roles/).

Metaliteracy and OER: Collaborative Course Development for Critical Thinking

How does one move from the theory of critical thinking to teaching it in a particular course? Where does metaliteracy come in? The authors of this article have worked together over four iterations of a relatively new course, Research and Method in Political Science, designed to assist in the teaching of critical thinking to undergraduates. Created particularly for transfer students, the course also meets several competencies encouraged for students within the Political Science major—information literacy, advanced writing, and oral discourse—all of which have an obvious connection to critical thinking.

The instructor, confronted with the challenge of preparing a new class, sought the assistance of the librarian to assess the availability of resources. Collaboration between the course instructor and the librarian began in the specific context of developing the information literacy requirement. The first time the course was offered, two librarians jointly taught an introductory class, with the subject librarian for political science addressing databases and other important tools and some key search strategies, while the author explored metaliteracy. The course professor then decided that the metaliteracy framework—with its focus on alternative domains of learning, active learning roles, and the critical thinking competencies honed by the metaliteracy quests—aptly fit the bill for future sections of the course.

While there are clearly many ways to accomplish the goal of teaching this kind of class, the instructor chose to develop a course that would make abstract policies more concrete. Thus,

each semester students have been asked to focus on four or five units, each highlighting a current and controversial political issue or concept. Students are required to become familiar with alternative perspectives on each issue or concept and subsequently develop their own positions. Topics were selected for their potential to involve different contexts for critical thinking—asking students, for instance, to consider issues as a generalist (making a budget) or as a policymaker tasked with a very specific role (handling the opioid crisis); or asking students to consider issues where they were likely to have strong opinions (income inequality) in contrast to issues with which they might be less familiar (globalization). As examples, in the fall 2019 semester the instructor developed a unit on migration/immigration, first considering some specific policies (e.g., green light laws, sanctuary cities), then stepping back to focus on broader principles including the advantages and disadvantages of open versus closed borders and the relevance of theories of American identity, finally cycling back to apply these broader perspectives to additional current-day issues. The generation unit of the course asks students, in light of the fact that people tend to pay attention to demographic characteristics such as race or gender over and above any effect of age, to focus on what it means to be part of a generation and what impact "generation" might have as they move forward with their lives. The instructor and students then consider aspects of "generation" (e.g., political socialization, the acquisition of political information, political participation) that are particularly relevant to the lives of younger generations and that also enhance one's critical thinking capabilities. For example, the more you yourself think about how you have been socialized, the better you can reflect on your own perspective, potentially making it more likely that you will be able to sort out the perspectives of others. The more you become aware of the sources of information you utilize, the more likely you might be to take the initiative to expand the range of available options.

Incorporation of Metaliteracy

When introducing metaliteracy to the instructor, the librarian described the aforementioned metaliteracy learner badges, which are specifically designed for use in courses regardless of discipline and are flexible in the content that can be selected and, if desired, adapted. While the learning system is structured around four master badges, instructors may choose to mix and match the quests (the lowest level of activity) that they assign. Students who complete the full series of required activities are able to earn a digital badge, attesting to their competency, but interested instructors can create badges that acknowledge meaningful subsets of the content.

After discussion, activities were selected from the metaliterate learner badges that complemented course topics. In particular, a variety of quests—who wouldn't be intrigued by the idea of a quest particularly at the height of HBO's Game of Thrones series?—were picked to increase student engage-

ment and to serve as short assignments to augment the writing requirement. Some students perceive writing responses to quests as more user-friendly than a standard academic paper. By the third iteration of the course, 10 quests were being used; the current iteration of the course requires nine. The assigned quests specifically relate to critical thinking—for example, the "Reevaluate" quest asks students to think about a current decision they are facing and reconsider it in light of critical thinking criteria. The "Giving Credit" quest focuses on the importance of acknowledging sources in an era where it is easy to take for granted where information comes from. The "Expand Horizons" quest asks students to take a specific course topic (generally this has been done in the context of the "generations" unit) and put their own stamp on it by compiling their own set of video and written sources and presenting them to the class. Appendix 1 provides the instructions students work from to create this quest.

Lastly, a culminating assignment asks students to design their own quest, exemplifying the learner as producer. By this point in the semester, students have considerable exposure to metaliteracy concepts and the quest format as well as to the specific topics covered in class. The "Design Your Own Quest" assignment asks students to create a quest about a topic of importance to them that had not been covered in the course and to present it to the rest of the class.

The quests used in the course were selected from different parts of the learning system, and therefore did not accrue an existing digital badge upon completion. The authors thus created the Expanding Horizons badge, which is unique to this customized selection of activities. Students learned that digital badges reflect mastery of a micro-competency and that they can share this achievement on social media and online resumes.

From an open pedagogical perspective, students who have written high quality quests are offered the option to have them considered for inclusion in the badging system content. To date, one graduate student—whose quest was on the ways in which the sport of baseball united different generations of families in Taiwan—has shared his quest in this way. Although the emphasis so far has been on getting the students to turn in specific course assignments, future iterations of the course will put more emphasis on encouraging students to work toward this more public option.

Impact of Metaliteracy OER

Over the course of the four semesters that this particular instructor has offered the course, the metaliteracy framework has proved useful and has accounted for a significant portion (20%) of a student's grade. As is clear from the description of metaliteracy, there are a number of components—the framework itself, the learning domains, the learner roles (producer, teacher, researcher, etc.), and the quests that draw upon the goals and learning objectives. The OER both clarify and expand these components, with the quests and higher-level activ-

ities from the badge content the most in-depth. Notwithstanding the inherent variation in student attention and interest, in general, students in the political science course understand the overall framework. They understand the idea that they are producers as well as simply consumers of information, and at its broadest level, they recognize that metaliteracy is asking them to process information in ways that go well beyond the cognitive domain.

Throughout the class, the instructor also emphasizes the accompanying metaliterate roles. The students in one class section asked the librarian for more detail about what exactly each role entailed, resulting in the development of the clarifying role prompt OER that has since been used in a number of other learning settings (Jacobson, Mackey, & O'Brien, 2018). In class, the professor incorporates specific roles in group activities—students pick the roles they think they need to improve on and at several points in the course are asked to engage in activities that will help them do so in conjunction with the particular topic being studied. If students want to become better researchers, they are asked to generate some new and interesting facts on the issue under discussion. If they want to improve as teachers, each student will be asked to explain an idea or two to another student.

As the instructor came to appreciate its value and became more comfortable explaining it to the class, the metaliteracy framework played a larger role in each semester. The quests, along with the culminating badge, have proven integral to the course. Despite the strong comment from one student claiming he would rather take an exam than develop a quest, impressionistically the students have seen the quests as favorable alternatives to "yet another paper." They appreciate that many of the quests are short and to the point. They also like the open-ended nature of some of the quests, particularly the "Expanding Horizons" quest, and the flexibility of picking their own topics for the "Design Your Own Quest" assignment.

Despite some understandable nervousness about formally speaking in front of the whole class, students also appreciate the resources used in the class presentations. One student wrote, "the quests not only put the students in a more central role in learning, but the presentations component allows for students to see how their classmates tackled the quests, furthering ideas of how they could look at similar situations in the future and how to further use the skills and knowledge they've gained" (E. Matott, personal communication, July 28, 2019).

Overall success notwithstanding, critical thinking is not easy to teach. Students respond most readily to the specific quests because they are the most concrete aspect of the metaliteracy framework. Although students come away with a general appreciation of the value of this set of OER, it falls to the instructor to frequently remind them about the broader learning context. The incorporation of the metaliteracy framework makes this job easier and would not have happened without the instructor-librarian collaboration.

Conclusion

In this paper, the authors have expanded an appreciation for OER by describing the metaliteracy framework, which demonstrates that the value of OER goes well beyond the provision of online textbooks for students. In turn, the metaliteracy framework provides a multi-pronged conceptualization to help students place the cognitive skills they usually highlight into a broader perspective including affective, behavioral, and metacognitive domains. The framework teaches students to become better critical thinkers and more effective and responsible citizens, thus embodying the spirit of the 4 Cs (critical thinking, communication, collaboration, and creativity) that have been cited as essential skills for 21st century learners. It empowers students to take on more active roles both within and outside of the academic setting and provides scaffolding for open pedagogical practices.

In explaining how this framework has been successfully adapted to the needs of one classroom context, the authors have also demonstrated the flexibility of the metaliterate approach. The active metaliterate learner roles have been clarified over successive iterations of this particular course to assist student understanding. The instructor has developed the "Design Your Own" quest assignment and adapted the "Expand Horizons" quest activity for use in larger political science courses that are centered on disciplinary rather than explicitly critical thinking-focused content, and adaptations to the metaliteracy OER developed in conjunction with this particular political science course have since been used by other professors at the University at Albany and beyond.

Finally, given that professors often underutilize the knowledge and assistance of librarians, the paper provides a reminder of the benefits of collaborative work. Faced with the challenge of creating a new course, the professor searched for resources that would assist in teaching critical thinking. In the collaborative spirit promoted by metaliteracy and OER, the successful professor-librarian partnership described in this paper has made that course significantly better.

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Appendix 1

Directions for Creating an Expand Horizons Quest (2016)

Your task: To create an engaging, informative **Expand Horizons** quest

Learning objectives: produce, share, and evaluate information in a variety of participatory environments; conduct ethical practices in the use of information, in ways that demonstrate awareness of issues of intellectual property; and broaden your own understanding of generations and politics.

Metaliteracy, as you know, emphasizes that learners are creators of information, as well as consumers. In this activity, you will have the opportunity to:

- Assume the role of creator
- Be creative and have fun
- Engage in a learning activity that allows you to inform others
- Further your learning about the topic of generations in connection with political science
- Possibly write for a larger public if your quest is used or adapted for the Metaliteracy badging system (permission will be asked of you)

In this activity, you will be considering how you might expand the horizons of other learners in connection with the course theme of generations. This might involve a historical look at generations, a glimpse into generations in other countries or other cultures, or some other specific aspect of generations that you can connect with political science. Or it might involve an unusual juxtaposition of topics or content formats.

You will be creating a quest that connects this idea of expanding horizons with the course content of generations. To do this, you need to know what a quest looks like, and what they try to accomplish. You aren't creating this only for your professor to review, but for a wider audience. Below, you will find out how to prepare yourself for this assignment, what you need to do to successfully complete it, and how you will share it.

Because this assignment is rather unusual, it behooves you to read these directions carefully. It will definitely make the assignment less confusing for you! If you have questions, feel free to contact Professor Jacobson.

Prepare

Prepare yourself by reading the following:

1. The Metaliterate Learner handout you were assigned earlier, to review the 4 learning domains

2. Two quests in the badging system, to reiterate what quests are!

   Giving Credit Quest

   https://sites.google.com/view/metaliteracy/master-evaluator/perspectives-responses/authors-voice/giving-credit?authuser=0

   Grow vs. Fail Quest

   https://sites.google.com/view/metaliteracy/empowered-learner/metacognitive-reflection/failing-better/grow-vs-fail?authuser=0

3. The Universal Design for Learning Guidelines (UDL)

   http://www.cast.org/our-work/about-udl.html#.V-K1dzVFHMx

   (look at the 3 boxes about the WHY, HOW, and WHAT of learning, and perhaps click through to the UDL Guidelines)

Create

1. Recognize that you would like to engage readers in the topic of generations (in connection with political science), help them to learn something (cognitive) and reflect upon it (metacognitive). You might also have them do something (behavioral) or they might come to feel something about this content you are creating (affective). You may also present information in different ways or provide different options for the final activity (UDL).

2. The toughest part about writing a quest is coming up with an angle. What aspect of generations would you like to present that fits the theme of Expanding Horizons for those who are reading it? How can you make it interesting?

3. Once you've decided on your topic and angle, find something engaging to let learners know about it. It might be a video, a short reading, or something else entirely. **Make sure you cite your sources!**

4. Find a way to tell a story. In other words, provide background, fill in gaps, make this quest cohesive. What would you like learners to come away with?

5. Next, develop an activity (or choice of activities, keeping UDL in mind) to let learners take the topic further, or to explore and reflect on what they've learned.

