Open Pedagogy Approaches

Open Pedagogy Approaches

Faculty, Library, and Student Collaborations

ALEXIS CLIFTON AND KIMBERLY DAVIES HOFFMAN

ROBIN DEROSA, STACY KATZ, JENNIFER VAN ALLEN, CYNTHIA MARI OROZCO, CAROLINE SINKINSON, AMANDA MCANDREW, SHANNA HOLLICH, JACOB MOORE, DENNIS E. SCHELL, DORINNE E. BANKS, NERINGA LIUTKAITE, MANTRA ROY, JOE EASTERLY, BETTE LONDON, CHRISTIAN BECK, LILY J. DUBACH, SARAH A. NORRIS, JOHN VENECEK, MARY LEE CUNILL, SHERI BROWN, TIA ESPOSITO, DANIEL DOTSON, ANNA DAVIS, AMANDA L. FOLK, SHANNA JAGGARS, MARCOS D. RIVERA, KAITY PRIETO, LINDSEY GUMB, HEATHER MICELI, SARAH HUTTON, LISA DI VALENTINO, PAUL MUSGRAVE, AMANDA KOZIURA, JENNIFER M. STARKEY, EINAV RABINOVITCH-FOX, JOSHUA F. BEATTY, TIMOTHY C. HARTNETT, DEBRA KIMOK, JOHN MCMAHON, ASHLEY SHEA, SEAN D. VISINTAINER, STEPHANIE ANCKLE, KRISTEN WEISCHEDEL, CARRIE BALDWIN-SORELLE, JENNIFER M. SWANN, BRYAN JAMES MCGEARY, ASHWINI GANESHAN, CHRISTOPHER S. GUDER, STEPHANIE N. LEWIS, ANNE M. BROWN, AMANDA B. MACDONALD, LAURIE N. TAYLOR, BRIAN KEITH, SUSAN J. ERICKSON, DENISE G. MALLOY, SARAH SIDDIQUI, KIMBERLY DAVIES HOFFMAN, ROSE-MARIE CHIERICI, AND AMANDA SPENCE

Contents

Part III. Open Pedagogy as Open Student Projects

Part IV. Open Pedagogy as Open Course Design

Acknowledgements

This book has received outstanding support from the generous "community of open" at every crucial juncture along its development. Every time we put out a call–for chapter proposals, for peer reviewers, for copy editors–the response was swift and plentiful.

Along with the particular individuals named below, we'd like to extend warm appreciations to this entire community. This is for all of you.

Special Thanks

- To Robin DeRosa, for contributing a powerful opening foreword and being a tireless inspiration to us all
- To Rajiv Jhangiani, for early feedback and thoughtful advice
- To Allison Brown, for savvy guidance and true bookmaking artistry at every point in the process
- To Amanda Wentworth, for picking up the pieces more than once
- To Sarah Siddiqui and Deborah F. Rossen-Knill, for clutch peer reviews
- To Alina Holmes, for clutch copyediting, and Justina Brown, for connecting her to us
- To the Rebus Community broadly, our Rebus Textbook Success Program peer cohort led by Apurva Ashok particularly, for guiding us through
- To the SPARC Open Education Leadership Program, for their continued support and connections
- To Amy Hofer, Mona Ramonetti, and Raffaella Borasi, for opportunities to share the work from our book-in-progress
- To the University of Rochester's Rush Rhees Library, SUNY Geneseo's Milne Library, and SUNY Geneseo's Computing and Information Technology (CIT), for immense support as we started this venture and saw it through to its successful conclusion. Particular thanks to Mary Ann Mavrinac, vice provost and Andrew H. and Janet Dayton Neilly Dean of the University of Rochester Libraries.

One more big thank you to Allison Brown, for the book's cover design.

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Tim was also a singer, songwriter, and DJ, a SUNY Plattsburgh alumnus, and a lover of local and regional history and music. These roles and interests combined to lead Tim to compile a list of musicians, performers, activists, speakers,

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- We are sorry to note that Hartnett passed away in April, 2020.

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   I have been an instruction and reference librarian at SUNY Plattsburgh Feinberg Library since 2000 and the Special Collections Librarian/College Archives manager there since 2003. My interest in OERs stems from a strong interest in reducing student costs. My online Critical Research Skills class is an OER course and I regularly work with other campus faculty to introduce students to archival resources, which inherently are OERs. My research interests include teaching with primary resources, accessibility in libraries and archives, and digital archives preservation. I received my BA in history at SUNY Plattsburgh in 1997, my MLIS at the University at Buffalo in 2020, and the SAA Digital Archives Specialist certificate in 2019.

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[Sharing the End of the World: Students' Perceptions of Their Self-Efficacy in the Creation of Open Access Digital Learning Objects](#)

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Cynthia is a community college librarian at East Los Angeles College, in which her primarily responsibilities are in reference, instruction, and outreach services. Currently, she is a de facto OER expert on campus although she hopes to continue working towards building a sustainable OER infrastructure at the college and district levels.

Kaity Prieto

[Mathematics Courses and the Ohio Open Ed Collaborative: Collaborative Course Content Building for Statewide Use](#)

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Kaity Prieto, Ph.D. is the University Innovation Alliance Fellow for The Ohio State University. She conducts interdisciplinary, qualitative student success research. She has written and presented on open educational resources (OER), open pedagogy, and institutional and statewide textbook affordability initiatives. Her research agenda centers the experiences of LGBTQ+ students, with a focus on bisexual, pansexual, and fluid student communities. Her dissertation research explores bisexual college student identity negotiation.

Einav Rabinovitch-Fox

[Teaching Wikipedia: A Model for Critical Engagement with Open Information](#)

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Einav Rabinovitch-Fox teaches modern U.S. and women's and gender history at Case Western Reserve University. She holds a Ph.D. in History from New York University (2014) and her research examines the connections between fashion, politics, and modernity. Einav has published on fashion, femininity, and feminism in scholarly journals and books, as well as public venues such as *Public Seminar*, *The Conversation*, *On the Media*, and *Dismantle Magazine*. In her teaching, she uses a range of experiential methods and open access platforms to enhance students' engagement, as well as designing assignments that utilize open access research and methods. Her latest project was creating together with students the online exhibition www.clevelandsuffrage.com.

Marcos D. Rivera

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Dr. Marcos D. Rivera is a higher education and student success postdoctoral researcher in the Office of Student Academic Success at The Ohio State University. He conducts interdisciplinary mixed-methods research with an emphasis on college student academic success and retention. Marcos's experiences and interests focus on understanding the impact of academic interventions and programs; sharing student stories to inform policy and practice; and leading teams to enhance the student experience by developing innovative approaches to answering complex questions.

Mantra Roy, Ph.D.

Reading British Modernist Texts: A Case in Open Pedagogy

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Mantra Roy is the Open Education Librarian at the Dr. Martin Luther King, Jr. Library at San Jose State University in San Jose, California. She learned about OER through the world of Open Access and Copyright and Creative Commons licenses. She believes in social justice in education and identifies OER as one of many tools in creating access to education.

Dennis Schell

Adapting Open Educational Course Materials in Undergraduate General Psychology: A Faculty-Librarian-Student Partnership

Dennis E. Schell, Ph.D. is Assistant Professor of Psychology in the Department of Psychological and Brain Sciences at The George Washington University. He is new to open educational resources (OER) and is currently the only faculty in the department to transition to a free online textbook, which he has been using for his General Psychology class for three years. His research with student use of the textbook shows overwhelming satisfaction.

Ashley Shea

Building a Collection of Openly Licensed Student-Developed Videos

Ashley L. Shea is the Head of Instruction Initiatives at Albert R. Mann Library, Cornell University. In addition to providing guest lectures for many diverse courses, she also teaches a newly developed one-credit course entitled "Information Chaos: Navigating Today's Information Landscape." Prior to becoming the Head of Instruction Initiatives, she served as the Food & Agriculture Librarian for Cornell's College of Agriculture & Life Sciences.

Sarah Siddiqui

Invitation to Innovation: Transforming the Argument-Based Research Paper to Multimodal Project

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Sarah Siddiqui is a Science and Engineering Outreach Librarian at the University of Rochester's River Campus Libraries.

She is interested in the trends and developments in scholarly communications, the research life cycle, and accessibility of resources. She received her master of science in Information Science from the University at Albany in 2018.

Caroline Sinkinson

[Approaching Open Pedagogy in Community and Collaboration](#)

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Caroline Sinkinson is a teaching librarian and Head, Teaching and Learning Unit at the University of Colorado Boulder Libraries. She serves as one of the Libraries' Open Educational Resources Leads and is deeply engaged in critical, digital, and open pedagogies. She is active locally on library and campus level working groups as well contributing to system level collaborations, such as the recently awarded OpenCU Initiative. Caroline is committed to pursuing diverse, collaborative, and open learning experiences that increase access and opportunity in and with vast information landscapes.

Amanda Spence

["What If We Were To Go?": Undergraduates Simulate the Building of an NGO From Theory To Practice](#)
Amanda Spence is a consultant at the NYC Department of Health and Mental Hygiene where she works with small independent health care practices to help them better utilize their EHR systems. She is a graduate of SUNY Geneseo's B.A. program in International Relations, minored in Anthropology, and is currently an M.P.H. candidate at New York Medical College pursuing her masters in health policy and management. She is interested in the intersections between community health and wellness, technology, and social justice.

Jennifer M. Starkey

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Jennifer M. Starkey is the Team Leader for Research Services at Case Western Reserve University's Kelvin Smith Library. She works with the library administration to set priorities, carry out strategic initiatives, and communicate with the campus about library services and resources. Her team provides direct research support for students and faculty, as well as instructional services, collection development, and liaison services for fine arts, humanities, social sciences, natural and physical sciences, engineering, and management at CWRU. Jennifer's subject background is in history and literature and in her previous role as a liaison librarian she frequently collaborated with faculty to develop meaningful research assignments that engaged students as scholars and citizens.

Jennifer M. Swann, Ph.D.

[Scholarly Bridges: SciComm Skill-Building with Student-Created Open Educational Resources](#)

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Jennifer Swann is a professor of Biological Sciences at Lehigh University in Bethlehem, PA; she has been teaching undergraduates for over 4 decades. As an African American woman, she has championed minority concerns, including access to education, throughout her career. She became involved with the OER movement during her 4 years as the inaugural director of student success in the College of Arts and Sciences where she learned, first-hand, of the struggle first generation, low income students experience in trying to acquire educational materials. She has worked with librarians to alert faculty and administrators to the issues surrounding student and faculty use of OER and serves on the MERLOT Biology Board reviewing and promoting the creation and use of OER content.

Laurie N. Taylor

[Open Pedagogical Design for Graduate Student Internships, A New Collaborative Model](#)

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Laurie N. Taylor is the Senior Director for Library Technology & Digital Strategies, where she provides leadership for technology and partnerships with the UF Libraries across the university, regionally, nationally, and internationally. She works closely with colleagues to create and sustain supports for compassionate and collaborative computing to build community and capacity, including through collaborations with the Digital Library of the Caribbean (dLOC) and LibraryPress@UF. Her work is geared towards enabling a culture of radical collaboration that values and supports diversity, equity, and inclusion.

Jennifer Van Allen, Ed.D.

[Evolving Into the Open: A Framework for Collaborative Design of Renewable Assignments](#)

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Jennifer Van Allen is an Assistant Professor of Literacy Studies at Lehman College, City University of New York. She has over 15 years of experience in education, ranging from elementary school to higher education. After noticing the degree to which teachers of all levels search for and share teaching materials, she realized the value of Open Educational

Resources and open pedagogy as a vehicle for creating high quality materials that can be easily adapted for varying needs and contexts. She is an enthusiastic and determined advocate for open education at all educational levels.

John Venecek

[Humanities in the Open: The Challenges of Creating an Open Literature Anthology](#)

John Venecek is a Humanities Librarian at the University of Central Florida, where he serves as liaison to the departments of Art, English, Texts & Technology, and Writing & Rhetoric. His main areas of interest include open education resources, textbook affordability, and digital curation. Prior to becoming a librarian at UCF, John taught English for several years at the College of DuPage in Suburban Chicago and served as a Peace Corps Volunteer in Ekaterinburg, Russia, where he taught English and helped establish a foreign language library/resource center.

Sean D. Visintainer

[Whose History?: Expanding Place-Based Initiatives Through Open Collaboration](#)

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Sean Visintainer has been working in special collections librarianship for ten years. As the Head of Special Collections & University Archives at the University of Texas Rio Grande Valley, Sean developed a keen interest in integrating special collections resources into curricula as OER. As special collections resources are often unique, rare, or scarce, they are excellent candidates for OER, either as digital surrogates and/or contextualized into larger interpretive efforts, such as exhibitions, lesson plans, and educational supplements. Sean is currently the Head of Special Collections at California State University San Marcos.

Kristen Weischedel

[Whose History?: Expanding Place-Based Initiatives Through Open Collaboration](#)

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Kristen Weischedel earned her M.L.I.S. with a concentration in Archives Management and M.A. in History from Simmons University (formerly Simmons College) in Boston, Massachusetts. She has held a number of library and archives positions, including working as the Digital Archivist for UTRGV in Edinburg, Texas. She currently works as the Digital Resources Management Librarian at the Illinois Institute of Technology in Chicago, Illinois. She is interested in digital resources, their access, and archival/special collections.

Editor's Preface

ALEXIS CLIFTON

We all have watched the world entirely change around us over the past several months: the COVID-19 pandemic, remote work, job loss, economic pain, economic protests, and the painful, necessary energy of the #BlackLivesMatter movement. I certainly have spent hours of reflection, hours of action, and terrible hours of inaction and frustration across these months. I can only imagine the same is true for most of our readers.

Even before these society-wide changes, my personal life had gone through some serious upheavals. I was reassigned in November 2019 to a new position at my institution, taking me away from work I'd invested myself in far too heavily over the previous years. On the same day as this reassignment, I broke my ankle and needed surgery. This caused me to miss travel to international conferences I'd been looking forward to for months, and meant that I had to adjust to my new job and new team from the isolation of home (oh, if only I'd known what was coming…).

Against this backdrop of personal and cultural upheaval, work on this book has mostly been a solace, though at times a burden too—and I'm incredibly grateful to my co-editor, Kim Davies Hoffman, for being the rock in this project when I fell apart. I hope that I too have been able to step in when she got overwhelmed. We've been very lucky in our partnership to find this sanity-check equilibrium.

My sense of editing-as-refuge from external chaos received a large jolt, however, when one of our book authors, Joshua Beatty from SUNY Plattsburgh, wrote in May to inform us that his colleague and fellow author Tim Hartnett had unexpectedly passed away. Beatty asked, on behalf of the three surviving authors, to include a dedication to his colleague as part of their chapter. ([Read that full, touching tribute to Hartnett here.](#)) He also suggested that their team may not be the only ones in our project experiencing loss, given the pandemic, and more recently, civil unrest.

While we are relieved to say that all of our other authors are still with us, that doesn't mean that everyone is unscathed. Some of our editorial team members are grappling with partial or complete furloughs this summer, just like many others who've helped shepherd this book into existence. It didn't take long in discussing Beatty's request with Kim to realize that ALL our authors likely had fresh introspections to share about their work, given the "new reality" that 2020 has brought.

This book will help no one if it remains an artifact of academic discourse from 2019. The higher education landscape will be permanently altered by the events of 2020, in ways that remain to be seen. We of course feel that open pedagogy writ large, and open pedagogy collaborations between libraries and teaching faculty more specifically, will be an effective avenue for navigating this new educational landscape. But we now recognize the need to state that explicitly, and repeatedly, across our book.

That's why Kim and I extended the offer of what we're terming a "2020 Preface" to each of our chapter authors. Not everyone elected to add this component, and in these cases we feel the work in the chapter speaks for itself about its transferability to current situations. We appreciate the time that all our authors took, both in the original chapter compositions and in the additions of these 2020 Prefaces, to frame their work in the way that will make it most helpful to the broader community.

Ultimately, the ability to offer this extension of our project to our authors, AND the ability to include this personal preface, are due solely to the open nature of the publishing path we pursued. I am immensely grateful to my colleagues across the editorial team who took this plunge into the unknown with me, and all that we've discovered along the way.

I remain excited about all the models this book puts forth, and know that they're the tip of the iceberg for what is possible. Whatever lies ahead across higher education in coming years, open pedagogy will be a positive path forward through it.

—Alexis Clifton

Foreword by Robin DeRosa

ROBIN DEROSA

I have been thinking and writing about "open pedagogy" since 2015, and with each year that passes, I become more unsure about the definition of that slippery term, "open."

In 2015, I was just beginning to articulate my discomfort with the focus on reducing the costs of textbooks that dominated the conversations around open in North America. It seemed limiting to me then to reduce open to an artifact, to valorize its product rather than its process, since what excited me most about working with openly licensed materials was how it enabled me to rethink the work that my students and I were doing together. What if the project of education was less about encountering knowledge and more about interacting with it? What would it mean for my students, my institution, my community, my world if we thought about education as a collaborative endeavor, and built architectures that encouraged a commons-oriented approach to learning? Surely this would mean making learning materials affordable, but surely it wouldn't mean *only* that.

As the years passed, I became more convinced that open is a shift in mindset more than a shift in cost. And at times, this shift in mindset has even left me with doubts about whether "open" is the shape of the new terrain I am gesturing toward in my own work in education. Feminist and indigenous scholars, in particular, have pointed out the ways in which "open" is not *necessarily* aligned with values that support sustainable, diverse, and equitable knowledge communities. And privacy advocates have critiqued the notion that public spaces are spaces in which privacy must be forfeited. So what does "open" mean for an educator driven less by a license and more by a vision for learning that honors the humanity and contributions of every learner?

This collection is intentionally attentive to the relationship between teachers and librarians, and this interstitial space between colleges and libraries is one place I look to when I try to think about the architectures that support open. My first job was in a public library, and what I most loved about it had little to do with the work: hours and hours of shelving (and a stolen hour here and there reading when I should have been shelving). What I most loved was the delicious mix of freedom and privacy. I could open the oak drawer of the card catalog and look for information about whatever secret world was calling me—some terrifying and some intoxicating. I could duck between the stacks and read with my friends and neighbors all around me and it was like I was the only person on earth. My first experiences in the public library were wrapped up in what I now believe was the feeling of having my privacy respected; the crowded silent reading room was like a metaphor I felt in my bones for the ways that public spaces could enable private ones.

My first job was in a library and my current job is in a library, but I am not a librarian. And mostly what librarians tell me when I wax poetic about the freedom and privacy that libraries provide is that ensuring those freedoms and that privacy is a bloody business, exhausting and often demoralizing. This is because like "open," libraries make a promise that they can't keep, because these promises are so often decontextualized from the political realities that define and constrain us. No place that purports to be equitable can be a utopia, since equity demands the kind of frank interventions that make power dynamics visible. And in today's world, these power dynamics are so often occluded or semantically inverted by the most powerful voices; it falls to those of us committed to social justice to lean away from any tendency to represent our visions as pure and untouched by society's violence.

So if open is not a panacea and libraries are not an escape, then why do I continue to invest my time and energy? I go to work every day in the Open Learning & Teaching Collaborative, located in the Lamson Learning Commons, the library of my public university in New Hampshire. The reason, for me, is hope. Hope is the thing that acknowledges the flaws, scars, barriers, and pain, but that envisions a way of flourishing in spite of, or after, or alongside, or underneath all of the trauma. For me, open is a way for us to unflinchingly name the ways that our students and our colleagues are prevented from exercising their ideas, contributing to the shape of knowledge, and changing the structures of an academy that insidiously validates the status quo. And open is a way to highlight a thorny path to something better. Libraries are not a site of escape, but a set of flares along the path—a space that calls us to the work, as bloody as it might be.

This collection is everything hopeful about open. It's the entangled voices that gather in our shared spaces to talk

about what's wrong, and what could be better. We don't have to agree on what open is. We don't need a particular license or a common set of resources. What we need is the courage to walk into conversation. When I think about *open* now, I think of collections and collectives. Of collaborations and collaboratives. Of the commons, in all of its painful fractures and all of its points of connection. I hope we enter this collection the way we enter our best conversations: ready to open our futures to something bigger and more complicated than we imagined before. Like most libraries, a commons isn't a safe or static place: it's a *public* constantly renegotiating its parameters so that resources can be shared. To do this work, we need to rethink our structures, exercise our creativity, face our abuses, illuminate our margins, listen to learners as they describe the experiences they bring to learning. We don't need to be sure about open; open is not a thing to achieve, as much as a way to hope. We need to be open to the hard work of hope. I invite you into this collection, where the work–and the hope–goes on.

Note

Many scholars and teachers and thinkers and learners have influenced my ideas here, especially Jessica Chretien, Chris Gilliard, Audrey Watters, Maha Bali, Tara Robertson, Jim Luke, Don Goodman-Wilson, Kim Christen, Michelle Pacansky-Brock, Shirley Lew, Fobazi Ettarh, and Kieran Egan.

About the Author

Robin DeRosa is the director of the Open Learning & Teaching Collaborative at Plymouth State University. You can read more about Robin and her work at http://robinderosa.net/*, or follow her on Twitter* [@actualham](https://twitter.com/actualham)*.*

INTRODUCTORY FRAMEWORK

Introduction

KIMBERLY DAVIES HOFFMAN, ROBERT BERKMAN, DEBORAH ROSSEN-KNILL, KRISTEN TOTLEBEN, EILEEN DALY-BOAS, ALEXIS CLIFTON, MORIANA GARCIA, LEV EARLE, AND JOE EASTERLY

Many of us who work with Open Pedagogy today have come into the conversations not only through an interest in the historical arc of the scholarship of teaching and learning, but also by way of Open Education, and specifically, by way of Open Educational Resources (OERs). OERs are educational materials that are openly-licensed, usually with Creative Commons licenses, and therefore they are generally characterized by the 5 Rs: they can be reused, retained, redistributed, revised, and remixed. As conversations about teaching and learning developed around the experience of adopting and adapting OERs, the phrase "Open Pedagogy" began to re-emerge, this time crucially inflected with the same "open" that inflects the phrase "open license."

    If we merge OER advocacy with the kinds of pedagogical approaches that focus on collaboration, connection, diversity, democracy, and critical assessments of educational tools and structures, we can begin to understand the breadth and power of Open Pedagogy as a guiding praxis. To do this, we need to link these pedagogical investments with the reality of the educational landscape as it now exists. The United Nations Universal Declaration of Human Rights asserts that "higher education shall be equally accessible to all."

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—Robin DeRosa and Rajiv Jhangiani
"Open Pedagogy"

</div>

Inspiration toward an Open Community

In April 2018, Open Pedagogy champion Robin DeRosa introduced faculty, librarians, and graduate students at the University of Rochester to two different concepts—open educational resources and open pedagogy. Open educational resources or OER are free online educational content licensed to allow users "permission to retain, reuse, revise, remix, and redistribute the material." Open pedagogy or OP is classically defined as an instructional approach that engages students in using, reusing, revising, remixing and redistributing open content. Throughout her presentation, DeRosa emphasized the critical interdependency between resource affordability and effective education for all. She shared compelling statistics on the rising cost of textbooks and noted that affordability issues have increasingly discouraged many from attaining a college degree. She further introduced OER and OP as the foundation for fostering student agency and for shifting their identity as knowledge consumers to knowledge creators. This vision held particular meaning for one librarian in the audience, a librarian who had personally witnessed students taking the lead in their coursework and creating meaningful, impactful, long-lasting learning. Looking around the room at DeRosa's talk, the librarian thought, "How can we inspire instructors to engage in open pedagogical practices?" "How do we impress upon them that the library is a natural partner toward this end?" and "How can we work together to explore this new territory of learning, paving a new path of seamless collaboration?"