6. Pull it all together, and get ready to present this to the class.

From Soup to Nuts: Expanding Liaison and Technical Services for OER Development

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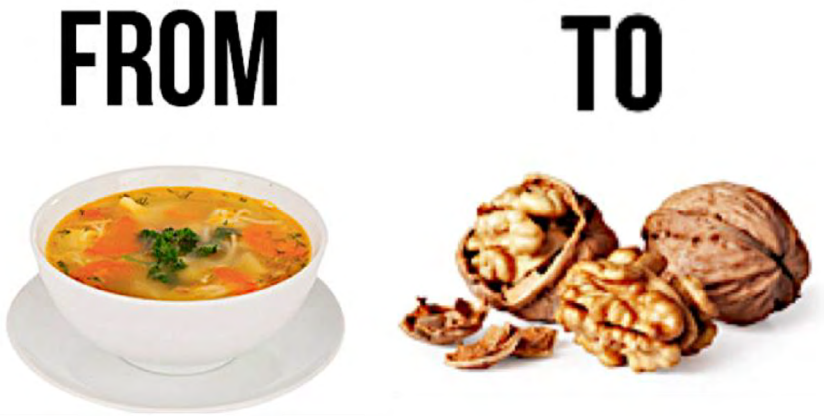
Georgia Southern University, Georgia



Abstract

This case study highlights an ongoing library collaboration with faculty recipients of a statewide open educational resource (OER) textbook grant at a rural public research university in the southeast. It emphasizes the evolving needs of teaching faculty open to OER grant writing and development, and the necessity of librarians to be creative in delivering this support. The authors describe how they expanded liaison and technical service roles to educate faculty about the meaning and benefits of OERs, guided selection of appropriately licensed and pedagogically aligned materials, supported development of the grant proposal, and supported development and maintenance of the OER product itself. Central to this study is how liaison and technical services librarians collaborated with faculty to open up the LibGuides CMS platform to host OER materials. This paper provides a comprehensive case study encompassing service development in support of the grant funding process, development of the content management infrastructure for hosting and developing the OER product, next steps, and recommendations for best practices. Throughout, the authors argue for the importance of intra-library collaboration and expanding liaison and technical services roles for effective OER support.

 doi: 10.18278/ijoer.2.1.12

Keywords: OER, OER hosting, faculty learning communities, intra-library collaboration, LibGuides CMS

De la sopa a las nueces: enlace de expansión y servicios técnicos para el desarrollo de REA

Resumen

Este estudio de caso destaca una colaboración continua de la biblioteca con los docentes que reciben una subvención de libros de texto REA en todo el estado en una universidad rural de investigación pública en el sureste de EE. UU. Enfatiza las necesidades cambiantes de la facultad de enseñanza abierta a la escritura y desarrollo de subvenciones REA, y la necesidad de que los bibliotecarios sean creativos para brindar este apoyo. Los autores describen cómo ampliaron los roles de enlace y servicio técnico para educar al profesorado sobre el significado y los beneficios de los REA, la selección guiada de materiales con licencia apropiada y alineados pedagógicamente, el desarrollo respaldado de la propuesta de subvención y el desarrollo y mantenimiento del producto REA en sí. Un aspecto central de este estudio es cómo los bibliotecarios de enlace y servicios técnicos colaboraron con el profesorado para abrir la plataforma LibGuides CMS para alojar materiales REA. Este documento proporciona un estudio de caso integral que abarca el desarrollo de servicios en apoyo del proceso de financiación de subvenciones, el desarrollo de la infraestructura de gestión de contenido para alojar y desarrollar el producto REA, los próximos pasos y las recomendaciones de mejores prácticas. En todo momento, los autores abogan por la importancia de la colaboración entre bibliotecas y la expansión de los roles de enlace y servicios técnicos para un apoyo efectivo de REA.

Palabras clave: REA, alojamiento de REA, comunidades de profesorado en aprendizaje, colaboración entre bibliotecas, LibGuides CMS

一应俱全：为开放教育资源（OER）的开发扩大联络和技术服务

摘要

本案例研究聚焦于一所位于西南乡村地区的公共研究大学中，图书馆和获得一项全州开放教育资源（OER）课本经费的教师之间的不断发展的协作。本文强调了教导教师对OER经费书写和开发持开放态度这一不断演变的需求，强调了图书馆员对此提供支持时须具有创造力的必需性。作者描述了其如何扩大联络和技术服务所发挥的作用，以期教导教师OERs的意义和益处；如何指导教师选择经过适宜许可和与教育一致的材料；如何支持经费提议；以及如何支持OER产品本身的开发和维护。本研究的关键在于，负责联络与技术服务的图书馆员如何与教师协作，打开LibGuides CMS平台，以存储OER资料。本文提供了一个全面的案例研究，包括支持经费集资过程的服务开发，为存储并开发OER产品而准备的内容管理基础设施开发，以及有关最佳实践的建议。作者通过全文主张进行图书馆内部协作、以及扩大联络和技术服务发挥的作用的重要性，以确保有效的OER支持。

关键词：OER，OER　存储，教师学习社群，图书馆内部协作，LibGuides CMS

Introduction

Georgia Southern University is a public doctoral and research university located on three campuses in southeast Georgia. Georgia Southern offers 141 degree programs and serves over 26,000 full-time and part-time students. The University Libraries belongs to the GALILEO consortium, an initiative of the Board of Regents of the University System of Georgia (USG). At Georgia Southern, support for open educational resources (OERs) traditionally has been offered through passive educational activities, such as maintaining a generic OER LibGuide and emailing basic information about OERs through institutional listservs. Recently, the University Libraries have taken a more active and integrated approach to supporting OER education and advocacy through workshops, semester-long learning communities, and one-on-one consultations. These efforts are coordinated with the statewide Af-

fordable Learning Georgia (ALG) initiative by a "Library Champion" who works with the campus community and fellow librarians to support OER initiatives campus-wide.

This paper highlights a recent collaboration with faculty recipients of a statewide OER textbook grant at Georgia Southern. Local and regional grant programs invite teaching faculty to adopt, edit, and create OERs for their courses, but many faculty are intimidated or overwhelmed by sourcing appropriately licensed instructional materials and deciding what to do with these materials once they have them (Allen & Seaman, 2014, 2016). Collaborating with librarians eases the burden of locating these materials, while opening the door to innovative solutions for content management and access (Johnson, 2018). Throughout this case study, the authors emphasize the evolving needs of teaching faculty open to OER grant writing and development, and the necessity of librarians to be creative in developing and delivering this support. To accomplish this, librarians at Georgia Southern expanded liaison and technical services roles to educate faculty about the meaning and benefits of OERs, guided selection of appropriately licensed and pedagogically aligned materials, assisted with the development of the grant proposal, and supported the development and maintenance of the OER product itself.

Central to this case study is how liaison and technical services librarians collaborated with faculty to open LibGuides CMS as a platform for hosting available OER resources to teach introductory Chemistry to first-year engineering students. As the authors describe, LibGuides CMS provided a stable environment with the hosting and editorial capabilities needed to solve the faculty's content management, access, and reporting needs, including integration with the University's Desire2Learn learning management system (LMS). Looking forward, LibGuides CMS opens the door for future collaboration and support, including using LibWizard to create interactive tutorials and assignments for the course. This case study addresses the authors' development of OER-related services for faculty, support throughout the grant collaboration, development of the content management infrastructure for developing and hosting the OER product, next steps, and recommendations for best practices. Throughout, the authors argue for the importance of intra-library collaboration and expanding liaison and technical services roles for effective OER support.

Literature Review

Rising student material costs have now been a concern of higher education stakeholders for at least two decades. The Bureau of Labor Statistics (2016) shows that college textbook costs have risen notably since the early 2000s, increasing as much as 88% in recent years. While still lower than tuition costs, high textbook costs represent a significant barrier to student success (Croteau, 2017). However, textbook costs alone do not reveal the full picture. Students often must pay for

bundled resources that include digital access codes or course-related software packages. These bundled resources are often time-limited or non-transferable, reducing students' ability to save money through the secondary textbook market. This, coupled with overall rising education costs, forces students to make tough decisions concerning course materials. A recent survey at Virginia Tech shows that students are opting to share materials, increase working hours, and reduce course loads to help pay for, or simply go without, the course materials they need to succeed (Walz, 2017). A now well-known Florida study reveals similar results, with students opting not to take certain courses due to the cost of course materials (Florida Virtual Campus, 2019). Such behaviors contribute to course failure and dropout rates, and increase students' time to degree completion (Martin, Belikov, Hilton, Wiley, & Fischer, 2017).

At the same time that awareness of student material costs has increased, higher education stakeholders have begun to explore OER alternatives, beginning with the development of Merlot, publication of PLOS, MIT's requirement that all course materials carry an open courseware license, and the development of what is now OpenStax by Rice University (Bliss & Smith, 2017). Through these and other efforts, instructors and OER advocates have shown that students can perform just as well using open resources, and that students rate low and no-cost materials favorably (Hilton, 2016; Todorinova & Wilkinson, 2019). As a result, a growing number of institutions and university systems have focused efforts on OER development to manage student material costs (Bliss, Robinson, Hilton, & Wiley, 2013; Farrow et al., 2014). Moreover, as OERs have become more widely adopted, educators have discovered benefits beyond cost management, including equal access to materials from the first day of class; increased student engagement; lower drop, fail, and withdrawal rates among at-risk populations; and slightly higher grades among at-risk students (Colvard, Watson, & Park, 2018).

For several years now, these and other benefits have contributed to broad institutional and system-level administrative buy-in for OERs, especially for high-enrollment core courses and lower-division STEM courses that tend to use expensive texts that are updated frequently. At the same time, however, the transition to OERs has been slow for many institutions (Doan, 2017). While the reasons for this are varied, several sources indicate that locating appropriate OER materials and setting aside time to overhaul curricula are significant barriers to faculty for developing OER materials (Allen & Seaman, 2016; DeVries, 2013; Wang & Towey, 2017). Addressing these concerns has led institutions and university systems to develop a diverse array of awards and funding-based incentives for faculty to research, review, create, and adopt OERs. These incentives exist at the state level (e.g., Georgia, Oregon), the system level (e.g., SUNY), and the institution level (e.g., Temple), with varying degrees of impact and success (Bell & Salem, 2017).

Given the nature of these barriers, librarians have an important role to play supporting the development and adoption of OERs. Librarians' unique background in information searching, copyright and licensing, and information delivery, along with their long history of collaboration with faculty and campus units, make them strong partners for OER funding, development, and delivery (Bradlee & VanScoy, 2019). To a great extent, however, librarians have fulfilled this role by simply folding OER support into traditional library services already familiar to faculty. For example, several case studies highlight strategies for educating faculty about OERs in general or supporting faculty education with one-shot options, such as workshops or webinars (Jensen & West, 2015; Mitchell & Chu, 2014; Primary Research Group Staff, 2017). While these strategies are important for building faculty awareness, they risk falling short of helping faculty progress confidently and successfully through OER development, implementation, and assessment.

Getting Started: Affordable Learning Georgia

In 2014, USG announced its first statewide call for textbook transformation grant proposals through a new initiative, Affordable Learning Georgia (ALG). This initiative provides funding to faculty willing to overhaul a portion of a course or an entire course using OERs. Faculty members have the option to adopt outright, adopt and adapt, or create materials from scratch. ALG also supports the option to use library subscription materials when available, as these resources do not incur additional costs for students. Initial awards largely targeted faculty teaching high-enrollment core courses with high material costs and high student impact numbers. More recently, ALG has begun granting awards to higher-level courses and now offers mini-grants to faculty willing to develop ancillary materials for courses already using OERs. As of Spring 2019, ALG has awarded 334 grants impacting over 296,000 students and providing over $51 million in cost savings (alg.org).