    And so began the idea for this book. Guided by a vision of collaboration and furthering OER and OP efforts, the editorial board includes both librarians and faculty, specifically, seven UR librarians, one faculty member (the Director of UR's Writing, Speaking and Argument Program, WSAP), and an OER specialist from the neighboring State University of New York (SUNY) Geneseo. Importantly, the anthology was envisioned locally as a professional development tool that might generate ideas and new course designs at the University of Rochester while equipping the editorial board with the skills to assist UR instructors with the future design of OER and OP. More generally, the anthology was anticipated to be widely shared and inspire ideas of OER and OP, designed collaboratively by faculty, library staff, and

in many cases, students. In the spirit of open, the editorial board decided that the book should not be published primarily in print, but rather in collaboration with the Rebus Community through the use of Pressbooks in order to allow unrestricted access to ideas and information. The authors have licensed their work through Creative Commons, making the entire resource an OER.

The editorial team during the final pre-release meeting

Developing the Book: Background, Goals, and Approach

Over the last few years, the editors noted several important reinforcing trends influencing teaching in higher education. Among them:

- A significant rise in the interest and activity by universities surrounding the need to integrate and educate stakeholders about opportunities and values of open pedagogy and open access (Ellis, 2019; Poritz, 2019)
- A rising commitment by US public agencies to support and fund the development of open educational resources (Affordable College Textbook Act, 2019)
- An increase in professional associations' interest in measuring and advising libraries on instructional practices (Julien et al., 2018; ACRL, 2017)
- Growing conformity on the effectiveness of active learning as a pedagogical method (Michael, 2006)

Over the last several years, there has also been an increased desire by academic librarians to engage more often and more deeply with faculty. By stepping outside the standard "one shot" in order to do something sustainable and meaningful, librarians and instructors can create true partnerships in the classroom (Meulemans & Carr, 2012). Such a partnership with a faculty member can not only introduce students to library resources, but also can help advance key learning objectives outlined by the professor.

Owing to the increased interest in effective pedagogy and especially in OER and OP, the editorial board was motivated to reach out and collect cases of library staff, faculty, and students who have successfully collaborated as true partners in classroom instruction using an open pedagogy framework. The collection would not only provide valuable strategies and insights—including pitfalls—for designing OP collaborations, but also would nurture a growing community of instructors and library professionals in higher education who practice open pedagogy in union. As a result, the curated collection gives witness and visibility to examples showing the power of partnerships combining faculty, library staff, and students in creative, generative processes of developing open educational materials, courses, and curricula. To echo Robin DeRosa's comment about this collection in the foreword, the editors also hope to enter this collection the way they enter their best conversations: "ready to open our futures to something bigger and more complicated than we imagined before." Ideally, these cases will spark new ideas that energize and influence conversations about how library staff, faculty, and students can collaborate to improve and empower student learning. Guided by this vision, the editorial board established these specific goals:

- Contribute fresh pedagogical ideas for library staff and faculty: for librarians, this means effective ways to approach and collaborate with faculty; for faculty, how to generate ideas that leverage the unique skill sets within the library to better meet course learning goals.
- Suggest effective strategies for creating balanced, sustainable, and pedagogically effective faculty-librarian relationships.
- Make visible the many ways in which academic library staff have strategically and effectively expanded their boundaries and roles.
- Illustrate ways to empower students to create meaningful, lasting, and potentially public work.
- Demonstrate ways to invigorate the classroom—increase student investment and joy in learning, inspire creative thinking, and motivate outstanding final products.
- Inspire faculty to create richer classroom and student experiences.

The entire spirit of this book project reflects the editors' shared belief in the power of an open and inclusive community, of learning, and of collaboration toward innovation. From the outset, the editors knew that this book would be an open project in its own right. It had to be published openly (to practice what we preach), and it would serve as an opportunity to learn the process of creating an open book from start to finish, including, for example, developing review criteria that would ensure rigor, diversity, inclusion, and ingenuity while drawing from the open community to involve both novice and expert OP practitioners both as authors and readers. The editors also knew that the book would be a collaboration that included librarians, faculty, and students, such as the eight UR undergraduate students enrolled in Principles and Practices of Copyediting, who played a key role in copy editing this work.

Recognizing that diversity can be defined in numerous ways, the editorial board spent time clarifying their collective understanding as it related to this project. They sought a diverse representation of examples from different regions, university types, and from varying disciplinary and job perspectives. The selection process for chapters adhered to a call for proposals that reached around the world. Although the editorial board received international proposals, they soon discovered differences across the globe on how professionals view "open" and approach their pedagogy, as revealed by an absence of collaboration among faculty, librarians, and students. These moments of discovery led the editorial board to question their assumptions vis-à-vis an over-reliance on familiarity within North America (primarily U.S. and Canada). Inspirations for the book's contents relied heavily—but unintentionally—on the editors' known North American experience where efforts toward open practices are frequently initiated via the library. For these reasons, chapters in this book represent the experiences within U.S. higher education to be able to provide apple to apple comparisons.

As the editorial board developed its guiding documents, it both borrowed from existing OER (mainly publishing guidance through Rebus) and reciprocated by developing rubrics and guidelines such as

- an [evaluation tool](#) for proposals that was openly shared with prospective authors;

- calls for proposals sent to [authors](#), [peer reviewers](#), and [copyeditors](#);
- [an author agreement](#);
- a [review guide](#) with information about the book and a [peer reviewers' template](#) to complete;
- and guidelines for copy editors ([1](#), [2](#)).

Each document carries a CC-BY 4.0 license, as do each of the chapters. Even before the book was published, the editors welcomed and responded positively to requests to share their rubrics and guidelines. The tools used to develop this book also demonstrated a practice toward open—discussion lists to reach a variety of audiences, Jotform, Google Docs, Airtable, Pressbooks, and of course, utilizing the Rebus Community platform as a home base. First and second rounds of review comments were shared with authors through Google Docs and identified by reviewer name. Work assignments (editorial board member, peer reviewer, and copyeditor-to-authors/chapter) were organized and monitored via the project management tool Airtable. While the book is published online with Pressbooks, the editorial board fully anticipates requests for print copies and will work to provide that option as well.

The editors admit that even with a strong spirit of openness, many of the steps in the process were new to the team, requiring a lot of investigation, thought, discussion, and revision. Previous publication experience didn't necessarily translate to this project, for which the board had to establish a practice for each phase. In what felt like a bold step, they decided to share the assessment rubric as part of the call for proposals, which required a good deal of advanced preparation. In the spirit of open work and transparency, the board decided on an open peer review, where authors and reviewers were all known to one another and had full access to one another's responses—a positively thrilling approach that led to some bumps. The editors did have at least one serious case of disagreement between author and reviewer; however, the vast majority of participant interaction was quite positive. The board received multiple responses from both authors and reviewers expressing how helpful they found the review process. At the end of the pipeline, as it came time to publish the book, there was no handing it over to a publisher for finalizing: the editorial board was the publisher!

Scope of the Book

The book involves partnerships among faculty, library staff, and students in open pedagogy projects across disciplines. It spans different organizations of higher education—from private, public, and community college to R1 institutions. Adjuncts, professors, administrators, and library staff of varying roles (e.g. Scholarly Communications, Reference and Instruction, Equitable Services, Special Collections, Digital/Open Resources) have come together, in some cases with graduate and undergraduate students as co-authors, to share their stories of collaboration and building on one another's strengths. Although these case studies took place in institutions of higher education, some of them can be adapted or applied to K-12 curricula. Each case study is an example of how faculty, library staff, and students can work together to put into action the philosophy of open pedagogy.

A great deal of work goes into developing curricula, activities, assignments, and courses that create or utilize open educational resources. It is important to emphasize that, within this book, not all digital projects will be OER in its purest conception (i.e., applying all 5Rs), and the treatment of open pedagogy may vary. Our original project title, Open Pedagogy: Varied Definitions, Multiple Approaches, highlighted this sentiment of broad-to-specific definitions and perspectives. The call for proposals, which included definitions of our four main submission categories, was flexible in nature. It sought a range of examples and experiences pertaining to the following:

- Open as in MOOCs—encouraging self-driven learning through massive open online courses
- Open textbooks/resources as core text replacements—saving students money on textbooks while cultivating the benefits of student ownership, accountability, and rigorous learning (via open textbook modification or developing content through research methodologies)

- Student-developed open projects—the product of student learning becomes open and usable by a wide audience
- Open pedagogical design—course design without a clear end product or strict process of learning; i.e., learning outcomes are defined, but how the instructor and students arrive at those outcomes is flexible and collaborative

Ultimately, only one chapter in this book addresses MOOCs directly, and other chapters shifted our understanding of these categories as they developed. Our book title and primary sections similarly shifted to reflect the work represented within.

Each case study in this collection illustrates instances of the different strengths each partner brings to a project. Subject knowledge, creativity, project management, support in critical thinking practices, information literacy, instructional design, data management, and many other skills all serve the philosophy of empowering students in their learning, whether through more equitable access to educational materials or allowing students to lead while the traditional teachers learn from them.

Using This Book

This book is meant to serve educators with varying levels of "open" experience and knowledge, whether one is starting small with a single assignment, radically revamping one's course design, or simply interested in learning about new pedagogical approaches. The OER case studies bring together different approaches to open pedagogy, and as such, each chapter is quite different from the next. These chapters do not seamlessly connect—a not unwanted byproduct of our aim for diversity—so there's no need to read them sequentially. The board recommends that readers approach the book with specific needs or goals in mind and then target the most relevant section (e.g., textbook replacements) or browse the book to discover unforeseen possibilities in teaching and learning. This is not to say, however, that the book could not be read sequentially, as some loose organizational principles were followed.

The first section, **Introductory Framework**, lays the groundwork in terms of theoretical and overarching approaches to open pedagogy. These chapters define foundational concepts and readings in "open" and provide suggestions for how educators might begin to answer initial questions of whether or not they should be moving toward open.

The second section, **Open Pedagogy as Textbook Replacement**, covers models being developed to find resources that reduce textbook costs for students, increase access, and foster engaged learning Chapter examples include students annotating classic literature from the public domain in an effort to make modern day connections (Beck et al.) and developing a class-based online text that prompts students to write, review, and enhance entries that signify their learning of core scientific topics (Gumb & Miceli).

Open Pedagogy as Open Student Projects introduces open student projects. Readers will find case studies that involve a multitude of digital tools and outputs (e.g., openly licensed videos in Shea, an Omeka digital display in Beatty et al., Wikipedia entries in Koziura et al.) and a variety of inclusion from library departments (e.g., special collections in Visintainer et al.). Here the editorial board wants to stress that not all projects live up to a 5 Rs standard of open. As discussed in Katz and Van Allen's chapter from the Introductory Framework, constructionist assignments take us one step closer to renewable assignments, and constructionist projects provide a good target for educators entering the world of open pedagogy. Essentially, the editorial board made an intentional decision to allow for a spectrum of digital projects to create space for those that are on the path toward open.

Open Pedagogy as Open Course Design involves open pedagogical approaches; the definitions sometimes vary here. Readers will encounter case studies using OER-enabled pedagogy as well as course structures that allow for open learning goals and open-ended projects. Erickson showcases a cMOOC for professional development purposes; Malloy and Siddiqui engage students in design thinking as their students transform traditional research papers into interactive multimodal products; Taylor & Keith and Lewis et al. each provide for choice in project topic while offering a structured base to the learning; and Davies Hoffman et al. transform an anthropology course into a student-led simulation where teams build a nongovernmental organization from the ground up.

Finally, within each section, the editors made an effort to order chapters from small scale (e.g., [Roy et al., Reading British Modernist Texts: A Case Study in Open Pedagogy](#)) to large scale collaborations (e.g., [Dotson et al., Mathematics Courses and the Ohio Open Ed Collaborative](#)).

To aid readers, chapters are connected by a final glossary of terms generated by the authors and supplemented by the editorial board. Terms here are restricted to those that are educationally relevant to open pedagogy and pedagogical theories, reserving more case study-specific terms for pop-up definitions within respective chapters.

Continuing the Conversation

This project has already increased conversations about open pedagogy within the UR community by involving six UR-affiliated authors across three chapters (two faculty and four librarians), six peer reviewers (one faculty member, two graduate student instructors, and three librarians), two faculty who gave a final read for one chapter, two library staff members, and eight students from a Principles and Practices of Copyediting course who assisted with copy editing. Beyond UR, dozens of professionals across the U.S. and Canada contributed to the book as authors, peer reviewers, and copyeditors, giving rise to the idea that many hands make light work. The editors' greatest hope is to continue this conversation. To this end, all readers are invited to contribute to and further this discussion by sharing their own experiences, strategies, successes, challenges, and concerns regarding faculty-library-student collaborations and open pedagogy. If a chapter inspired a new project/course design, the editorial board welcomes the resulting new accounts, adaptations, and reflections. Through this publication, there are links for feedback and questions, an adoption form to discover new ways of adapting the case studies to local situations, and contact information to be able to connect with contributors of this book.

The editors especially welcome 5 Rs usage of this book, so that you may choose to borrow from it, adapt it, and supplement it with additional resources to make it your own.

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Evolving Into the Open: A Framework for Collaborative Design of Renewable Assignments

STACY KATZ AND JENNIFER VAN ALLEN

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Project Overview

Institution: [Lehman College](#)

Institution Type: public, liberal arts, undergraduate, postgraduate

Project Discipline: Education

Project Outcome: student-created lesson plans

Tools Used: OER Commons

Resources Included in Chapter:

- Renewable Assignment Design Framework
- Recommended Sources
- Course Assignment
- Grading Rubric

Introduction

"Come for the cost savings, stay for the pedagogy," is a popular sentiment in the open education community. The

significant cost savings associated with the adoption of Open Educational Resources, OER (Hilton et al., 2014; Ikahihifo et al., 2017) creates accessible opportunities in education for students of all ages. Understanding the impact of OER as a practice is nascent and difficult to measure. Indeed, some argue that standard research methods are insufficient for explicating the benefits of free access to knowledge through OER (Grimaldi et al., 2019). If we cannot sufficiently understand what it means for students to access materials, we can only begin to imagine how the shift to **open pedagogy**. This design is a student-centered teaching approach that empowers students as creators of knowledge and open resources (DeRosa & Robison, 2017), as well as promotes and potentially maximizes learning outcomes. As the integration of OER within classes compels instructors to reconsider the assigned course materials, open pedagogy recasts the role of course assignments and activities students engage in within a course. Yet, many are grappling with how to create and redesign assignments to engage students in open pedagogy. In this chapter, we make a case for applying open pedagogy in teacher education coursework and, utilizing a specific case, describe the Renewable Assignment Design Framework that may be adapted by librarians and faculty when planning for open educational practices.

In 2009, Greenhow et al. predicted that participatory, collaborative, and distributed practices provided through connected platforms on the Internet would have a profound effect on teaching and learning. As OER initiatives have taken hold in education, some instructors have begun to integrate open teaching practices into their coursework (Veletsianos & Kimmons, 2012). Through open licensing, not only is access to knowledge more freely available, but knowledge can also be created and shaped allowing content to develop in unique ways. "Knowledge consumption and knowledge creation are not separate but parallel processes, as knowledge is co-constructed, contextualized, cumulative, iterative, and recursive" (DeRosa & Jhangiani, 2017, p. 13). This is the basic premise of an open pedagogical approach in which an instructor guides students to curate and create new knowledge, empowering them as public contributors of ideas through open content as they learn and grow in their disciplinary knowledge (DeRosa & Robison, 2017). At the same time, the instructor is also supporting students in developing digital literacy skills which help them become part of an open network that can support their learning beyond the classroom (Cronin, 2017).

Of students attending the City University of New York (CUNY), 37.1 percent have household incomes of less than $20,000 per year (CUNY Office of Institutional Research and Assessment, 2017). CUNY librarians have long been aware of the high use of the reserve collections and recognized OER as a path to provide free online access to materials for students and renew faculty pedagogy (Amaral, 2018). Since librarians possess expertise in searching collections, resource evaluation, copyright, and Creative Commons licensing, they are uniquely positioned to engage faculty in curating and adapting OER. Therefore, initiatives began at multiple CUNY colleges to reduce textbook costs. Beginning in 2017, funding from New York State was allocated to the CUNY Office of Library Services to support OER adoption and creation across institutions. As a result, Lehman College, the only four-year public institution in the Bronx and a part of CUNY, was allocated funding to continue its OER initiative to train and incentivize faculty in adopting and creating OER (for more specific information about this funding, see CUNY, n.d.). Participation at Lehman College has been based on faculty interest and distributed across all the schools in the college (Katz, 2019). Since the start of the CUNY initiative, students have reported that, in addition to saving them money, the materials for OER courses they have taken were, by and large, easier to access and better for learning (Brandle et al., 2019). Through the process of adopting and curating OER, faculty have engaged in more intentional pedagogy by ensuring that resources are specifically aligned to course outcomes. These outcomes have met the primary and secondary goals of the CUNY OER Scale Up initiative to decrease costs and barriers to access for students, as well as align curriculum and pedagogy to learning outcomes (CUNY, n.d.).

Open pedagogy emerged as a popular trend in the *New York State Open Educational Resources Funds CUNY Year One Report*, as "OER offers faculty the opportunity to engage students in open pedagogy, where students take on the role of knowledge creators and share their work and their learning with others" (CUNY, 2018). The enthusiasm for open pedagogy within CUNY created the buzz to interest faculty and offer a workshop on it at Lehman College in Fall 2018. It was through this work that our collaborative partnership emerged. Stacy Katz, a library faculty member at Lehman College, developed the school's OER initiative, in which she supported faculty in curating and creating OER for their courses. Jennifer Van Allen, a teacher education faculty member at Lehman College, participated in the initiative through redesigning a course using OER and open pedagogy. Jennifer's course, Language, Literacy, and

Educational Technology, which was designed for inservice teacher candidates seeking an advanced degree in literacy studies, provided an opportunity to collaborate on and experiment with open pedagogy. OER use in teacher education courses allows teaching candidates to become familiar with open teaching resources available for use in K-12 classrooms and resources that can further their own professional growth after they graduate. At the same time, OER encourages teaching candidates to become important collaborators of open teaching materials (Sapire & Reed, 2011). As the course instructor, Jennifer was intimately familiar with the assignment and course learning outcomes, while Stacy provided expertise in open platforms and Creative Commons licensing. Our experiences resulted in the creation of a framework for developing renewable assignments (**Renewable Assignment Design Framework**) described below.

Renewable Assignments

Renewable assignments, as opposed to disposable assignments, are defined as tasks in which students compile and openly publish their work so that the assignment outcome is inherently valuable to the community (Chen, 2018; Wiley & Hilton, 2018). Wiley and Hilton (2018) have defined categories of assignments to show the spectrum between those that are disposable and renewable. In their criteria, assignments can be sorted as disposable, authentic, constructionist, and renewable. The disposable assignment which involves a student-created artifact submitted to the instructor, meets the most basic criterion of any assignment. When the value of that artifact extends beyond the students' own learning, such as the creation of content tutorials for future classes, it falls into the category of an authentic assignment. In the constructionist assignment, students make an authentic assignment publicly available. To be considered renewable, the teacher invites the students to openly license and publicly share their work with the global community. In some cases, renewable assignments may be originally developed by the students, and in others, students may remix or adapt existing OER (Wiley & Hilton, 2018).

Originally, the assignment Jennifer chose to redesign was an authentic assignment in which the teaching candidates were required to develop an inquiry-based curriculum unit that supported their K-12 students in engaging with and developing digital literacy skills. This made it an ideal assignment to redesign so that candidates' work had the potential for broader impact and value to others (see Appendix A for the original and redesigned assignment descriptions). Since the teaching candidates implemented the unit in their classrooms affecting the learning of their K-12 students, the assignment already had value beyond the candidates' own learning. Through our collaborative process, the final assignment was broadened. Rather than limiting the teaching candidates to creating inquiry units, the redesigned renewable project allowed them to explore current K-12 OER and either remix, revise, adapt, or create a new OER that creatively demonstrates how to integrate technology or new literacies into their classrooms to support literacy learning. In addition to implementing the project in their own classrooms, the teaching candidates were invited to publicly share their work with the global teaching community using a Creative Commons license. Since the redesigned assignment has value to their K-12 students and the teaching community through a publicly shared and openly licensed artifact, it is considered a renewable assignment.

Renewable Assignment Design Framework

Using our experiences of redesigning the assignment from authentic to renewable, we developed the Renewable Assignment Design Framework (see Figure 1) to provide a process for our work, as well as to help others consider ways to develop open pedagogy practices. While our collaborative work on the renewable assignment described in the chapter took approximately two months, timelines may vary for others. Variables such as levels of support, technical skill, knowledge of OER tools and repositories, and other demands on faculty and librarian time may shorten or extend the timeframe for others. We provide our experience working through each of the steps together to redesign the

assignment as well as to discuss recommendations and considerations for others implementing the framework within their community. These steps are not intended as a dogmatic practice, but rather a process of faculty reflection and intentional assignment development to position students as creators of meaningful open content.

Figure 1

Renewable Assignment Design Framework
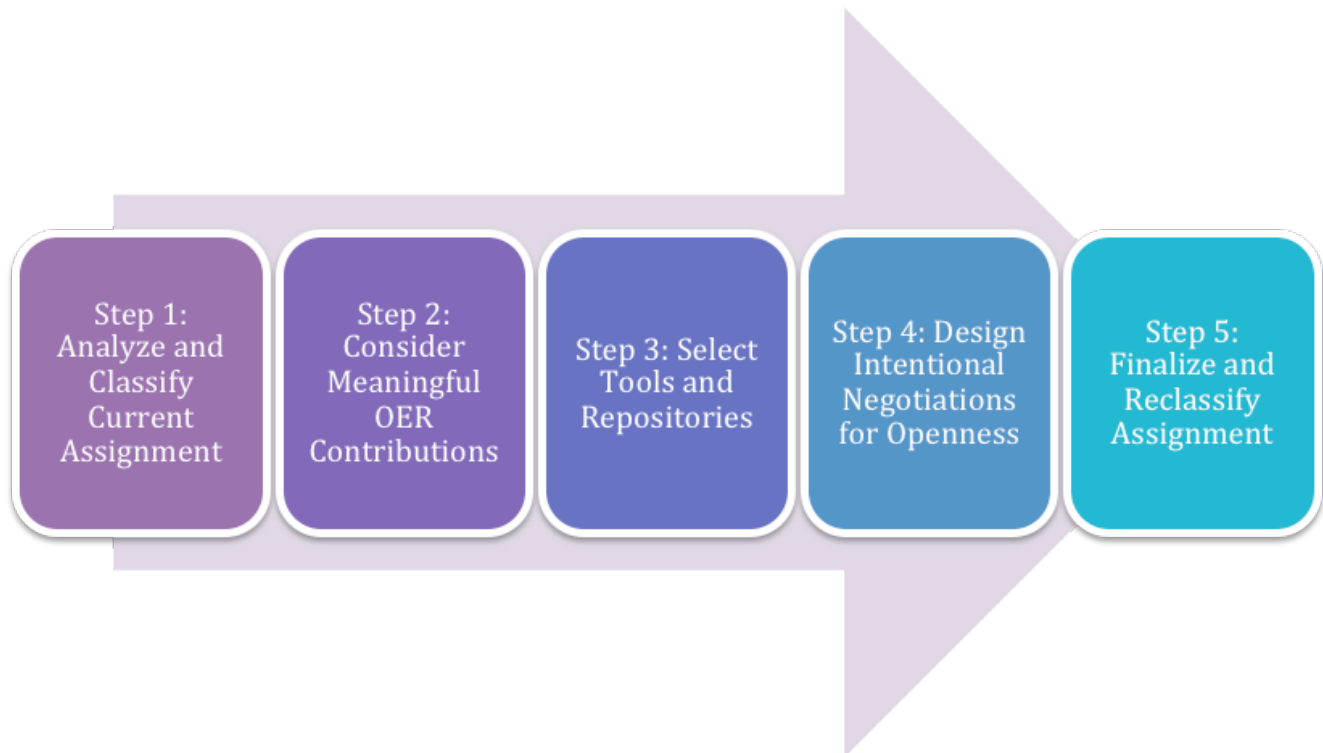
Step 1: Analyze and Classify Current Assignment