Like many institution and state-level OER funding initiatives, ALG relies heavily on librarians to serve as liaisons between the funding agency and faculty. As part of the initiative, each institution's library designates a "Library Champion" whose role is to advocate, educate, and work with faculty and administrators to encourage an OER-friendly climate on campus. ALG provides advocacy training and professional development opportunities to the Champions, including webinars, special panels, and Creative Commons certifications. Monthly virtual meetings also allow Champions to share success stories, troubleshoot concerns, brainstorm, and keep up with OER activities at each institution. Each spring, ALG sponsors interested Champions to attend the Teaching and Learning Conference in Athens, GA. ALG holds a yearly function in Macon, GA to highlight new developments in open access and OERs. ALG has a strong presence at the annual Georgia Libraries Con-

ference and other meetings across the state. These opportunities create a sense of community for the Champions and contribute to a strong support system for promoting OERs across the USG. Such support is important to the success of the initiative as most Champions take up this role voluntarily in addition to their other job duties.

Of course, some institutions have had better success than others realizing the goals of the ALG initiative. For a number of years, Georgia Southern University lacked a dedicated Library Champion. In Spring 2017, the Library Dean appointed a new Champion after serving in this role himself. For the new Champion, most of her first year in this role was spent learning about ALG and connecting with colleagues statewide. During this first year, the Champion was able to conduct two one-shot faculty workshops and develop a new LibGuide introducing the OER concept and outlining ALG grant requirements (https://georgiasouthern.libguides.com/nocostlowcost). During Spring 2018, the Champion was able to partner with Georgia Southern's Center for Teaching and Excellence (CTE) to provide two additional OER workshops as part of the CTE's ongoing faculty development series. Attendance at these workshops was low, with only five total attendees. However, some faculty attended multiple workshops even after receiving emails explaining the content had not changed. Conversations and questions following the workshops revealed to the Champion and CTE personnel the depth, breadth, and complexity of participating faculty members' questions and concerns about implementing OERs for their courses, indicating that the traditional liaison approach to faculty OER education was inadequate for faculty needs. As a result, the Champion and CTE personnel committed to developing a semester-long Faculty Learning Community (FLC) for Fall 2018, with the expectation that an extended, immersive training experience would address questions and concerns raised during the spring workshop.

Increasing Engagement: The Faculty Learning Community

During Fall 2018, the Champion partnered with CTE personnel to offer a six-week FLC on OERs and ALG grant funding opportunities. The FLC met biweekly from September through November. Faculty attending the Spring 2018 workshop were personally invited to participate as they had previously shown interest. Furthermore, CTE personnel added the FLC to their faculty training calendar and advertised it via their monthly newsletter and website. The Champion drafted emails for the other library liaisons to target faculty who had shown interest or asked questions about OERs or ALG grants. As a result, eight faculty from across campus signed up for the FLC.

Goals of the FLC included mentoring faculty to 1) develop a working knowledge of open access and OERs, 2) learn how to search for and evaluate appropriate OER content, 3) understand Creative Commons licensing and its use in the OER context, and 4)

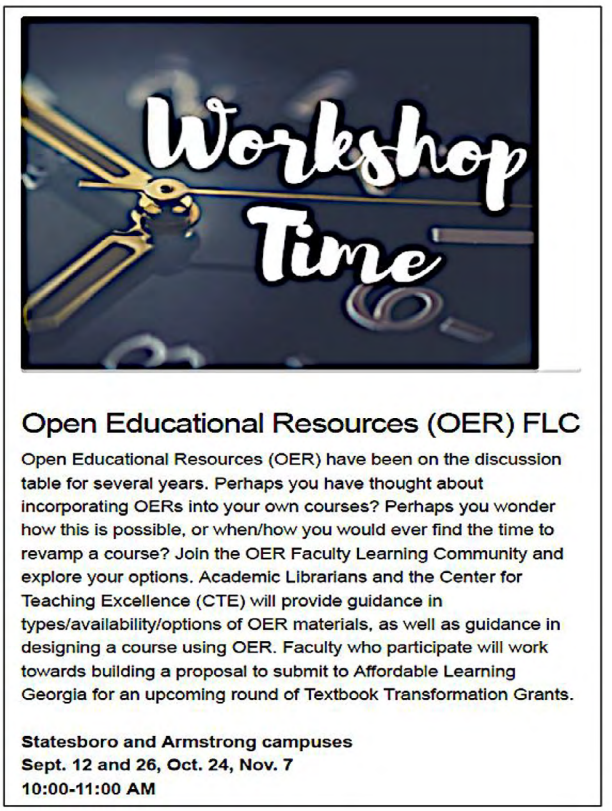


Figure 1. Portion of CTE Newsletter announcing the OER FLC.

learn how to develop and assess learning objectives in courses using OERs. The target end product of the FLC was for participating faculty to develop, and ideally submit, one or more ALG textbook transformation grant proposals. Taking a team approach, the Champion provided guidance on OER research and evaluation, while CTE personnel provided guidance on course design, pedagogy, and assessment using OERs. The instructional team utilized online tutorials developed by ALG, scholarly and popular readings and websites, and the libraries' OER LibGuide to centralize research on available and appropriate OER materials. All readings, videos, the LibGuide, and other materials were delivered using the university's Desire2Learn LMS. Participating faculty were asked to complete readings and videos outside of designated meeting times and answer brief questions for discussion during the face-to-face meetings. These meetings provided an opportunity for the instructors to clarify questions and concerns and to delve deeper into areas of specific interest.

Following this highly structured format, the FLC provided dedicated time for faculty to think about their courses and specific course objectives and gave the Champion opportunity to address any barriers to locating course materials at the point of need. The Champion was able to walk faculty through the effective use of tools

developed to help them locate these materials. Participants were able to explore specific searches during face-to-face meetings, allowing the Champion to discuss the pros and cons of various resources and how they might be adapted to their curricular needs. Moreover, the Champion was able to leverage her subject area expertise to aid material selection. For example, the Champion's awareness of the peer-review status of available OERs helped to alleviate faculty concerns about their appropriateness to a particular curriculum. Indeed, several faculty participants in the Fall 2018 FLC expressed concern about their ability to evaluate OER materials for quality, effectiveness, and licensing status. While this level of support may be outside faculty members' normal expectations for liaisons (Bradlee & VanScoy, 2019), reevaluating librarians' specific duties and modeling these to faculty through FLC and similar instructional modalities can help change these attitudes.

Similarly, partnering with an instructional design specialist, whether this is a librarian or someone from another academic support unit, can help to address any pedagogical issues related to course design or how to utilize particular OERs to achieve student learning outcomes. One barrier not often discussed in the literature is that faculty may have no significant experience selecting instructional materials for their courses. Often, curricula or textbooks are chosen for faculty by departments, or faculty simply choose a well-known or widely adopted option within their discipline. The Champion and CTE personnel observed this with faculty during the Fall 2018 FLC. On several occasions, faculty expressed anxiety and raised concerns about not finding test banks, slide decks, or other ancillary materials prepared alongside the OER materials they were considering for their courses. Having instructional design expertise available helped to ease this source of stress and provide confidence to faculty.

Pulling in persons familiar with copyright and re-use licensing also helps when working with faculty to understand how materials may be modified and reused in their courses. Given the FLC's team approach, the Champion was able to bring in the Discovery Services Librarian from the library's technical services department, who facilitates faculty workshops covering copyright, authors' rights, and re-use licensing in the institutional repository. Involving the Discovery Service Librarian, who faculty were already aware of and trusted on these topics, was a natural fit to provide this information. For most of the faculty participating in the workshops, authoring, editing, and publishing OER content is outside of their publishing experience. During the Fall 2018 FLC, the faculty also displayed significant anxiety about receiving credit for their work and were skeptical of allowing others to create derivatives of their work. This was due in part to ALG's requirement that the Creative Commons license CC-By be applied to any materials produced under an ALG grant. Understanding this requirement was important for any faculty intending to submit a grant proposal.

As previously mentioned, prior to the development of the FLC, OER-related library support was largely limited to general OER instruction and referral to the library's LibGuide. By contrast, the main takeaway of the Fall 2018 FLC was to facilitate discovery of OERs that would meet the specific learning objectives of participating faculty members' courses and the ALG grant requirements. As part of their training through ALG, Champions are instructed on the rubric ALG uses to review all grant proposals. Proposals must include an outline for delivery, accessibility, and assessment of course learning objectives and students' reactions to the course materials. With this training, Champions are prepared to help faculty develop proposals that are well paced and achievable within ALG's required timeline for implementation.

At the completion of the FLC, two teams of Chemistry faculty felt confident enough to submit proposals for one of ALG's textbook transformation grants. The proposal was due December 2018, and neither group was awarded funding. However, reviewer feedback made clear that both proposals required only minor revisions to be successful. With encouragement from the Champion and CTE personnel, both teams resubmitted in Spring 2019 and received full funding. ALG provides a full year for faculty to implement their plan and begin utilizing the OER materials within the designated course.

From Grant to Implementation: Evolving Library Support

Beginning in Summer 2019, the Champion has continued work with one of these teams as the faculty have transitioned from the grant application process to OER development and implementation. The team is developing an online textbook for a specialized Chemistry course required of all first-year Engineering majors. A significant issue with the current proprietary textbook is that none of the included examples or problem sets is engineering-related, and so it fails to engage the students. To address this, the team has elected to adapt the OpenStax *Chemistry 2e* textbook for the course. The OpenStax text is similar in content and organization to the current textbook and has received positive reviews from other faculty in the USG system, and the team feels that they can successfully adapt it to an engineering audience without disrupting their teaching style. While the faculty will need to update examples and problem sets over time, adapting this text means that the team does not need to start from scratch.

While electing to adapt the OpenStax text has reduced the need to originate new content, this plan has raised platform hosting and delivery challenges not fully anticipated during the FLC or grant funding process. Namely, the faculty require the ability to migrate, host, and revise this text, and they need a platform that will allow them and future instructors to update the text without specialized plat-

form knowledge. Because instructors may change over time, it is important that the text be accessible and editable by anyone teaching the class going forward. Moreover, the faculty require a platform that supports accessibility, assessment, and the ability to integrate the text into the university's Desire-2Learn LMS. Given these needs, the library's collaboration with and support for the team will continue throughout development and implementation, for the foreseeable future.

To address the team's platform hosting and delivery needs, the Champion again reached out to colleagues in the technical services department who have experience with content hosting, management, and delivery. Together, the Champion and Discovery Services Librarian evaluated the OpenStax website and text, and determined that neither the library nor ALG's document-centric institutional repository (IR) would provide an appropriate platform. While IRs have been widely adopted to host OERs and help to ensure the preservation of this content, they are less well suited to OER content that is dynamic or likely to be updated frequently by multiple stakeholders. Moreover, because this text makes extensive use of the MathML XML standard and the MathJax JavaScript library to display equations, the faculty require a platform that accommodates both in order to ensure accessibility and preserve as much of the OpenStax source material as possible. After considering a number of hosting solutions, and given the library's prior experience hosting student-created work (Mortimore & Baker, 2019), the Champion and Discovery Services Librarian determined that LibGuides CMS was the best available solution.

Springshare LibGuides and LibGuides CMS offer hosting, access, and permission controls that support extraordinary flexibility, both in terms of content and display and editorial access and control. Specifically, LibGuides CMS supports administrators' ability to apply unique access and permission controls to individual guides or groups of guides and unique look and feel settings, including page templates, language settings, and custom guide or group-level CSS and JavaScript (JS). Because access and permission controls are applied at the guide or group administrator level, library administrators are able to cordon off guides from each other and from platform-level configurations. In this way, administrators can open up highly customized guides to faculty editors while protecting library-created content. Moreover, because LibGuides and LibGuides CMS are patron-facing platforms closely integrated with Springshare's other products, including LibWizard, they are well suited to meet the accessibility needs of students and the assessment needs of faculty and grant funders.

During early Summer 2019, the Champion proposed LibGuides CMS as a solution to the team and arranged for the Champion, Discovery Services Librarian, and faculty to meet for an initial consultation. During this meeting, the Discovery Services Librarian introduced the platform to the faculty, recommended a single LibGuide to host

the OER, and developed a preliminary workflow for the librarians and faculty to create an initial table of contents and identify content for migration to the LibGuide. Following this meeting, the librarians and faculty held a half-day workshop, during which the Discovery Services Librarian determined the faculty's level of comfort working with OpenStax HTML, provided the faculty with basic training on migrating and editing content in LibGuides, and began initial testing of migrated content.