As Lee and Barnett (1994, p. 17) explain, "Before one can change something, it is necessary to know what is occurring now." Analyzing an assignment through reflective dialogue set the stage for the change process. Before redesigning the assignment, we examined the description and rubric of the class's major assignment using Wiley and Hilton's (2018) four-part test for categorizing an assignment as disposable, authentic, constructive, or renewable. This four-part test consists of the following questions:

1. Are students asked to create new artifacts (essays, poems, videos, songs, etc.) or revise/remix existing OER?
2. Does the new artifact have value beyond supporting the learning of its author?
3. Are students invited to publicly share their new artifacts or revised/remixed OER?
4. Are students invited to openly license their new artifacts or revised/remixed OER? (Wiley & Hilton, 2018)

During our discussion, Jennifer articulated the assignment description and goals, while Stacy asked reflective questions

to clarify details about the original assignment. In order to analyze the original assignment, we assessed where it belonged within Wiley and Hilton's (2018) criteria for renewable assignments. Since the students were practicing teachers, they utilized the unit plan they developed in their current K-12 classrooms. We, therefore, categorized the original assignment as authentic because it had value beyond Jennifer's course to the K-12 students in the teaching candidates' classrooms. The assignment was not renewable, however, because it was not publicly and openly shared with others. Our reflective dialogue about our analysis and classification of the assignment clarified intentional decisions that needed to be made during the redesign.

Considerations for Implementation

Redesigning an assignment to be renewable functions as a change process in which faculty develop greater self-awareness of their pedagogical practices and goals for their course. Given that syllabi and course assignments may be inherited and that faculty have competing demands that often limit their intentionality in planning, reflection is a critical component for envisioning new possibilities. When working with faculty to analyze and classify assignments, librarians may consider facilitating a reflective discussion. Questions and prompts posed by the librarian encourage the instructor to reflect on the course goals, an assignment's purpose, and the desired learning outcomes for students. Examples of reflective prompts include:

- Tell me about your course goals.
- What reasoning guided the process and product of this assignment?
- What kinds of learning outcomes do you want to occur as a result of this assignment?

For more information about leading a reflective discussion, see Lee and Barnett (1994).

During the conversation, the librarian may raise points from Wiley and Hilton's (2018) four-part test. As a result of this dialogue, the librarian will more fully understand the context of the course and the assignment. Additionally, the discussion will broaden and deepen the instructor's understanding of their praxis, the course, and the assignment. Once both collaborators agree upon which category the original assignment fits into and fully understand the assignment outcomes, they can then begin to consider how the assignment might be modified to make it renewable as the collaboration moves forward.

Step 2: Consider Meaningful OER Contributions

After fully analyzing and classifying the assignment, we considered how it contributed to knowledge within the field of education. Using resources highlighted during the workshop on open pedagogy, which sparked Jennifer's interest in open pedagogy, we explored examples of renewable assignments in various disciplines. These included student contributions to a test bank in a psychology course (Jhangiani, 2018), the creation of an anthology of early American literature with front matter for each text written and edited by students in an English literature course (DeRosa, 2016), and a project in which students edited a Wikipedia page to create more robust entries on places within their community in an interdisciplinary course (Montgomery & Leonard, 2015). Each of these examples helped us understand how OER contributions should be meaningful within the discipline or a broader community. While some of these examples contribute to course development through supporting the school community, others add to the discipline by developing open resources on the topic.

In considering the inquiry unit assignment, Jennifer provided expertise on what a meaningful contribution would look like in education. Since teachers value resources that can be used within K-12 classrooms, it was logical to revise the assignment to develop a broad range of classroom resources from lesson plans to online modules to a multimodal

open book chapter for their students. As Jennifer began to think through these ideas, she shared these ideas with Stacy, who provided resources and continued to ask reflective questions about what changes might meet the criteria of a meaningful contribution in education for teachers and the learning outcomes of the assignment.

Considerations for Implementation

An important step in the process of redesigning an assignment is considering how an artifact might be meaningful within a discipline or broader community. What is meaningful can vary greatly based on the course context, the field, and the desired impact of the project. Student learning outcomes need to not only address course content knowledge but also support students' development of disciplinary literacy skills. At the same time, when designing a renewable assignment, the instructor should consider how to support students in treating the project as an opportunity to contribute and empower them to view themselves as experts. Open pedagogy provides an opportunity for "students to learn as co-investigators so that they realize a model beyond the banking paradigm for their education" (Rosen & Smale, 2015, para. 13). Therefore, the librarian's role is to support the brainstorming process by curating relevant examples of renewable assignments. Resources that provide guidance, as well as examples, include:

- *[Guide to Making Open Textbooks With Students](#)* – an open textbook for faculty interested in learning how to develop open textbooks with students
- [Open Pedagogy Notebook](#) – a website curating examples of renewable projects in higher education classrooms, which includes examples of open pedagogy at the assignment, course, and program level

Open pedagogy course examples include:

- [DS 106](#) – an open online course where students build an assignment bank
- [Eng 2001](#) – a literature course in which students build the glossary for their assigned readings

In addition, the librarian may continue to facilitate reflective dialogue supporting the instructor in connecting to the assignment goal and meaningful open contributions within the discipline and/or community. Once the instructor envisions a meaningful open contribution, the librarian can provide recommendations of appropriate tools and repositories for students to share their work.

Step 3: Select Tools and Repositories

Next, we explored the tools and repositories for open resources commonly used by educators. As the OER librarian, Stacy was familiar with the available tools and repositories that could be used by faculty and students to openly publish work. CUNY faculty have written, curated, and shared OER using a variety of tools, such as [CUNY Academic Commons](#) (a WordPress instance), [CUNY OER Commons](#) (an OER library of instructional materials), [CUNY Academic Works](#) (the institutional repository), and [Manifold](#) (a collaborative publishing platform). Stacy suggested that Jennifer explore OER Commons because it is a tool where educators, including K-12 teachers and higher education faculty, share educational open content. After reviewing the tool, Jennifer decided that this would be beneficial for her teaching candidates for a number of reasons. First, OER Commons already had a plethora of open content available for K-12 educators. Therefore, the teaching candidates would be able to create new content or revise, adapt, or remix content currently in OER Commons. Additionally, the authoring tool within OER Commons provides flexibility when remixing content and includes editing tools similar to word processing software that is easy to use. Finally, introducing teaching candidates to a repository where they may develop habits to find and share resources also provides a pathway for the teaching

candidates to continue to find, author, and remix open content in their own classrooms beyond the course. As we decided on the tool, Jennifer began to draft a description of the assignment, elaborating on the details of the assignment expectations and the tool to be used.

Considerations for Implementation

The collaborative partnership should consider institutional access to tools, authoring features provided in specific tools, their students' digital literacy skills, and the time that faculty are willing to devote to developing students' digital literacy skills, understanding of the tool, and understanding of OER within the course. With these factors in mind, the collaborative partnership explores the tools together to select one that meets the needs of the assignment, reaches the intended audience of the contribution, and will be manageable by the instructor and students within the course.

When exploring and evaluating possible tools and repositories, it is important to consider what students have access to and ensure that the intended audience will have access to the content. Often, the librarian is well-positioned to recommend relevant tools and repositories that align with the assignment goals, discipline, and/or intended audience of the artifact using prior conversations regarding the direction of the assignment. For example, if the artifact in a biology assignment is a test study guide meant to support other students who take the course in the future within that institution, the librarian may recommend that it go into cloud storage, such as a [Google Drive](#) folder, that could be shared with other students in the future. However, if the artifact in an art class is a textbook detailing specific techniques for anyone in the broader art community, the librarian may recommend that the instructor use WordPress or a Wiki-based collaborative publishing tool that is more widely accessible. These decisions are contextual based on access, relevance to the discipline, and intended audience.

Step 4: Design Intentional Negotiations for Openness

As we discussed the open tools and repositories, Stacy noted that students would need to consider and select a Creative Commons license for their work. Stacy and Jennifer discussed the nuances that faculty and librarians need to plan for in designing renewable assignments. The question posed by Wiley and Hilton (2018) to determine if an assignment is renewable asks if students are invited to share their work openly. We felt that being "invited," as opposed to being mandated or directed, was an important piece for students, especially considering Cronin's (2017) discussion of openness which is more fully explained below. We discussed how students may not want to share their work openly or publicly and needed an option to share with the class without sharing with the world. The class assignment involves sharing the artifact within a class folder in Google Drive and then sharing through OER Commons (see [Appendix B](#) for examples of openly licensed resulting student work). This provides options for students to consider if they want to openly share work with a teaching community, and, if so, whom they will share with (class community or global community), whom they will share as (their personal digital identity as a student or as a teacher), and if they will share *this* particular artifact within OER Commons.

Once students determined how they wanted to balance their privacy with openness, we realized that they would need to understand **Creative Commons licensing**. One feature of OER Commons is that the licenses are built into the authoring tool. On the submission page, users are asked to select a license to define how others might use their work. The form asks if they want to allow modifications ("yes," "no," or "yes, as long as others share alike") and if they will allow commercial uses. The symbols associated with the Creative Commons licenses are not visible, and the explanation does not use jargon. Despite the ease of attributing a Creative Commons license within OER Commons, Jennifer still addressed open licensing directly with her class. We felt it was appropriate for the teaching candidates to spend class time understanding the licenses since teachers should understand copyright, fair use, and open licensing. Therefore, Jennifer assigned the students readings about OER. We also devoted one class session to instruction, discussion, and

activities related to Creative Commons licensing and exploring OER offerings on OER Commons (the tool we selected for the renewable assignment). Subsequent class discussions revolved around licensing choices for their own work and evaluation of OER available to K-12 teachers.

Considerations for Implementation

Because open pedagogy is designed to empower students as creators, they need agency in making the decision to share openly and, if they choose to share openly, determining how they will share their work under a Creative Commons license. According to Cronin (2017, p. 18), openness is always "complex, personal, contextual, and continually negotiated" since there is a certain level of risk associated with sharing work. Balancing privacy considerations and open sharing is a critical consideration, as explained through the lenses of Cronin's (2018) *macro* (global), *meso* (community/network), *micro* (individual), and *nano* (interaction) levels. At the *macro* level, students must first decide if they want to become part of an open network and contribute to this network by sharing open content (Cronin, 2018). Those who place a high priority on privacy may decide not to engage in open practices. Those who do engage in open practices must make key decisions. At the *meso* level, students should consider with whom they are willing to share their work (e.g., friends, the class, the professional community, the world, etc.), while they also decide with whom they will share at the *micro* level. This is a vital decision as students develop their digital identities and balance their private versus professional identities. Finally, once students have made these key decisions about open practices, they must then negotiate decisions about sharing the particular artifact they have developed as part of the renewable assignment (Cronin, 2018). In developing a renewable assignment, the librarian should help the instructor consider issues of student privacy and design options for students who opt out of sharing their artifact openly.

Another consideration in designing renewable assignments is how to develop students' knowledge of Creative Commons licenses. It should not be assumed that faculty engaging in open practices and students entering courses fully understand the ramifications of different licenses. Therefore, while designing the renewable assignment, the librarian may support the instructor in fully understanding each of the licenses and what it means for student work as well as how to incorporate instruction of these ideas into the course. The instructor may explicitly teach a class about Creative Commons licensing, or address this more implicitly by helping students identify the symbols on open content they engage with during the course and lead discussions about what they mean before having students create their artifact. Alternatively, the librarian may be invited as a guest instructor to lead a lesson on Creative Commons licensing. While these decisions may certainly be made after the renewable assignment is developed, it is a good idea to start this conversation during the assignment design.

Step 5: Finalize and Reclassify Assignment

Throughout each of the previous steps, Stacy and Jennifer brainstormed ideas and clarified details of the assignment. Once the details were thoughtfully determined, Jennifer finalized the assignment description and wrote the rubric (see Appendix A). Afterwards, she shared the finalized assignment with Stacy, who first read through the description and rubric independently. As she read through it, Stacy applied a student lens in understanding the assignment and expectations, asking clarifying questions to ensure clarity. Afterwards, Stacy and Jennifer met together for one final meeting to reclassify the redesigned assignment using Wiley and Hilton's (2018) four-part test introduced in step one. The discussion concluded that the final redesigned assignment description and rubric could indeed be classified as renewable since the teaching candidates are invited to use an open license to publicly share a new or revised/remixed OER artifact that has value to others beyond what the author learns in creating the artifact.

Considerations for Implementation

While this step is fairly straightforward, this is where the collaborative partnership between the librarian and faculty member reaches its peak. The librarian not only serves as a reviewer of the redesigned assignment, offering critical feedback to support the development of the description, but also reengages the faculty in reflective discussions. As the librarian and faculty member reclassify the assignment to ensure it meets the criteria of a renewable assignment, the partners may engage in dialogue to reflect on the value of the assignment to the field, the effectiveness of the tools utilized, and the match between the assignment's learning outcomes and the learning goals of the course.

Conclusion

This chapter outlines a Renewable Assignment Design Framework for analyzing an assignment and adapting it to become renewable. This framework is meant to be used flexibly and can be adapted as needed in other situations or contexts. For example, the framework may be used in K-12 settings by collaborative teams of school librarians and teachers. Alternatively, teams of faculty members who want to rework a course may also use the framework as they reconsider the major assignments. Overall, it may apply in any context where assignments are being developed since students are asked to create artifacts in nearly every assignment. Far too often, students' work exists only within the teacher-student relationship and is not designed for a broad impact. By discussing our experience and collaboration, we provide an example and path forward in utilizing Wiley and Hilton's (2018) criteria to develop renewable assignments through our Renewable Assignment Design Framework. These design considerations for faculty and librarians assist in developing meaningful renewable assignments by outlining a collaborative process honoring the expertise and experience held by each, while the resulting artifacts provide evidence of empowered students who created open content.

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Appendix A

Original Assignment

Inquiry Unit Plan

In a small group of two to four students, you will collectively choose a topic and design an inquiry or problem-based unit plan for a specific grade level. Within the unit, you must include different types of texts for students to analyze and mini lessons that guide students in this analysis. For example, you may include mini lessons that show students how to effectively generate key words to find information on their topic. In addition, you should include ways to differentiate lessons for individual learners such as struggling readers, ELL students, and students with learning disabilities. Your unit plan should detail a performance task that students would complete to conclude the unit or as a product of the unit. Be sure to include a rubric or other method of assessing this student work. A template will be provided to assist in the design of the unit.

Redesigned Renewable Assignment

OER Technology Integration Project

For the culminating assignment in this course, you will design, adapt, or remix an OER to share on OER Commons (https://www.oercommons.org/), then implement it in your classroom. You can design your project from scratch, adapt your project from existing work in your classroom, or adapt, remake, or remix an OER that already exists on OER Commons or in EDR 529's shared resource collection on Google Docs. After designing, adapting, remaking, or remixing your OER resource, you are required to upload it into EDR 529's shared resource collection and onto OER Commons using the resource or lesson builder. If you do not wish to share your work openly, please discuss this with your

instructor. When you submit your work to Blackboard, you should include a link to the resource on OER Commons. **Before you begin working on this project, have the instructor approve your idea.**

Your project should creatively demonstrate how to integrate technology/new literacies into your classroom to support literacy learning in meaningful ways as a result of what you learned during this course. In addition, your project should exhibit your understanding of the skills students need to be successful in the 21st century and create experiences for students that utilize best instructional practices for integrating these skills into instruction. For example, your project may demonstrate how you empower learners to actively create, collaborate, and/or design. Be sure to include the grade level and specific standards that were addressed in your project.

You should plan to implement all or part of your project with your students and provide a two- to three-page reflection on the implementation. As appropriate, include samples of student work within your reflection and explain how implementation went. Note the students' response, your own successes, students' successes, challenges, and ways you might change the design in the future. Most importantly, detail a few lessons you learned about technology integration within the literacy classroom. Throughout your reflection, as appropriate, be sure to make connections to class texts. **Student work samples and your reflection should NOT be submitted to EDR 529's shared resource collection or OER Commons. Rather, you will submit this through Blackboard.****

Ultimately, this project could take many varied forms, so be creative! In designing your project, you should use the ideas we have discussed in class, instructional strategies from your self-selected book, technology integration ideas from our texts, etc. to guide your project. Some ideas are:

- A module that includes multimodal resources for a unit of instruction, with plans to support their use in the unit and resulting evidence of student use
- An open book chapter for your students with multimodal texts on a given topic
- A series of lesson plans (or a unit plan) with examples of student work
- An inquiry unit with a digital performance task embedded and different modes of text used within the unit with examples of student work
- A collection of technological resources with mini lessons on how/when to use them and examples of student work after implementation of the resources
- Exemplar models of projects you completed with students along with student attempts
- Yearlong plan of how you will integrate a specific technological resource into your classroom with evidence of beginning stages of implementation

Component	Beginning	Developing	Proficient	Exemplary

Project Design	Does not appropriately embed learning activities with new literacies; does not align with standards (Substitution & Augmentation)
	
	    Uses limited digital tools and resources to encourage learning that may not be active or deep
	
	    Applies few to no instructional design principles to create a digital environment that minimally supports learning
		Demonstrates how to embed learning activities with new literacies that are inauthentic and may loosely align with standards (Substitution & Augmentation)
		
		    Uses minimal digital tools and resources to encourage learning that may not be active or deep
		
		    Applies some instructional design principles to create a digital environment that mostly supports learning
			Demonstrates how to embed authentic learning activities with new literacies that align with standards (Augmentation, Modification, & Redefinition)
			
			    Uses some digital tools and resources to encourage active, deep learning
			
			    Applies instructional design principles to create a digital learning environment that supports learning
				Demonstrates how to embed creative and meaningful authentic learning activities with new literacies that align with standards (Modification & Redefinition)
				
				    Uses varied digital tools and resources to maximize active, deep learning
				
				    Applies effective instructional design principles to create an innovative digital learning environment that engages and supports learning

Student Skills	Does not model/ nurture students' creativity when communicating ideas, knowledge, or connections
	
	    Provide little to no support for students' use of technology
	
	    Demonstrates little to no understanding of 21st century skills and literacy demands required of students
		Allows for minimal student creative expression to communication ideas, knowledge, or connections
		
		    Supports students' use of technology with various approaches that may not be appropriate
		
		    Demonstrates limited understanding of the 21st century skills and literacy demands required of students
			Models/nurtures some student creative expression to communicate ideas, knowledge, or connections
			
			    Appropriately supports students' use of technology with scaffolded approaches
			
			    Demonstrates an adequate understanding of 21st century skills and literacy demands required of students
				Models/nurtures student creative expression to communicate ideas, knowledge, or connections
				
				    Effectively and appropriately supports students' use of technology with scaffolded approaches appropriate for student age
				
				    Demonstrates an exemplary understanding of 21st century skills and literacy demands required of students

Reflection	Little to no implementation of the project design
	
	    Provides an outline of the project implementation with little to no reflection
	
	    Provides limited to no examples of student work;
	
	    makes few to no connections to course content; does not provide lessons learned that are not applicable to future technology integration efforts
		Bare implementation of the project design
		
		    Provides a limited reflection on the project design and implementation; feels more like a report of the events than a reflection
		
		    Provides few examples of student work (does not necessarily need to be within the reflection)
		
		    Makes limited connections to course content to provide general or vague lessons learned; lessons learned may not be applicable to future technology integration efforts
			Implements all of or a sufficient portion of the project design
			
			    Reflects on the project design and implementation, including some specific responses, comments, and reactions
			
			    Provides examples of student work (does not necessarily need to be within the reflection) and uses these examples to make points in the reflection
			
			    Makes connections to course content in order to provide broad lessons learned that may guide future technology integration efforts
				Implements all of or a significant portion of the project design
				
				    Thoughtfully reflects on the project design and implementation, including specific responses, comments, and reactions
				
				    Provides multiple examples of student work (does not necessarily need to be within the reflection) and uses these examples to make salient points in the reflection
				
				    Thoughtfully makes connections to course content in order to provide a few broad lessons learned that can be applied to future technology integration efforts

Mechanics and References	Many grammatical and spelling errors that distract from meaning
	
	    In-text citations and references do not adhere to APA format
		Some grammatical and spelling errors that distract from meaning
		
		    Many in-text citations and references do not adhere to APA format
			Few grammatical and spelling errors that do not distract from meaning
			
			    Most in-text citations and references adhere to APA format
				Little to no grammatical and spelling errors
				
				    All in-text citations and references adhere to APA format

Appendix B

Links to Resulting Candidate Work

Work Shared on Google Drive with a Creative Commons License

- [Addition and Subtraction Book Chapter – 1st Grade](#)
  - Licensed CC-BY-NC
- [Interviewing Characters in Because of Winn Dixie Project – 4th Grade](#)
  - Licensed CC-BY-SA

Work Shared on OER Commons with a Creative Commons License

- [Ocean Garbage Patches Unit – 5th grade](#)
  - Licensed CC-BY-NC-SA

Informed Open Pedagogy and Information Literacy Instruction in Student-Authored Open Projects

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Project Overview

Institution: [East Los Angeles College](#)

Institution Type: public, community college

Project Discipline: Information Literacy

Project Outcome: student-created zines

Tools Used: ACRL Framework

Resources Included in Chapter:

- Class Assignment Template

Open pedagogy has often been touted as empowering, liberating, and revolutionary. While many interpretations of the term open pedagogy exist, this chapter specifically focuses on an open pedagogy in which students are creating openly licensed works in a classroom environment. Open pedagogy affords librarians, instructors, and students a unique way to guide how courses are taught and how students learn. However, while working openly can be empowering, liberating, or even revolutionary, I argue that it is unethical to mandate or strongly encourage students to produce open work without themselves understanding the implications of working openly. I argue that it is only when students understand the political intent behind these types of open projects—speaking to a much broader open education and open access movement—that they might decide for themselves to continue to engage in and support open work. Open practice is only powerful when the students involved understand why they are engaging in this work and deciding for themselves

that this is something they are personally and politically invested in. Furthermore, it is only when students understand the concept of open and their own rights as authors that they can ethically engage in this type of open pedagogy.