During and after this session, the faculty worked with the Champion and Discovery Services Librarian to identify and resolve several content migration challenges. For example, the faculty and Discovery Services Librarian initially migrated content to the LibGuide by cutting and pasting the text, images, and equations directly from the OpenStax webpages. However, this method converted the equations into SVG images, rendering them so they could not be copied, viewed by screen readers, or easily edited following import. This undermined the faculty's need for accessibility and ongoing editorial control of the equations. Furthermore, the presence of these images greatly increased the number of HTML characters required to represent the content on the page, outstripping Springshare's 65,000-character limit for Rich Text/HTML fields. This complicated content migration and risked interfering with future editing because the HTML would need to be spliced across numerous content area fields on each page.

Through trial and error, the Discovery Services Librarian and the faculty resolved these initial migration challenges, supporting the display of complex OER content in LibGuides (see Figure 2). After further experimentation with the OpenStax content, the Discovery Services Librarian determined that the XML files OpenStax provides for offline use could be modified and uploaded in lieu of copying and pasting the content directly from the webpage. This method has the advantage of importing the equations in MathML format, which uses fewer HTML characters and is easier for the faculty to edit. Moreover, this method allows the Discovery Services Librarian to utilize the MathJax JavaScript library via Springshare's Guide Custom CSS/JS feature to display the equations, preserving accessibility and their ability to be copied. Using the file manifest in OpenStax' offline file directory, the faculty first identified which XML should be used to populate each page in the OER. The Champion and Discovery Services Librarian then extracted the XML files, removed any unneeded code, batch updated the image source URLs, and imported the modified XML into the LibGuide. While the XML for some pages still exceeded the 65,000 character limit for Rich Text/HTML fields, the overall reduction in characters made it easier for the Champion and Discovery Services Librarian to splice the code into fewer fields with less disruptive breakpoints.

To date, the Champion and Discovery Services Librarian have completed migrating the OpenStax content to the OER LibGuide. By doing so, they have freed the faculty to focus

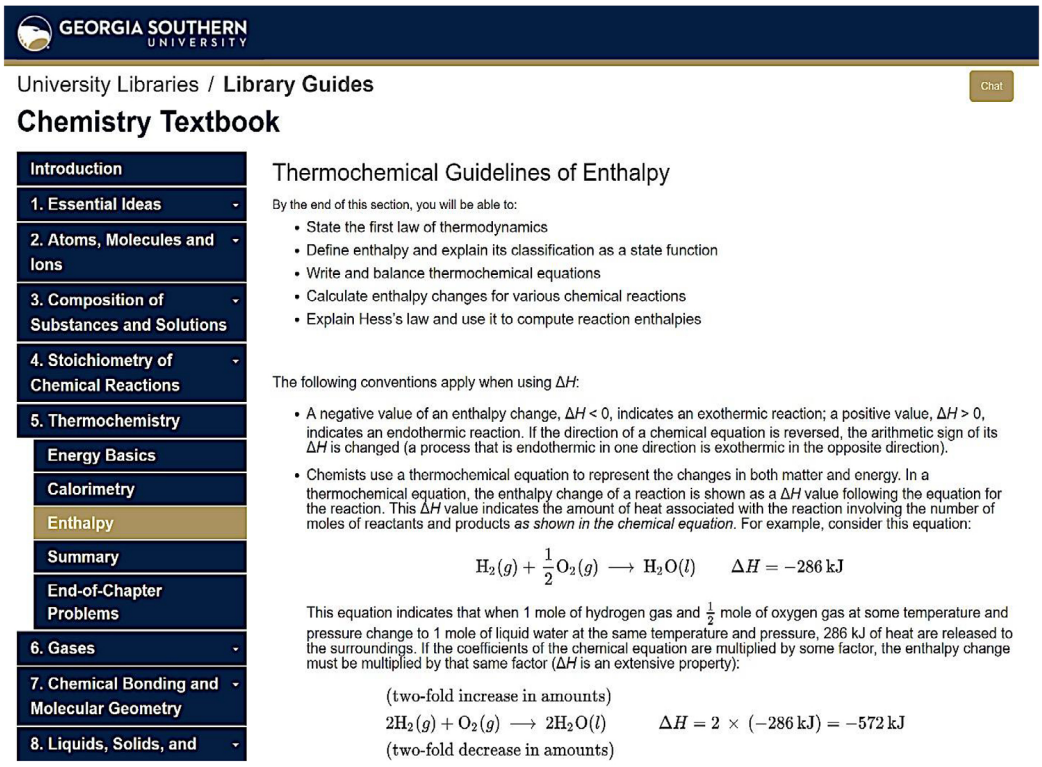


Figure 2. OER LibGuide page with modified OpenStax XML and MathML encoded equations. Equations are displayed using the MathJax JavaScript library.

attention on revising the text, examples, and problem sets for the Engineering majors who will be taking the course. Once the faculty have completed this task, the Discovery Services Librarian will normalize the CSS across pages using LibGuides' Guide Custom JS/CSS feature, ensuring a consistent look and feel. While this step is not necessary, given that the initial import is sufficient to deliver usable text, the process of re-styling the text is simplified by utilizing the offline files. Unlike the copy and paste method, which introduces extensive in-line styles into the HTML, using modified offline XML preserves source IDs, classes, and tag attributes that can be used to develop a single style sheet for the entire LibGuide.

As the faculty have worked with the imported OpenStax content, they raised additional content and feature requests requiring librarian support. For example, in the course of researching additional content to include in the OER, the faculty identified an open source interactive simulation from PhET at the University of Colorado, Boulder. Unfortunately, the simulation is available only in Java, which cannot be run natively in the browser and requires students to have Java installed on their computers. Moreover, unless students know how to open and run the

application on their computers, they may have difficulty using it. In order to increase the likelihood that students will successfully download and access the simulation, the Discovery Services Librarian uploaded a copy of the Java Archive (JAR) file to LibGuides, created and uploaded an associated Java Network Launch Protocol (JNLP) file, and created a link to the JNLP file on the LibGuide page. Now when students download and open the JNLP file, the Java Web Start software automatically downloads and runs the simulation.

Similarly, as the faculty have continued to reflect on assessment, they have requested usage data that goes beyond what Springshare's RefAnalytics reporting tool supports. For example, in addition to page and asset views, the faculty are interested in collecting data about entry and exit pages, page link clicks, and video views. As a result, the Discovery Services Librarian has created and embedded a Google Analytics profile targeting the OER using LibGuides' Guide Custom JS/CSS feature. This profile is associated with a delegated Gmail account, which ensures access continuity as instructors change over time. Furthermore, it ensures that only instructors of record are provided access to usage data consistent with FERPA and IRB guidelines. As assessment needs continue to evolve, the Discovery Services Librarian may further employ Google Tags or Google Analytics' Campaign URL Builder.

During Fall 2019, the faculty will continue to modify the OpenStax content now migrated to the OER LibGuide. As they do so, they will gain experience revising content on LibGuides CMS and lay the groundwork to hand the OER over to new instructors as they take responsibility for the course. As use of the OER evolves, the Champion and Discovery Services Librarian anticipate further collaboration, including training the faculty to develop interactive tutorials and assignments using Springshare's LibWizard module. Doing so will further extend the OER's value for conducting student assessments and required assessments for ALG. While this level of faculty-librarian collaboration is extensive and may not be sustainable for all OER projects, the faculty's current progress toward delivering the OER has depended heavily on intra-library collaboration and expanding liaison and technical services roles as needed.

Observations and Best Practices

Faculty barriers to OERs are not singular or discrete. In this study, what presented itself as a barrier early on (e.g., locating an appropriate OER) evolved as the process moved forward. The teaching faculty in this study expressed different anxieties, questions, and stumbling blocks at each stage in the creation of their course material. In the beginning, the most prevalent anxiety centered on understanding and finding OER content. This anxiety spilled over to time management anxiety. At times, the faculty panicked over the work required to completely overhaul a course. Once faculty became comfortable finding and evaluating OER content, anxieties about copyright and reuse li-

censing requirements surfaced. Each of these anxieties mingled with the anxiety of tackling a course with limited ancillary materials available to guide the faculty's teaching strategy. To meet these anxieties and lessen these barriers, librarians must be flexible. While the FLC began with a set syllabus and learning objectives, concerns brought by the faculty frequently necessitated a change of plans and several on-the-fly explorations of resources, copyright issues, and examples of successful OER implementation at other institutions in similar courses. Many of the Champion's planned lectures were scrapped to allow faculty time to search for OERs and ask questions. By supporting an interactive and inviting environment, the FLC format made addressing these barriers possible and kept the faculty engaged. Furthermore, the learning community format creates the expectation that additional work and exploration will take place outside of scheduled meeting times, allowing for a more in-depth exploration of topics during face-to-face sessions.

Collaboration among librarians and other campus entities has also proved essential for making a variety of expertise and skills available to faculty as they work through whatever barriers they encounter. Working in a team removes the unrealistic expectation that one person can be an expert in all areas of OER development. Prioritizing expectations and sharing workflows also facilitates success. As mentioned earlier, the Champion and Discovery Services Librarian performed the initial migration of text over to the LibGuide

Figure 3. Timeline of project outlining number of one-shot workshops, attendance, progression of FLC, and grant proposals.

for the faculty. Taking care of tasks outside faculty members' interest or expertise ensures that faculty remain focused on tasks more suited to their strengths. Indeed, throughout this collaboration, the authors relied on intra-library collaboration to address the breadth of barriers presented by this project. This may prove more difficult for librarians at small institutions with minimal staff, but having solid foundations in place to help answer faculty concerns should help. A well developed tutorial or LibGuide can help provide guidance in searching, copyright issues, and pedagogical practices that work best with open materials.

Lastly, librarians should be prepared to support OER projects well beyond the grant award. Hosting, enhancement, and long-term management of the OER product are central to faculty concerns about the viability of OER adoption. These barriers can stall or kill an OER project if librarians fail to support faculty through this part of the process. Fortunately, librarians often have at their disposal technical services expertise and hosting tools to address this. Librarians should be prepared to think critically and creatively about how existing content management tools, including IRs and LibGuides CMS, can be adapted to meet content management needs. Providing this level of service is consistent with academic librarians' growing awareness of their role supporting students and faculty as content creators (Jackson, Pierard, & Schadl, 2019).

Conclusion

Effective OER support requires shifting thinking from a one-shot instructional model to an understanding that faculty needs will vary and evolve as they delve into these materials. Librarians are well positioned to bring a variety of expertise and skills to this process. Expanding and redefining liaison and technical service roles allows creative solutions and provides strong scaffolding for faculty support. Providing guidance throughout the OER process strengthens the relationship between librarians and faculty and creates opportunities for deeper collaboration across the institution.

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Coordinating OER Efforts Across a Mid-Sized College Campus

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Image by Rawpixel

Abstract

In 2018, the University of North Alabama (UNA) began to formalize its efforts to promote the use, creation, and adaptation of sustainable open educational resources (OER) on campus. UNA's strategic plan for 2019-2024, *Roaring with Excellence*, aspires to have some form of OER integrated into at least half of all academic programs at the university. Following the lead of the Alabama Commission on Higher Education (ACHE), which had begun promoting OER statewide, the university was eager to assess the knowledge and use of OER on campus and to provide training and education to faculty to encourage the enhanced understanding and adoption of OER.

A three-person informal working group formed on the university's campus at the behest of the university president and provost. The make-up of the group included a scholarly communications librarian, a cataloging librarian serving as interim university librarian,

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and the director of the university's Educational Technology Services (ETS). This paper details how the working group began to create a sustainable culture of OER on the university's campus.