In other words, if we are using open pedagogy to encourage students to themselves be part of the open education movement, then students must understand what open practice is and how it relates to their own lives. I posit an informed open pedagogy that 1) teaches students about, and brings students into, the greater open education movement, in which 2) students decide individually and negotiate as a whole their preferred individual and collective authorship that lastly, 3) allows students to opt-out at any point in the class, or later can provide a more ethical design to open pedagogical practices. This informed open pedagogy can be elicited through the practices of information literacy instruction.

The Framework for Information Literacy for Higher Education, or Framework, from the Association of College and Research Libraries (ACRL) (2015) presents guiding frames in which classroom instructors and librarians can scaffold instruction about open principles within a larger information literacy context. The Framework defines information literacy as:

> ...the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning (p.8).

This definition of information literacy also is situated in learners' own academic and social learning goals throughout their academic careers and lives. In open pedagogy, by centering students as creators of information rather than simply passive consumers of information through an **OER-enabled project**, students can improve upon their information literacy and better understand information ecosystems and how knowledge is produced, disseminated, and valued. The Framework consists of six broader frames that are central to information literacy. These six frames are meant to guide, not prescribe, local practice. These frames enable us to think about how we might teach students about general open principles, open education, and open pedagogy through the lens of information literacy.

For each of these frames, I will provide some examples of how I attempt to cultivate an informed open pedagogy in my own community college classroom through a short-term eight-week Library Science 101 course, College Research Skills. The students in this particular course were required to take Library Science 101 as part of our honors program; however, the zine assignment is appropriate for any group of students. This course meets one day per week, two hours each class. The capstone OER product is a **zine**, in which individual students create a specific piece of an overall openly licensed zine resource for their fellow students at our college that provides guidance on various information literacy concepts and the mechanics of using information resources, from our library or otherwise. The terms of the zine assignment are negotiated by the class as a whole, such as the content that will be divided by students, the open license to be used (if at all), and their form of authorship (e.g. full or partial name, pseudonym, anonymity, group authorship) (see [Appendix](#) for selections from the Zine Contribution Assignment). While most of the discourse on open pedagogy tends to be centered on technology, I present this capstone open pedagogy project that is largely analog, is distributed in print, and whose final product lives online on a somewhat obscure website that is, by design, not easy to find. This is an intentional obfuscation technique that I will discuss later.

While the example open pedagogy project I have provided is for a Library Science course, the lessons and projects here can be adapted to a course in any discipline. I would also encourage classroom instructors to consider liaising with your campus librarians to dialogue and develop strategies for scaffolding instruction around openness into your classroom in meaningful ways. This can include librarian-led lecture and/or discussion around: copyright, fair use, and open access; citation and attribution in both academic (e.g. research paper) and non-academic (e.g. zines) information genres; or developing search strategies for traditional library databases and open access journals. The examples I provide here are reflective of my personal practice and are not exhaustive but rather intended to demonstrate some ways in which to integrate information literacy and open instruction.

Authority is Constructed and Contextual

Information resources reflect their creators' expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required. (Framework, 2015, p. 12)

In this frame, students are learning about how various types of authorities are conferred and how authority is related to their information needs. Students also should be thinking about their own authoritative voices and the responsibility tied to being an authority, including putting forth information that is both accurate and reliable, respecting intellectual property, and participating in communities of practice. In asking students to create an OER product, open pedagogy allows us an incredible opportunity for students to explicitly engage and reflect in the development of their authoritative voices.

From the onset of my Library Science course, students have a syllabus that clearly articulates the assignments that will be completed in the course, including the final zine which is the big project that will be created and made available for all students at our college after the course is completed. Each class of approximately 25 students makes one zine, and the assignment is repeated with different student authors for each class. From the beginning, when I explain information and our assignments, I repeatedly emphasize that when it comes to being a student, my students themselves are the experts. What might a new student need to know about the library or research that they may be unfamiliar with or need more guidance on? I can speculate based on my experience as a librarian and teacher, and at one point a student myself, but the students are the ones who have intimate, personal, and immediate experience and knowledge as current students–a very specific type of knowledge–that is valuable in their community and to other students. In the third week, just under the halfway point in our course, students complete their first open assignment: taking photographs of resources, services, and spaces in the library that they think would be useful for students to know and to describe them (e.g. title, summary, social tags). I ask my students, "As a current student taking Library Science 101, what should other students know about the library or research in general?" We compare authority in other information formats in comparison to what we are doing, and students articulate why they are in a position to give other students tips and advice. I also use this opportunity to be explicit about my position in this dynamic and argue that they are indeed the authority for this type of information need and not myself, even though I am the instructor in a traditional overarching form of authority.

Information Creation as a Process

Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences. (Framework, 2015, p. 14)

This frame puts students in a position to think about the creation of a final OER product and how the creation process affects the information produced, thinking specifically about how the information created is enhanced or limited by

the creation process itself. In addition to this process, students are asked to think about information formats and dissemination. For example, what does it mean to produce a static object versus a living document as OER? Thinking about how we want our information to be received and by what population, how might we appropriately disseminate this OER? This frame also explicitly encourages students to understand that their own choices impact how information will be received and interpreted.

Much of my course is dedicated to learning how to effectively search and find information, which my students engage with from the first week of the course. By the end of the first week, students should be able to perform basic catalog, database, and web searches, upon which the rest of my lessons are built. In the fourth week of class, my students and I look at information about a specific topic comparing information formats. For example, this can be a journal article on a given subject compared to a tweet from an academic on the same subject, but this can also be a comparison of two academic journal articles, one being open access and the other not. As another example, we compare a traditional encyclopedia article and a Wikipedia article and compare the creation and dissemination of both static and dynamic formats. We then engage in a discussion about the process of creation in each of these information formats and how one might decide to produce and disseminate that information and to whom. The lessons from this week serve as a precursor to an entire class dedicated to open access, which I will elaborate on in a later section.

Information Has Value

> Information possesses several dimensions of value, including as a commodity, as a means of education, as a means to influence, and as a means of negotiating and understanding the world. Legal and socioeconomic interests influence information production and dissemination. (Framework, 2015, p. 16)

This frame goes beyond teaching students about plagiarism and following a particular citation style, rather teaching them about their relationship to intellectual property and their own rights as authors. This frame also provides an opportunity to explicitly teach students about copyright, fair use, open access, and the public domain. I dedicate the fifth week exclusively to issues around open access and general openness covering all of these topics. Our discussions revolve predominantly around traditional publishing models and open models, intellectual property and students' own rights as authors, and information access. For example, we have a typically lively discussion about the implications of using Turnitin, a popular plagiarism detection software, and students' intellectual property rights, which Morris and Stommel (2017) explain permits Turnitin to take control of a student's intellectual property and sell that work for profit. This is just one example of contextualizing ways in which existing systems are broken and exploitative; by understanding how the students fit in this system, they can make decisions about how they will work in, and possibly apply solutions to improve, these systems.

At this point in the course, I also want my students to understand that various open licenses exist so that we can collectively determine which open license, if any, we want to apply to our final zine product.[1] Additionally, I want students who are creating works after the course to understand what licenses are available to them and how to use

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1. While I recognize students can select or reject to use an open license for their individual work, I chose to have students select one open license for the zine as a whole through a larger group discussion. I personally felt that the process of thinking about what it means to work open at an individual, campus, and societal level was a more relevant discussion topic in which to engage.

them. This includes articulating the various Creative Commons licenses but also exploring, for example, licenses for open software and public domain considerations, and thinking about multiple ways of approaching open work and intellectual property. We also explore traditional knowledge (TK) licenses to engage in discussion about both the cultural variations in intellectual property and how new licenses can be co-created when what is valued and needed by a community does not yet exist (TK Licenses).

With regard to making their own choices, this frame emphasizes a need for students to make informed choices regarding their online actions with respect to issues of privacy and the commodification of their personal information. Moreover, students should be centered in the decision of where and how their information is published, such as in the case of how student data is exploited through Turnitin. How much do students want to reveal about themselves? This is not a decision that educators should make or impose but one that students should play an active role in. The ways in which students work, especially when in an open environment, ought to be determined by the students themselves.

Research as Inquiry

Research is iterative and depends upon asking increasingly complex or new questions whose answers in turn develop additional questions or lines of inquiry in any field. (Framework, 2015, p. 18)

This frame best captures the exploratory nature of research that students engage in when creating OER as part of their regular assignments. In this frame, students conduct research through various methods that best apply to the information need they are presented with. This often involves creating research questions, determining a scope of investigation, looking for gaps or weaknesses in the gathered information, and organizing and interpreting information in meaningful ways. Regardless of whether or not an educator utilizes open pedagogy, encouraging and guiding students to engage in research as an iterative process requires substantial instruction and resources. Remember that students are likely just developing their research skills so even just providing links to specific campus library or open access databases can be incredibly helpful.

In the sixth week, my students receive the final assignment guidelines; however, I also include several resources with which to engage students within our course learning management system (LMS) site. This includes library tutorials—both those created by my library or other libraries who have made their materials openly available—links to specific resources, and ways to get help (i.e. reference desk, chat reference, office hours). I also extend the content covered in our week dedicated to open (Week Five) in the resources, so students can continue to engage with open concepts (i.e. supplementary readings and YouTube videos, specific hashtags around openness to browse on social media) as they develop their final product. This is the frame in which students are also encouraged to ask for help when needed, so classroom instructors could liaise with campus librarians, including OER librarians, subject specialists, and copyright librarians.

Scholarship as Conversation

Communities of scholars, researchers, or professionals engage in sustained discourse with new insights

> and discoveries occurring over time as a result of varied perspectives and interpretations. (Framework, 2015, p. 20)

This conversation sees scholarship as fluid and encourages students to engage with scholarship in various ways, whether through citing a scholar's work, looking at scholarship in a particular area over time, or recognizing that scholarly works tend to hold various perspectives. Open pedagogy aligns with the learner disposition in this frame in which students view themselves as information creators and not only consumers of information.

In this frame, students also look for barriers to participation and how existing systems may prevent students from participating or engaging. Most of the students I encounter have not engaged with or have limited engagement with scholarly articles; thus, in the third week of class, we break down a scholarly article from title and abstract to conclusion and references to both better understand this genre and to become more comfortable working with what my students often perceive as inaccessible academic language. As a class, and as a community of scholars, we discuss how information and scholarship are communicated and what academic language affords, and how it restricts. We use this discussion to collectively decide how we want to communicate our OER to the audiences with whom we engage, taking into consideration those affordances and restrictions.

Searching as Strategic Exploration

> Searching for information is often nonlinear and iterative, requiring the evaluation of a range of information sources and the mental flexibility to pursue alternate avenues as new understanding develops. (Framework, 2015, p. 22)

In the last frame, students are articulating their information needs, determining a scope of investigation, and employing various search strategies to find appropriate information. If we as educators are attempting to bring students into the open community, we ought to teach students how to incorporate open sources within this search exploration. In addition to teaching library databases, catalogs, and the open web, we can also include open access journals and databases, institutional repositories, or using open limiters that designate a database item as open access or an open web item as openly licensed (i.e. Flickr images, YouTube videos).

Because I teach an information literacy course, we begin employing search strategies in the first week of the course. When I teach students about using our academic library's databases or catalog, I am very explicit that these resources are only available to them while they are students. When they are not in school (i.e. summer session) or after they graduate, they can no longer access our electronic resources or check books out from our library. This provides an opportunity to discuss resources that are always available, not only including open resources but also the incredible, although inherently different, collections and resources offered by the public library.