Keywords: OER, open educational resources, climate surveys, libraries, university faculty, textbooks, course materials, learning materials

Coordinar los esfuerzos de REA en un campus universitario de tamaño medio

Resumen

En 2018, University of Northern Alabama (UNA) comenzó a formalizar sus esfuerzos para promover el uso, la creación y la adaptación de Recursos Educativos Abiertos (REA) sostenibles en el campus. En el plan estratégico de UNA para 2019-2024, Roaring with Excellence, aspiran a tener alguna forma de REA integrada en al menos la mitad de todos los programas académicos de la universidad. Siguiendo el liderazgo de la Comisión de Educación Superior de Alabama (ACHE), que había comenzado a promover REA en todo el estado, la universidad estaba ansiosa por evaluar el conocimiento y el uso de REA en el campus y proporcionar capacitación y educación al profesorado para fomentar una mejor comprensión y adopción de REA

Un grupo de trabajo informal de tres personas se formó en el campus de la universidad a instancias del presidente y rector de la universidad. La composición del grupo incluyó un bibliotecario académico de comunicaciones, un bibliotecario de catalogación que sirve como bibliotecario interino de la universidad y el director de los Servicios de Tecnología Educativa (ETS) de la universidad. Este documento detallará cómo el grupo de trabajo comenzó a crear una cultura sustentable de REA en el campus de la universidad.

Palabras Clave: REA, recursos educativos abiertos, encuestas climáticas, bibliotecas, profesorado universitario, libros de texto, materiales de curso, materiales de aprendizaje

在一个中型大学校园开展开放教育资源（OER）协调工作

摘要

2018年，北阿拉巴马大学（UNA）正式开始推动校园可持续开放教育资源（OER）的使用、创造和改编工作。在UNA对2019年至2024年的战略规划“Roaring with Excellence”中，他们渴望将OER的部分形式融入至少一半的大学学术课程中。继阿拉巴马州高等教育委员会（ACHE）带领全州推动OER之后，UNA渴望评估校园中有关OER的知识和使用，并对教师提供培训，以期鼓励对OER的进一步理解和采用。
应UNA校长和教务长要求，该校组建了一个由三人组成的非正式工作组。工作组成员包括一名学术传播图书馆员、一名负责编目的内部图书馆员、以及该校教育技术服务（ETS）董事。本文将详细描述该工作组如何开始在校园创建一个可持续的OER文化。

关键词：OER，开放教育资源，气候调查，图书馆，大学教师，课本，课程资料，学习资料

Background

In Fall 2017, the Academic Affairs division of the University of North Alabama (UNA), which includes Collier Library and Information Services, and Educational Technology Services (ETS), became aware of a new statewide initiative to raise awareness and promote the use of open educational resources (OER) among Alabama's institutions of higher education. The initiative was set to kick off with a series of workshops held across the state in early 2018. Several representatives from UNA attended the first workshop, which was held at Athens State University. These representatives included administrators, faculty, instructional designers, and librarians. Two of the authors of this paper were among the attendees. After completing the workshop series, the Alabama Commission on Higher Education (ACHE) announced a statewide grant program to support OER use, adoption, and creation in general education courses. Soon after, the president of UNA, in consultation with the provost, decided to follow the state's lead and make OER a priority on our campus.

To support the new campus OER initiative, the provost charged the university librarian and the ETS director to lead the university's efforts. The library had recently hired a scholarly communications librarian. With the provost's approval, the directors recruited her to join them as an informal three-person OER working group. The group immediately began promoting the state's OER grant program on campus. The timing of these events was not ideal, occurring at the end of the spring semester, a time when faculty are busy finishing spring courses and preparing for summer schedules. However, one education professor's interest in adapting OER for a course resulted in a grant award for a university team who were subsequently asked by ACHE to partner with another team from Wallace State Community College.

The scholarly communications librarian was part of the team awarded the statewide grant at UNA. In addition to the education professor and the librarian, the grant team included an instructional designer to help integrate the OER into the course shell and a second education professor to assist in the research analysis and reporting. The grant required the instructor to use traditional material in a fall semester section of the class and OER in a spring semester section of the class. The librarian worked closely with the education professor to locate OER materials to replace her traditional course materials. The course is a required, high-enrollment general education course in her department. Preliminary data shows on overall 3.9 (on a 1-5 scale) student satisfaction score when using the traditional learning materials. When using the OER, the satisfaction rate was a 4.7. A full report to ACHE is expected at a later date.

In Fall 2018, the campus OER initiative received a second boost when the university's strategic plan for 2019-2024, *Roaring with Excellence*, specifically included OER. The plan defined an aspiration to integrate OER of some form into at least half of all academic programs at the university. Given this formal directive, the OER working group created an agenda and goals, and started to work on the first steps to realizing this aspirational strategic directive.

First Steps

Faculty survey

In order to set a clear timeline for OER adoption and implementation, it was important to first assess the current status of awareness and use of OER on campus. An IRB-approved survey was sent out to all faculty, staff, and adjuncts affiliated with UNA in September of 2018 through a variety of channels, including campus-wide emails and campus digital announcements. The survey was created based on the strategic aspiration of the university and many questions were borrowed from a variety of openly licensed sources. We utilized questions from OpenStax College Educator Survey (2016), the Babson Survey Research Group (Seaman & Seaman, 2018), and the faculty perceptions survey administered by Jung, Bauer, and Heaps (2017). The survey recorded 101 total attempt-

ed responses. Of those 101, a total of 81 participants completed the survey.

The survey instrument assessed instructor demographic information, current textbook use and selection criteria, instructors' impressions of student textbook use, awareness and use of OER, perceptions of quality of OER, and perceived challenges for adoption or creation of OER. Once all of the survey data was recorded and reviewed, it was used as the basis of a report the working group presented to the provost. This report included not only survey data, but also the goals the group established based on the findings from the survey. A brief review of the survey and the data collected follows.

Demographics

Survey respondents had an average of 12 years of teaching experience, with a low of 0 for a respondent who indicated they worked in administration to a high of 47. The primary method of instructional delivery was full-time face-to-face teaching with a blend of other methods (see Table 1). Respondents primarily teach both undergraduate and graduate courses. The majority of responses came from assistant professors, with an equal number of associate and full professors having the second highest response rate, although staff, adjuncts, and others were also represented (see Table 2).

Textbooks: Responsibility and Criteria for Selection

The second section of the survey asked participants to provide information related to their current textbook use, including responsibility for textbook selection, and the

Table 1. What kind of teaching do you do? (select all that apply)

Answer	Respond	%
Staff	3	3.70
Adjunct	6	7.41
Instructor	10	12.35
Assistant Professor	24	29.63
Associate Professor	17	20.99
Professor	17	20.99
Department Head	6	7.41
Administration	5	6.17
Other (please describe)	3	3.70

"Other" responses included none, professional development, and study abroad.

Table 2. What is your status at UNA? (select all that apply)

Answer	Respond	%
Full-time face-to-face	41	50.62
Part-time face-to-face	9	11.11
Full-time online	13	16.05
Part-time online	14	17.28
Full-time blended (face-to-face and online)	26	32.10
Part-time blended (face-to-face and online)	2	2.47
Other (please describe)	5	6.17

"Other" responses included curriculum developer, fundraiser, grant writer, and graduate coordinator.

importance of features, such as ancillary resources and access codes, when selecting a textbook. Participants were also asked questions relating to textbook costs, including when they had last checked the price of the materials they required for classes, how often students asked if the text was required or if an older edition could be used, and how much they thought students spent on materials per course. Finally, participants were asked how often they thought students did not purchase required class texts.

Since survey participants may teach multiple classes, they were given the option to choose multiple answers regarding textbook selection. Fifty-four respondents indicated they have sole responsibility for textbook selection and 19 respondents are involved in textbook selection committees. The next highest choice was "Entire department," with 7 responses (see Table 3).

Respondents were asked to rate their personal criteria for textbook selection on a Likert scale from "Not at all important" to "Extremely important." The criteria with the most importance to 37 participants was "Clear & accessible writing." Sixty participants indicated that "Sponsorships or other financial incentives offered by the publisher" were not at all important. Other "Extremely important" criteria included "Comprehensiveness of coverage" (26) and "Cost to the student" (20). Table 4 shows the complete breakdown of participant responses.

When rating ancillary resources that can come bundled with textbooks, participant responses were mixed. Fifteen participants rated slide decks as "Extremely important," but 18 selected "Not important at all." With an average value of 2.95, "Online student resources" received the highest overall importance of the resources listed (see Table 5).

Table 3. Who has a role in selecting required course materials (including textbooks) for use in the course(s) you teach? (select all that apply)

Answer	Response	%
I am solely responsible for the selection	54	66.67%
Another faculty member makes the selection	6	7.41%
I lead a committee/group that makes the selection	2	2.47%
I am a member of a committee/group that makes the selection	19	23.46%
A committee/group of which I am not a member makes the selection	3	3.70%
Entire department	7	8.64%
Course developer	5	6.17%
Instructional Design group	1	1.23%
Administration	0	0.00%
Other (please describe)	4	4.94%

"Other" responses included course leader selects then approved in committee meeting, depends on the class, and common classes are done by concurrence of all instructors who teach those classes.

Table 4. When selecting a required course textbook, how important is each of the following factors to you?

Question	Not at all important	Slightly important	Moderately important	Very important	Extremely important	Average Value
Cost to the student	1	2	15	42	20	3.98
Reputation of author(s)	3	8	26	29	15	3.56
Quality of ancillary resources (question banks, Powerpoint slides, etc.)	9	11	25	25	11	3.22
Comprehensiveness of coverage	1	2	8	44	26	4.14
Recently updated edition	4	11	18	33	15	3.54
Used/recommended by other faculty	11	15	26	24	5	2.96
Clear & accessible writing	-	-	7	37	37	4.37

Theoretical orientation	6	15	26	24	10	3.21
Works with Canvas	23	16	16	13	13	2.72
Relationship with publisher	42	16	12	9	2	1.93
Sponsorships or other financial incentives offered by publisher	60	10	6	3	2	1.48

"Other" responses included course leader selects then approved in committee meeting, depends on the class, and common classes are done by concurrence of all instructors who teach those classes.

Table 5. In addition to textbooks, how important are ancillary resources to your teaching?

Question	Not at all important	Slightly important	Moderately important	Very important	Extremely important	Average Value
Question Banks	19	18	16	19	9	2.77
PowerPoint Slides	18	19	23	6	15	2.77
Instructor Activity Manual	15	24	21	12	9	2.70
Adaptive/ Online Quizzing	23	18	19	11	10	2.59
Online Student Resources (e.g., flashcards, tutorials, demos, etc.)	14	15	24	17	11	2.95

Textbooks: Perceptions of Student Use

Survey participants were asked a series of questions related to student purchase and use of textbooks. Only 26 of the 81 respondents required students to purchase an access code that was bundled with a textbook. Three participants had never checked the price of their textbook, while 67 said they had checked the price within the last year. According to the College Board's Average Estimated Undergraduate Budgets, 2018-19 (2016), students at a four-year public university spend an average of $1,240 per academic year on books and materials. If a student were

to take four classes in both the Spring and Fall semesters, this would mean the student spends an average of $155 per class. When asked about their perceptions about student spending on course materials, 23 participants thought students spent between $150 and $200 per class, while 26 participants thought students spent between $100 and $150. Twenty-one participants thought students spent less than $100 on course materials.

Participants were also asked to estimate the number of student questions they receive regarding textbooks. Thirty-six respondents indicated that they are asked by students between one and five times each semester if the textbook is required, and another 20 said they are asked between five and 10 times each semester. Further, 48 respondents said they are asked between one and five times per semester if an older edition of the required text can be used, far outweighing the other responses to this question. Only 12 respondents said they did not have students ask them about using older editions of required texts.

The final question in this section asked participants to tell us what percentage of their students they thought went without purchasing the required textbook. Responses ranged from 0 to 100%. One participant stated that "they [students] cannot pass the class without an access code." Other comments to this question were "depends on the course, but less than 20%" and "most." Of the varied responses, 61 participants said 25% or fewer students did not buy the textbook, 13 responses fell in the range of 26-50%, and 6 responses were 51% or higher.

Open Educational Resources Awareness on Campus

The first question in this section asked participants how much they knew about OER based on the William and Flora Hewlett Foundation definition, which defines OER as "teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge" (Atkins, Brown, & Hammond, 2007). The majority of survey participants were either unaware of OER (23 responses) or had heard of OER but did not know much about them (28 responses). Only seven participants were currently using OER, with another five responding that they have used them previously for teaching (see Table 6).

The 69 respondents who were either unaware of OER or who had never used OER were then asked if they would consider adopting OER for any of their courses. Of those 69, 65 said they would consider adopting OER and four indicated they would not.

The 12 participants who were using or had used OER were directed to

a series of questions about their use of OER in their courses. The first question asked them how they had used or created OER. Eleven responded that they had used OER, with seven responding that they had adapted OER. Two had created OER for study or teaching and two had added OER to a repository. One participant has created and published OER with an open license.

The participants who had used OER were then asked what types of OER they had used. Videos had the highest response rate with 11, and open textbooks were second with nine. Full responses are detailed in Table 7.

Table 6. How aware are you of open educational resources (OER)?

Answer	Response	%
I am not aware of OER	23	28.40
I have heard of OER but don't know much about them	28	34.57
I am unaware of OER and have previously used them for teaching	18	6.17
I am aware of OER and have previously used them for teaching	5	6.17
I am aware of OER and currently them for teaching	7	8.64

*OER is defined by the William and Flora Hewlett Foundation as "teaching, learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use and re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge."

Table 7. Which of the following types of OER have you used? (select all that apply)

Answer	Response	%
Open textbooks	9	75.00
Whole course	0	0.00
Elements of a course (e.g., a module or unit)	4	33.33
Videos	11	91.67
Podcasts	7	58.33
Images	5	41.67
Infographics	5	41.67
Interactive games	2	16.67
Lectures	2	16.67

Lesson plans	0	0.00
Tutorials	1	8.33
Quizzes	1	8.33
E-books	6	50.00
Datasets	1	8.33
Learning tools, instruments, & plug-ins	2	16.67

Participants who used OER had varied purposes for using it, from teaching (10 responses) to inspiration (six responses). Some used it as supplementary material (eight responses) and some to provide e-learning material for online students (six responses). See Table 8 for a full breakdown.

Table 8. For which of the following purposes have you used OER? (select all that apply)

Answer	Response	%
For teaching	10	83.33
To supplement my existing lessons of coursework	8	66.67
As "assets" (e.g., images or text extracts) within a classroom	3	25.00
To give to students as compulsory "self-study" materials	2	16.67
To give to students as optional "self-study" materials	3	25.00
To provide e-learning materials to online students	6	50.00
To engage my students more fully in a topic area	4	33.33
To interest hard-to-engage learners	2	16.67
For inspiration and new ideas for my teaching	6	50.00
To make my learning more culturally diverse	2	16.67

Challenges to OER Adoption and Use

Of the participants who used OER, challenges included finding high-quality resources (seven responses) and not having time to search for and evaluate suitable resources (seven responses). Other challenges are detailed in Table 9. All survey participants were asked to rate potential deterrents to adopting OER in their courses. The lack of awareness and difficulty in finding resources ranked high among concerns. Other issues include not having enough resources or ancillary resources. Full responses are in Table 10.

Table 9. Which challenges, if any, do you most often face in using OER (select all that apply)

Answer	Response	%
Overcoming technology problems when downloading resources	2	16.67
Knowing where to find resources	6	50.00
Finding suitable resources in my subject area	5	41.67
Finding resources of sufficiently high quality	7	58.33
Find resources that are up-to-date	6	50.00
Getting work colleagues, including supervisors, to accept the use of OER	1	8.33
Not being skilled enough to edit resources to suit my needs	1	8.33
Not knowing whether I have permission to use, change, or modify resources	3	25.00
Not having enough time to search for and evaluate suitable resources	7	58.33
Not having connections with peers using OER for support and advice	4	33.33
Not having time to experiment with using OER in the classroom	4	33.33
Lacking institutional support for my use of OER	3	25.00

All survey participants were asked to assess which factors would make them more likely to select a particular OER. Relevancy of the resource to the instructor's needs had the most responses at 66. Easily downloadable resources ranked second, with 42 responses. Participants also rated interactive/multimedia content (38), description of the learning objectives (37), and positive user ratings (36) highly. The criterion selected least was the resource having a catchy title or attractive images.

Participants were asked to choose the one item they thought would be the biggest challenge for OER adoption at UNA. With 21 responses, discoverability was seen as the biggest challenge. Other challenges included faculty perception (15), OER availability (10), and time (10). None of the respondents chose scalability or advocacy as a challenge for adoption, and planning, technology, and ownership of the OER initiative were each selected only once.

Finally, all survey participants were asked how they perceive the quality of OER. Fifty respondents indicated that they do not know, followed by 23 respondents rating them about the same as traditional material. Six respondents said they perceive OER quality as worse than traditional material. Only two responses rank OER quality as better than that of traditional textbooks (see Table 11).

Table 10. To what extent do you feel that the following are deterrents to the adoption of OER in the courses you teach?

Question	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat Agree	Agree	Strongly agree	Average value
Not aware of OER	5	9	3	11	11	16	26	5.05
Unsure of how to use OER	4	7	4	9	15	18	23	5.13
Too difficult to find what I need	-	8	2	34	14	10	11	4.62
Not enough resources for my subject area	2	6	1	32	16	17	5	4.58
No available ancillary resources	1	8	4	34	10	17	6	4.49
Unprofessional appearance	3	12	3	45	7	8	2	3.91
Not current	2	11	3	40	11	11	2	4.10
Not high quality	2	7	7	38	9	12	5	4.26
Not understanding permissions for use	3	10	7	37	12	9	2	4.00
Lack of institutional support	6	12	5	36	8	8	5	3.90
Too difficult to change or edit	3	8	4	46	10	8	-	3.96
To difficult to integrate into technology I use	1	10	5	46	9	8	1	4.00
Other	1	1	-	10	-	3	1	4.25

Table 11. Overall, how do you perceive the quality of OER?

Answer	Response	%
I do not know	50	61.73
Better than the quality of traditional textbooks and course materials	2	2.47
About the same as the quality traditional textbooks and course materials	23	28.40
Worse than the quality of traditional textbooks and course materials	6	7.41

Key Takeaways and Strategies

The survey made it immediately apparent that there is a lack of awareness or limited awareness about OER on UNA's campus. When asked directly about awareness, close to two-thirds of respondents selected "not aware" or "have heard ... but don't know much." Similarly, the highest responses regarding deterrents to adoption were "not aware" and "unsure of how to use." High numbers of neutral answers to the other deterrents listed in this question may also indicate a lack of or limited awareness on campus.

Answers to several questions on the survey suggest that instructors on UNA's campus are unsure about locating and evaluating high quality resources that meet the needs of their courses. They are also concerned about the time this activity takes. Among the survey respondents, over two-thirds of respondents teach at least one course for which they have sole responsibility for textbook selection. Instructors with sole responsibility for course material selection have more freedom to explore alternatives for their courses. Survey data also indicates that a large number of current OER non-users would consider using OER.

Efforts by the working group on OER to raise awareness on campus began as soon as they started reviewing the survey data. In Spring 2018, the working group offered workshops and lectures about OER, copyright, and scholarly communications. Outside experts were brought to campus, including Will Cross, Director of the Copyright & Digital Scholarship Center at North Carolina State University, who led two days of OER information sessions and a workshop about finding and adapting OER for the classroom. The library worked to bring the ACRL Roadshow, *Scholarly Communications: From Understanding to Engagement*, to campus, an event aimed at librarians and instructional designers from our campus and the surrounding region. Although these events were successful, they only reached a limited number of our campus instructors.

Results of the survey support continuation of efforts to promote and educate the campus community about OER as a critical aspect of achieving the aspiration of the strategic plan. The working group is looking at other potential outside speakers to invite to campus. In addition, the working group feels strongly that part of raising awareness should include promoting the expertise and services of librarians and instructional designers on campus who can help with the challenges identified in the survey data, while offering practical training on OER collections, tools, and other assets. To that end they are planning a series of talks/workshops led by working group members on topics such as using library tools to locate OER, integrating OER into Canvas, and customizing OER for the classroom. A project to leverage LibGuides to highlight quality OER resources by subject is already underway.

A key component of the working groups efforts will be offering a grant program to instructors who adopt, adapt, or create OER to help

offset the time required for this activity. The working group has proposed a Provost Grant Program modeled after successful programs at other colleges and universities. Invaluable to our efforts to create this proposal is the work done by Grand Valley State University to compile a fairly comprehensive document detailing OER initiatives and grant programs at colleges and universities across the United States (Yahne, Rander, & Ruen, n.d.). The proposal also was greatly informed by the ongoing successful grant program in Oregon (OpenOregon, 2018) and the work done by Christopher Barnes as part of his SPARC Open Education Leadership Program requirements (2018).

As part of this grant program, instructors who receive awards will be encouraged to assess their use of OER in the classroom. It would be beneficial for UNA's instructors to add to the growing body of literature on education outcomes of OER and OER-related institutional efforts. To that end, we would like to see instructors consider employing the model used by similar grant programs, where they obtain IRB approval for a comparison study of student learning outcomes using traditional course materials and OER course materials. Instructors would also be encouraged to publish and share their adapted or new OER materials via the UNA Scholarly Repository and in Alabama's OER Commons.

The working group gauged instructor perceptions of course material costs through several survey questions. The evidence from the survey generally indicates that instructors on campus are aware of the costs of course materials to students. They generally have a good perception of the average cost of materials; the majority has checked the price of their course materials in the last 11 months and several instructors indicated they had fielded questions from students about other options to purchasing the textbook. This awareness of course material costs and the potential impact on students could suggest an opportunity to promote OER as a way to lower costs for students, make education more affordable, and encourage instructors to consider OER adoption as a benefit for students.

The library has become heavily involved in the push to reduce textbook costs for students. They have begun a program called the *Textbook Affordability Initiative*, which utilizes a variety of measures to purchase learning materials for students. One part of this project that has already begun is the strategic purchase of textbooks for high-enrollment courses. These books are placed on course reserve so that students have access to the materials without having to purchase expensive textbooks. Another push by this project is to begin to strategically purchase databases that can be used to supplement or replace traditional learning materials.

The survey also aimed to identify whether campus instructors had experience using OER in their teaching. The survey data reveals some use of OER by UNA's instructors. Twelve respondents have used or were using OER at the time of the survey. This current use of OER, though small, could be a foundation for increasing OER use on campus. One

goal of the working group is to identify all instructors at the university who are using OER and build a database, so that we can assist them in any way, from understanding open licenses to ensuring instructional design standards are maintained. Thus far, through workshop events and library outreach, we have identified several instructors who are OER users, including the provost and the university's president. Finding champions of open access and OER on campus can benefit the working group and help achieve the university's strategic directive.

The current working group acknowledges the limitations of the survey, considering that the number of responses (81) compared to the number involved in teaching that fall semester (455) is small. Also, according to the demographic data, there is limited feedback from part-time instructors at UNA. However, given the inclusion of OER in the campus strategic plan, the evidence from the survey results provides the working group guidance on strategies to build awareness on campus and increase OER in UNA's courses.

As the campus OER initiative continued to grow, the working group realized that it would benefit the group to include other campus representatives. To accomplish this, we have invited three people to join our working group: a full-time teaching faculty member, a student engagement staff member who works with the campus food pantry and at-risk students, and a sophomore student who serves as a student government senator. As part of this expansion, a memo has been drafted and sent to the provost to formalize our working group through campus shared governance. In the documentation, we have drafted language to define our charge to be the following:

1. To support the campus initiative to adopt, implement, and use OER.
2. To raise awareness of OER on campus.
3. To advise and educate the campus about OER and related issues, such as copyright, fair use, open access, and open pedagogy.
4. To propose changes in areas related to OER, including policies, procedures, and products used.

Future Directions

The importance of administrative support, including funding and promotion of OER efforts and building OER initiatives into the campus strategic plan, cannot be understated. However, without understanding the needs of the campus, the allocation of funding and support would be difficult. Thus, the first step in implementing an OER process was assessing the current status of awareness and use of OER on campus. Using the results of that assessment has allowed the OER working group to coordinate a strategic rollout of OER initiatives across campus for all teaching faculty and staff. The purpose of this research is not only to explore awareness and adoption at our institution, but also to contribute to the growing body of research on

OER at institutions of higher learning. In addition, the authors especially hope to encourage other mid-sized regional public institutions to evaluate their campus OER usage and implement OER initiatives.

In addition to monetary grants, we would like to see formal language drafted for tenure and promotion documentation for any faculty member who chooses to adapt or create OER for use in their courses. While OER is free for students, we recognize that there is a substantial time commitment involved for faculty OER work and feel that they should be rewarded for their efforts. The working group plans to submit proposed language for consideration by the university's faculty senate and shared governance system.

Our next big project will be to design a new IRB-approved survey instrument to poll students about textbooks based on the research questions used in the Student Textbook and Course Materials Survey (Florida Virtual Campus, 2016). If our expanded workgroup is approved by the provost, we will leverage the new student working group member to promote survey participation via student government and other traditional channels, such as email and campus digital announcements. We are hopeful that the data from this forthcoming survey will help support an initiative to develop a clear way to identify course offerings that utilize OER textbooks or course materials in our online catalog so that students can make financially-informed decisions when choosing classes. This type of course identification is formalized in law in certain states and is in the process of being presented to various state legislatures (Lynden Tribune, 2019; SPARC, 2019).

In addition, the working group members plan to continue to apply for outside OER research and education opportunities, such as ACHE grants, OpenStax Partnerships, and OER Research Fellowships. We are also in the process of investigating the financial feasibility of the university joining the Open Textbook Network. Increasing the working group's knowledge and understanding of the issues and challenges to OER will help inform how we present and support future initiatives on our campus and will enable us to reach our strategic plan aspiration to create a sustainable culture of OER use in 50% of our courses by 2024.

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Beyond Saving Money: Engaging Multiple Stakeholders is a Key to OER Success

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Abstract

This article addresses how the mere development of open educational resources (OERs) and the financial savings are not enough to support OERs as means to academic success. The transition from for-pay textbooks does not end with the adaptation, adoption, or creation of open-access resources; it must also provide broad-ranging support provided for multiple campus stakeholders. This should include, at minimum, comprehensive professional development for academic and library faculty concerning (1) how to review and revise OERs after their initial implementation; (2) training students to be actively engaged in their learning; (3) partnering library and academic faculty to grow, sustain, and expand an OER initiative; and (4) defining academic freedom and accessibility through an OER lens.

Keywords: academic freedom, accessibility, andragogy, collaborations, open educational resources

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Más allá de ahorrar dinero: involucrar a múltiples partes interesadas es una clave para el éxito de los REA

Resumen

Este artículo aborda cómo solamente el desarrollo de los REA y los ahorros financieros no son suficientes para respaldar los REA como medios para el éxito académico. La transición de los libros de texto de pago no termina con la adaptación, adopción o creación de recursos de acceso abierto; También debe proporcionar un amplio apoyo a múltiples partes interesadas del campus. Esto debería incluir, como mínimo, un desarrollo profesional integral para el profesorado académico y bibliotecario con respecto a: (1) cómo revisar y asegurar la calidad de los REA después de su implementación inicial; (2) capacitar a los estudiantes para que participen activamente en su aprendizaje; (3) asociar biblioteca y profesorado para crecer, sostener y expandir una iniciativa de REA; y (4) definir la libertad académica y la accesibilidad a través de un lente de REA.

Palabras clave: libertad académica, accesibilidad, andragogía, colaboraciones, Recursos Académicos Abiertos

不只是省钱：多个利益攸关方的参与是开放教育资源（OER）成功的关键

摘要

本文研究了仅靠开放教育资源（OERs）和财政节省如何不足以支持OERs作为学术成功的途径。从付费型课本进行过渡，并不会实现开放存取资源的改编、应用或创造；这一过程必须还要为多个校园利益攸关方提供大范围支持。此举最少应包括学术教师和图书馆员工在以下方面的全面专业发展：（1）如何在OERs初期实行之后对其进行评审和修改；（2）培训学生，以使其积极参与学习；（3）图书馆员工和学术教师建立合作，以发展、维持、扩大OER倡议；（4）以OER视角定义学术自由和可获取性。

关键词：学术自由，可获取性，成人教育学，协作，开放教育资源

Introduction

The open educational resources (OER) initiative in the Early Childhood Education (ECE) program at an urban community college began with a $300,000 *Achieving the Dream* (AtD) grant, shared with two other community colleges and funded in late Spring 2016. The executive director of the library and the coordinator of the academic program had multiple questions as they wrote the proposal: (a) How will OER benefit faculty and students? (b) How do we find the right resources for our courses? (c) How does this benefit the institution? and (d) Will faculty from liberal arts be interested in this project?

For faculty, OERs offer teaching, learning, and research resources that reside in the public domain or have been released under an intellectual-property license that permits their free use, distribution, and/or adaptation by others. OERs include full courses, course materials, modules, textbooks, streaming media, tests, software and other tools, and/or techniques used to support access to knowledge. Students benefit from having course content available with zero costs and a wealth of resources available to them.

The final result was expected to be that ECE students would be able to complete all 60 credits required for their degree with zero textbook costs—an anticipated savings of approximately $2,800 across 60 required credits. Faculty from English, Education, Mathematics, and the Behavioral and Social Sciences began working on adapting their existing course in Fall 2017. The goal was to complete at least one section of each required course by 2019.

The starting point for each course was to tie together specific student learning objectives, program learning outcomes, and general education competencies used in the sections that relied on traditional for-purchase textbooks. Faculty who developed OER sections had three choices: adopt, adapt, or create. They began by reviewing the objectives, outcomes, competencies, topics, and assignments before identifying or developing OER materials for each course. Faculty developers could have adopted a complete course and used it in its entirety, they could have selected components from more than one existing course to compile a new OER course, or they could have created their own content units and resources. Regardless of which way the OER sections were developed, they must have been available to anyone seeking to adopt or adapt their content.

As a college community striving to reach a 50% graduation rate by 2021-2022, it was hoped that the proliferation of OER would help students reduce their costs, thereby mitigating one of the factors that often delays graduation—a lack of funds. It was also anticipated that OERs would level the academic playing field because all students would have access to academic content on the first day of class—no more waiting for the secondhand book to come from another state or students using earlier editions that may be worn, damaged, or incomplete. Faculty and administration expected that students

would feel more competent and be better able to pace the work because they could access the course from any computer or mobile device. They would, therefore, be less likely to drop the class.

Before agreeing to join the grant proposal, the potential participants were charged with asking the chairs of their departments whether or not they would encourage a faculty member to create the OER and whether they would schedule it every semester once it was certified. Support from all departments was obtained, and faculty members enthusiastically promised to develop courses.

One of the key components to this work was the partnership between library faculty and teaching faculty from the different academic content areas. For each course, a specific library faculty member was assigned to serve as a co-researcher, helping to sift through available OER material and researching for resources when what is needed is not easily located. This collegial approach served to reduce any apprehension about delving into an unfamiliar means of delivering instructional information.

Two additional goals for this OER grant existed. Besides creating an entire degree program that would be offered free of any cost for textbooks, workbooks, or supplemental materials, additional goals were (a) to expand the number of sections offered and (b) to use existing OER sections in liberal arts courses as a springboard to the development of additional OER degrees. Students began taking the first OER sections in Spring 2017. Three sections (one each from Education, English, and Mathematics) were offered with the attribute ZERO, signifying no textbook costs.

During this college's initiative, it became apparent that the actual development of OER-based content was not going to be the only part of moving toward open materials that would impact student success. The initiative would need to support (1) reviewing and revising OERs after their initial implementation; (2) training students to be actively engaged in their learning; (3) partnering library and academic faculty to grow, sustain, and expand an OER initiative; and (4) defining academic freedom and accessibility through an OER lens.

Review of the Literature

The existing literature most frequently addresses the use of OERs and its impact on academic achievement; however, studies have been conducted that discuss non-financial benefits of using OERs. Among these non-financial benefits are andragogy, creating confident learners, student engagement, and accessibility.

Andragogy

The term *andragogy* is described as the art of instruction of adults (Ross-Gordon, 2003). A recommendation for classroom practice for adult learners in higher education is to foster relationships between academic learning and learning in the larger world (Ross-Gordon, 2003). Thus, an approach that fac-

ulty can use to facilitate adult learning is to create "opportunities within the classroom for students to make linkages between course content and knowledge gained in the contexts of work, family, and community living" (Ross-Gordon, 2003, p. 50), thereby training students to be actively engaged in their learning. Adult learner access to OERs provides the content to help post-secondary students build these connections, especially when faculty bring the rationale for selecting items for inclusion in the content into the classroom dialogue.

Another benefit of OER featured as an advantage was its usage as a tool in a flipped classroom using team-based learning instructional strategies (Jakobsen & Knetemann, 2017). In the flipped classroom, students engage in the course material (i.e., OER) outside of the classroom permitting them to study the OER data at their personal speed (Jakobsen & Knetemann, 2017). "Rather than spending class time laying down the foundation, students are able to delve into a deeper understanding of the material" (Jakobsen & Knetemann, 2017, p. 177). During this institution's OER initiative, faculty members are encouraged to make the OER content available via the online learning platform advance of the first week of class.

Confidence building

Another major benefit of OER is that it advances student learning. In a study of the impact of OER use on teaching and learning, one conclusion drawn from the project was that "implementation of OER can improve student performance, but often indirectly through increased confidence, satisfaction and enthusiasm for the subject" (Farrow et al, 2015, p. 972). Other research on encounters with OER referenced the identification of improved learning as a potential benefit of OER (Hatzipanagos, 2015). A student participant in research conducted by Brandle et al. (2019) shared that the strong sense of direct involvement of an instructor with OER content benefited students because the instructor was more aware of the materials students were using.

Feldstein et al. (2012) and Fischer et al. (2015) both discussed the non-financial benefits of OERs, which can lead to increased confidence. Feldstein et al. (2012) found that students indicated a preference for non-paper OER materials compared with traditional printed textbooks based on their "ease of use" and their belief that the content would be revised thereby remaining accurate and relevant. Although there were inherent flaws in the study, primarily because of its scope, Fischer et al. (2015) determined that there was a higher likelihood that students completed more credits in a semester when enrolled in OER-based courses compared with for-pay textbooks. This particular finding supports the initiative discussed herein as this campus is involved in a university-wide drive to increase retention and graduation rates.

Student engagement

OERs have the potential to expand access to learning mostly for non-tradi-

tional groups of students. This will in turn increase participation in higher education (Ehlers, 2011). Sometimes life can get in the way of student participation in courses. Students in this college typically hold at least one job, are dependent on financial aid, and, in the ECE program, are rearing young children. According to the Fall 2018 Student Profile, 43.6% are part-time students (Hostos, 2018). When students are able to access the content online without needing to purchase or potentially lose a textbook, they are able to participate with less financial concern and at their personal convenience. Even when students do not have access to the Internet at home, students can utilize computer laboratories to review and complete online course content at their convenience. This practice of online learning fosters self-directed learning. Students are put in a position to manage their learning tasks independently via self-management and self-monitoring (Garrison, 1997). The professor sets up the environment for the student to continue in their self-directed learning journey, with the OER content being instrumental at the onset of the course. Open educational resources can be a successful way of producing lifelong learners and closing the gap between formal and informal learning (Ehlers, 2011).

Involvement

OER content that is available online can empower students to gain control of their lives by becoming organized early in the semester. They can accomplish this by previewing content prior to the start date of the course and even laying out readings for the semester. Taking a look at course content at their own leisure or when it works with their schedule puts them in control of their learning.

Palloff and Pratt (1999) suggested that it is the student's responsibility to make sense of the content and take control of their learning. Moreover, the professor supports the process with the assignments and selection of textbook. In the case of OERs, the professor selects content that students can relate to and connect with, which can motivate them to learn the material with ease. Students may be more inclined to preview the content before the course begins and become comfortable with the course itself. Granting access to OER content in advance not only piques their interest early, but also provides students with the key tool for success—the content. As students review the textbook and course expectations, they can come up with a plan to navigate and juggle other courses for the semester. Additionally, they can make a major decision by asking themselves, "Am I ready for this course?"

Accessibility

In the past, research identified the absence of visual literacy in education. The potential for Accessibility Resource Centers (ARC) to manipulate images from a textbook was more challenging (Bader, 2019). When the course content is embedded into the learning-management system and made available online, such issues do not exist. Images,

diagrams, and words do not need to be scanned and re-organized to the extent it once was. Content is also available on students' mobile devices or at home. There is no need to visit the library reserves or even the ARC to view course content in many cases.

Since the course content is available to the both the instructor and students, courses can be organized in advance so that students can preview the material before the first day of class. By providing the ability to see materials earlier than necessary, faculty create a supportive atmosphere and give students tools for success early in the semester. Students have resources at their disposal, and it is their choice to utilize them before the course begins or when it begins. Some students may not even review the course until a few days into the semester, as they are getting acclimated to returning to school. Nevertheless, the option was provided to them. It is not always easy to get buy-in from students to engage in online courses early in the semester (Slusky, 2019). Instructors providing the benefit of early access to the course may improve the likelihood of success for students.

Overall fear can be a motivating factor to either enroll or not enroll in an online course. However, professors can assist in alleviating that fear by outlining the benefits of engaging in the course early (Davis, 2019). Students can take a look at the textbook and course expectations. In turn, they can ask questions about information early in the course. They can begin coursework early and work at a slower pace or one that accommodates their lifestyle. When professors set up the online learning environment for success and provide access to the textbook, students have the potential to become self-directed learners. This is an empowering role for students.

Collaborations between the Library and Academic Faculty

At the initial stage of the grant that would lead to an Associate's Degree program in which students would never have to pay money for academic content, it became clear that a collaborative approach was critical to success. Academic faculty could recite program learning outcomes and outline the scope and sequence of the syllabus, but the library faculty had the ability to determine which materials could serve as OERs for a particular course and specialized knowledge of where and how to locate these materials. Partnering library and academic faculty to grow, sustain, and expand this OER initiative was critical to its success.

This community college is part of a 24-campus university and was founded to provide a college education for those who previously were excluded from such an opportunity. The central office of the university includes a library-based team dedicated to the development of OER resources, faculty development for all involved in the university-wide OER initiative, and the successful fulfillment of grant-funded OER projects, including the one awarded to this community college and the one funded through state monies.

At this specific college, individual library faculty are typically assigned the role of liaison for specific academic content areas and often develop strong collegial relationships with academic faculty housed in their specialized departments. It is not unusual for classroom instructors to seek the expertise of their library counterparts when selecting materials, such as books, reading lists, media, and Internet resources and therefore working together to adopt, adapt, and/or create OER works.

Library faculty members typically have greater expertise in copyright, licensing, e-platforms, interoperability, scholarly communication, and open access. For the grant awarded to the ECE program, faculty worked closely with their library counterparts when selecting materials that could be licensed under Creative Commons; the newly compiled or created OER sections were not certified as OER through the library because an outside entity was provided under the terms of the grant. The governor recently allocated approximately $4 million per academic year to support OER initiatives. OER content for the state project is certified through the library, which is also designing a means for faculty to access existing OER resources easily by creating LibGuides specifically listed in an online OER section.

Over the past three years, academic and library faculty have shared ownership of the OER initiative and have co-presented at local and national meetings and conferences on topics related to OERs: in particular, the benefits of OER content and identifying open-access materials. They encourage interdisciplinary efforts, as materials on individual topics are often mutually included in multiple course offerings across different departments.

Faculty development

It is widely accepted that the library is the nexus of teaching, learning, and research. When the invitation to submit a proposal to create an OER-based program was brought to this campus, it was offered to the Executive Director of the Library. It was at her behest that the ECE program became interested in this grant and in OER at all.

One of the concerns faculty members new to OER development frequently have at this campus is the impact that OERs have on student attitudes, achievement, retention, and graduation rates. Academic faculty applying for approval to conduct research at this campus must work with the library faculty member dedicated to Human Research Protections Program (HRPP). It is their responsibility to ensure that all applicants have completed the requisite certification to conduct research with human subjects and to assist them as they write their proposal.

The Scholarship of Teaching and Learning Committee hosted a three-part series on writing a successful research application; the HRPP library faculty member assisted in forming research questions and identifying proper research techniques. As a result, at least two academic professors have successfully completed research on the results of using OERs.

Additionally, the Office of Educational Technology facilitates the uploading of the OER shell into the online learning system for each course using that material. Academic faculty can work with a technologist to enhance this content by placing it conveniently on the online site. They can also work with the campus's dedicated OER specialist, who is library faculty. This OER expert will participate in one-on-one brainstorming sessions or provide small-group training on topics related to the development and use of OERs.

Faculty in the ECE program raised the issue of how to review and revise OERs after their initial implementation in order to maintain relevance; the next phase will include working with their library liaison to establish a process by which existing OER materials will be routinely reviewed and to provide training on how to effectively review open content. This is to maintain a focus on best practices, include the most current and applicable research, and ensure that the content addresses the latest academic knowledge, general education competencies, and career attributes the students will need to transfer to a four-year college or gain employment in their chosen field. One part of this professional development will be maintaining an interdisciplinary dialogue, as material must be shared among content specialties as needed.

Academic Freedom

In its *OER State Policy Playbook* (2018), the Scholarly Publishing and Academic Resources Coalition offered the following advice when creating an OER program in higher education: "(1) Ensure that policies are designed to encourage and support OER use, not mandate or pressure it. (2) Consider speaking to faculty leaders in advance to communicate the intent to respect academic freedom. (3) Consider including language that recognizes that the legislation should not be construed to infringe on academic freedom or the right of faculty to select course materials" (Steen, 2018, p. 8). The practice at this college has been to maintain the integrity of the course regardless of the content format by adhering to the course description and learning expectations and to allow faculty developers to select OERs that will facilitate the academic success of the student by setting an atmosphere of active and engaged learning.

In defining and discussing academic freedom, the American Association of Colleges and Universities (2006) posited that "faculty are responsible for establishing goals for student learning, for designing and implementing programs of general education and specialized study that intentionally cultivate the intended learning, and for assessing students' achievement." These three stipulations are at the core of OER development, as is defining academic freedom and accessibility through an OER lens.

At this campus, the first consideration in designing an OER course is the program-learning outcomes and/or student-learning objectives. These have been identified based on the description

for each course in the college's course catalogue and cannot be changed solely to facilitate the development of course content. The ability to merge material from multiple sources across different academic specialties for use in one course serves to cultivate learning, as it can take a constructivist approach where students can move from theory to practical applications from different subject areas. OER-based courses offer students an opportunity to be actively engaged in their learning (Orr, Rimini, & van Damme, 2015) rather than passively receive information solely through print. It is possible to imbed questions within OERs so that students can revisit material as needed, even beyond the end of the semester.

Faculty are encouraged to exercise their academic freedom by selecting open materials that address the topics in their course in relation to the practical context of the setting. For example, for a foundational course in education, faculty are able to include information on specific hiring practices within their urban public school system and to give up-to-the-minute information on their state's revised standards. Instructors teaching Political Science can give students more recent information about elections and civic issues than a textbook in need of revision could. Finally, OERs in no way restrict instructional methodology.

Future Considerations

There have been numerous investigations into the impact of OERs on academic achievement. Some indicate greater student success using grades as the benchmark; others show no difference between achievement among students using for-pay textbooks and those using OERs (Hilton, 2016). Most of these studies have been conducted using a control and a treatment group within a course and did not allow for outliers, such as the instructor's likability, the attractiveness of the course on its own, or student perception to the course prior to its start. A more longitudinal approach, comparing student attitudes and achievement in courses using OERs to the attitudes and achievement in courses reliant on traditional texts, might provide significant findings as to the impact OERs have on student success.

Additionally, studies on how the partnering of library and academic faculty impacts an OER initiative, and ultimately student success, may encourage more campuses to consider this practice.

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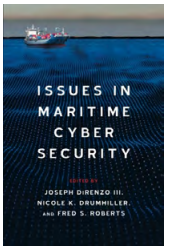
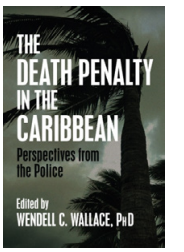


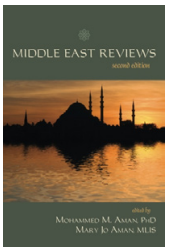
Issues in Maritime Cyber Security Edited by Nicole K. Drumhiller, Fred S. Roberts, Joseph DiRenzo III and Fred S. Roberts

While there is literature about the maritime transportation system, and about cyber security, to date there is very little literature on this converging area. This pioneering book is beneficial to a variety of audiences looking at risk analysis, national security, cyber threats, or maritime policy.

The Death Penalty in the Caribbean: Perspectives from the Police Edited by Wendell C. Wallace PhD



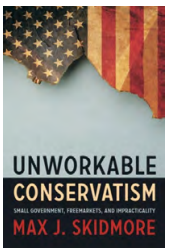
Two controversial topics, policing and the death penalty, are skillfully interwoven into one book in order to respond to this lacuna in the region. The book carries you through a disparate range of emotions, thoughts, frustrations, successes and views as espoused by police leaders throughout the Caribbean



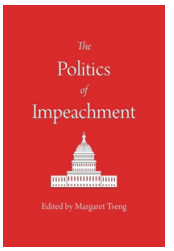
Middle East Reviews: Second Edition
Edited by Mohammed M. Aman PhD and Mary Jo Aman MLIS

The book brings together reviews of books published on the Middle East and North Africa. It is a valuable addition to Middle East literature, and will provide an informative read for experts and non-experts on the MENA countries.

Unworkable Conservatism: Small Government, Freemarkets, and Impracticality by Max J. Skidmore



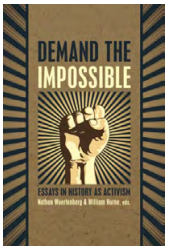
Unworkable Conservatism looks at what passes these days for "conservative" principles—small government, low taxes, minimal regulation—and demonstrates that they are not feasible under modern conditions.



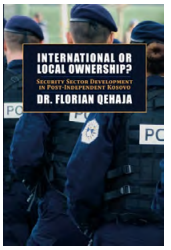
The Politics of Impeachment
Edited by Margaret Tseng

This edited volume addresses the increased political nature of impeachment. It is meant to be a wide overview of impeachment on the federal and state level, including: the politics of bringing impeachment articles forward, the politicized impeachment proceedings, the political nature of how one conducts oneself during the proceedings and the political fallout afterwards.

Demand the Impossible: Essays in History as Activism
Edited by Nathan Wuertenberg and William Horne



Demand the Impossible asks scholars what they can do to help solve present-day crises. The twelve essays in this volume draw inspiration from present-day activists. They examine the role of history in shaping ongoing debates over monuments, racism, clean energy, health care, poverty, and the Democratic Party.



International or Local Ownership?: Security Sector Development in Post-Independent Kosovo
by Dr. Florian Qehaja

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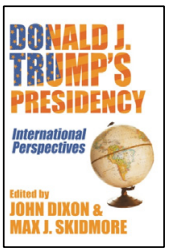
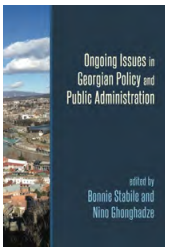
Edited by John Dixon and Max J. Skidmore



President Donald J. Trump's foreign policy rhetoric and actions become more understandable by reference to his personality traits, his worldview, and his view of the world. As such, his foreign policy emphasis was on American isolationism and economic nationalism.



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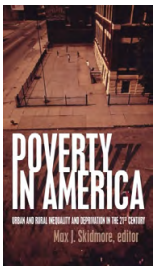
Thriving democracy and representative government depend upon a well functioning civil service, rich civic life and economic success. Georgia has been considered a top performer among countries in South Eastern Europe seeking to establish themselves in the post-Soviet era.

Poverty in America: Urban and Rural Inequality and Deprivation in the 21st Century
Edited by Max J. Skidmore



Poverty in America too often goes unnoticed, and disregarded. This perhaps results from America's general level of prosperity along with a fairly widespread notion that conditions inevitably are better in the USA than elsewhere. Political rhetoric frequently enforces such an erroneous notion.