Metacognition and Student Reflections

I designed this course to include weekly self-reflection around learning outcomes in addition to a more robust final

reflection at the end of the course. Students were required to reflect on the exercises and readings of each particular week and reflect on how they individually were meeting one or more learning outcomes, as well as strategies they might take to further meet these outcomes. This metacognitive practice was implemented to help students gain awareness into their own learning process, but also provided a wonderful glimpse into their interpretations and feelings towards open pedagogy through the zine assignment, touching on concepts found in all of the frames:

Table 1

Student Reflections on ACRL Frames

Frame	Student Reflections
Authority is Constructed and Contextual	Many students recognized themselves as a relative authority on college research on our campus upon finishing our course and producing the zine. The zine might not be as comprehensive as taking Library Science 101, but it would introduce students who are not familiar with college research to some basic principles to get started. Because this zine would be published openly, students expressed an interest in producing a quality end-product for their fellow students.
Information Creation as a Process	Students had to make choices about how they were going to communicate information in the zine, which was fun and liberating for some students, while other students were more uncomfortable with this freedom. However, most students seemed pleased with the end product, many being very surprised that the end product was so cohesive even though all students took wildly different approaches to their work.
Information Has Value	As creators themselves throughout this process, students recognized the need to give credit to others. Few students explicitly engaged with the concepts of copyright and open access. Students seemed to appreciate the democratic process in deciding how this zine would be published.
Research as Inquiry	Several students described the need to return to course materials from previous weeks or find other resources to better understand that material in order to teach it to other students themselves.
Scholarship as Conversation	Many students recognized the zine assignment as creating a platform in which to share knowledge with other students.
Searching as Strategic Exploration	Students explained their search strategies in creating their final product, using various search techniques and information sources that were most appropriate for their work.

Overall, students seemed to enjoy collaborating to make a class zine, many claiming that they were really proud and excited to have their name included in something that would be made public.

Final Thoughts

The Framework provides some ways in which to think about how we can teach students open in our various local contexts. Open pedagogy can offer, at least partially, a path to liberation, breaking students away from the restrictions of the traditional banking model of education, in which students are seen as banks into which knowledge is deposited (Freire 2000). However, we also need to be simultaneously wary of any open determinism in which we uncritically prescribe open to a given attribute, whether empowering, liberating, or revolutionary.

The core essence of open is similar to what one could say is the essence of education and teaching from both

Freirean pedagogy and bell hook's education as the practice of freedom. Freire (2000) asserts that revolutionary leadership necessitates dialogue and the practice of co-intentional education, in which the teacher acts more as a facilitator alongside students towards the co-construction of knowledge through common reflection and action; here, "the presence of the oppressed in the struggle for their liberation will be what it should be: not pseudo-participation, but committed involvement" (p. 69). While bell hooks (1994) recollects the work of Freire to be crucial to her survival as a student, she describes the unfortunate disconnect between Freiran theory and practice, which assumes liberation but, in fact, manages to further oppress:

> It was particularly disappointing to encounter white male professors who claimed to follow Freire's model even as their pedagogical practices were mired in structures of domination, mirroring the styles of conservative professors even as they approached subjects from a more progressive standpoint (p. 18).

To this point, I assert that an informed open pedagogy is one that is inclusive of engaging students in dialogue around concepts of open, and one that is exploratory for students to decide for themselves any commitments to working open. While I am staunchly an open advocate, like Crissinger (2015), I find that open rhetoric is dominated by shared goals and politics but gives little attention to the risks, and further, that an uncritical examination of openness and open practices can be as exploitative as the traditional systems that we aim to disrupt. While this chapter is not focused on said risks, it is nonetheless important to remember that working openly, unsurprisingly, looks different for different people. As an example, as a woman of color, I think about the constant tension of having one's voice heard in academic spaces while simultaneously not wanting one's work to be invalidated or appropriated. In a similar vein, even though I believe I engaged my students in an informed open pedagogy, I am hesitant to deposit their open zine into major open repositories.

Now, the big presupposition here is that open is the best or only optimal way by which to produce and share information. Towards open access and public domain advocates, Christen (2012) suggests a cultural blindness around access and openness in relation to information sources, citing faith in openness as an end in and of itself as a distraction from "seeing the possibilities of alternative regimes that are neither oppressive nor controlling, but based on divergent social and ethical systems and ways of imagining information and its movement between various groups of people" (p.2878). By recognizing this open determinism and engaging students in an informed open pedagogy that is inclusive of both information literacy concepts and open practices, might this further encourage students to see a solution other than one that currently exists in open practice or elsewhere?

For me, I mostly choose to work openly because of the implications it has for my students. I see much opportunity in opening up traditional systems of publishing and scholarship to share and expand knowledge, bringing students into these vibrant, open communities. At the same time, and as strong as my personal commitments are to open, I believe students themselves must understand the nature of open and maintain self-determination in choosing how they engage with information in their own lives.

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix

Selections from the Zine Contribution Assignment

Why a zine?

Zines are small publications that are produced, published, and distributed by the creators (us!) themselves. Zines provide us a way to create information, share this information with our peers, and distribute our final product in the library and across campus.

For your assignment

You will either design a half of a sheet of paper and summarize in your own words one piece of what you've learned in this class (**sign up below!**) written as if to advise other [campus] students, either about information literacy, or about library resources and services. **Due date: This will be due by [date]!** This is a hard deadline. Remember that I have to write all my parts, collect all your contributions, put together all your individual pieces, copy everything front and back, and staple everything by the time we meet on [last class date]!

[Logistical information about creating a zine page and how to submit the final work. Purpose of the assignment.]

Sign-Up

Wherever it says "*available*", replace that text with your name:
   Cover: ½ page with our agreed upon title & metadata.

- Title (to be determined by the class by majority vote): *Available*

Author Page: I'll be inputting the author page. At the bottom of this page, please write your name as you wish to be attributed. As creators of this information, you should all get credit for your hard work! You can also remain as anonymous as you want to. You can also include your name on your actual zine page (optional).

- To be completed by professor

Table of Contents:

- To be completed by professor

[Bulleted sign-up list of content areas to be selected by students in the class. This sign-up list uses students names to assign roles and keep track of grades for individual students, but the names listed here are not shared in the zine unless the student opts in in the "Attribution" list at the end of the assignment prompt.]
   Open license to be used: to be determined by the class

- The purpose of this zine is to communicate information to other students on campus, and we, as authors, have the ability to make our work more open to be easily shared by others. We will cover this more in class (lecture and discussion) and determine the type of license we wish to use (if any!)

Author list for attribution (for those wishing to remain anonymous, please write "Anonymous, [your name] so I know that you specifically do not want your name listed on the Author Page, not that you just forgot to include your name!) (e.g. Cynthia Orozco, Cynthia O.):

1. [Student names to be inputted by students, plus their preferred attribution, here]

Approaching Open Pedagogy in Community and Collaboration

CAROLINE SINKINSON AND AMANDA MCANDREW

Authors

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Project Overview

Institution: [University of Colorado Boulder](#)

Institution Type: public, research, undergraduate, postgraduate

Project Discipline: Faculty/Staff Professional Development

Project Outcome: Faculty Learning Communities

Tools Used: Reclaim Hosting, Google Drive, WordPress, Omeka, LibGuides

Resources Included in Chapter:

- Planning and Scheduling Materials
- Recommended Readings

Introduction

In the 2008 *Cape Town Open Education Declaration*, signatories envisioned that openness in education would foster a "new pedagogy where educators and learners create, shape and evolve knowledge together" (Cape Town, 2008). Today, the global open education community continues to pursue these pedagogical visions. This was captured at a recent

gathering of United Nations Educational, Scientific and Cultural Organization (UNESCO) member state representatives, who work to encourage international collaborations to improve education, science, and culture. In a series of draft recommendations for open education, they affirmed the ongoing aim to realize pedagogical innovations that engage "both educators and learners to become more active participants in educational processes and creators of content as members of an inclusive knowledge society" (UNESCO, 2018). As we, a librarian and an academic technology consultant, increasingly participated in open education, these pedagogically-focused goals resonated with our professional roles and inclinations. Motivated to more fully explore these possibilities, we set out to expand local dialogue and awareness of open pedagogies. We invited a community of educators together to investigate the pedagogical possibilities of open education and to dwell on questions about learners' agency and ownership of their education.

In this chapter, we describe our partnership that formed through mutual investment in reshaping approaches to teaching and learning within our local university setting. We provide the theoretical background of the project as well as share the structure, essential elements, and strategies employed to form a series of faculty learning communities focused on open pedagogy.

Context

These learning communities were formed at the University of Colorado Boulder, which is a public research university that offers more than 3,900 courses in approximately 150 subject areas to over 30,000 students each year (University of Colorado Boulder, 2018). Across the campus, educators have individually pursued open education projects. Perhaps most notable is the Physics Education Technology (PhET) simulations (University of Colorado, 2019), which are interactive, research-based science and mathematics simulations developed by a cohort of faculty and researchers in the department of Physics. More recently, as statewide grant opportunities have developed, the University of Colorado System launched an **open educational resources** (OER) initiative that offers targeted educational programming about OER as well as faculty stipend opportunities for OER review, adoption, and adaptation (Colorado Department of Education, 2019). These programs, coupled with campus-articulated commitments to student savings, have increased the momentum and interest in open education across the campus community (Strategic Relations and Communications, 2017).

As the institution increasingly drew attention to the promise of open education, a partnership already existed that for a number of years leveraged the expertise of an instructional designer and a teaching librarian to create reflective spaces for pedagogical exploration. Amanda McAndrew is an academic technology consultant within a department of the Office of Information Technology titled the Arts & Sciences Support of Education Through Technology (ASSETT), and has worked as a teacher, instructional designer, and educational developer for more than fifteen years. Caroline Sinkinson is a teaching and learning librarian in the University Libraries and has worked with **information literacy** education and related **critical digital pedagogies** for over ten years. We have commonly consulted with faculty, both together and individually, on learning design that centers on information and digital literacies as well as the integration of educational technologies. Due to these shared experiences and roles on campus, we began offering semester-long faculty seminars that introduced theoretical readings, instructional design models, and emerging technologies that held promise congruent with pedagogical aims. Throughout these collaborations, we frequently encountered complements and alignment between our respective fields that presented new opportunities for conversation with the campus community. This held true as we investigated open education and the pedagogical aspects therein.

Open Pedagogy

These conditions and our on-going professional relationship established the foundation for what would be a multi-

tiered effort to expand campus conversations about open pedagogy. To begin, we dove into concepts of open pedagogy that would inform our approach and would strengthen a theoretical foundation to our project.

We were fascinated to find that the concept was not new but had emerged in the 1960's and 1970's (Barth, 1969; Mai, 1978; Paquette, 1979; Noddings & Enright, 1983). Early conceptions of open pedagogy developed as educators challenged dominant modes of schooling that they claimed reduced learners' participation, creativity, and ownership in their learning experiences (Barth, 1969; Paquette, 1979). Notably, these perspectives echoed the foundation of our work to explore methods for breaking down traditional educational structures that limit learner expressions. For example, we were intrigued by the potential for learners to connect with broader publics through technology and the possibilities of authoring for authentic audiences. Similarly, in years past, the open educators of that time questioned "traditional seats of authority, including the way classrooms and schools were organized and students were taught" (Cuban, 2004). As such, they developed strategies to open classroom structures in terms of time and space, to advocate for more flexible curricula that allowed individual or community directed learning, and to flatten relationships between learners and teachers. We located coherence between early notions of open pedagogy with **critical** and experiential pedagogies which have all often shaped our approach to learning.

As we looked to contemporary discussions of open pedagogy, we found some definitions that clearly attached the concept to production of OER and the capabilities enabled through open licensing (Wiley & Hilton, 2018). Others resisted definitions in favor of identifying guiding values and beliefs about learning, which echoed patterns in the past (Paquette, 1969; Hyland, 1979). Recurring themes throughout included increased access to education, learner-driven design of learning, connectivity with wider publics, and learner participation and creativity (Hegarty, 2015; Reynolds, 2018; DeRosa, 2017, Hendricks, 2017; Bali, 2017; Jhangiani, 2019). Our analysis of the historical and contemporary definitions of open pedagogy led us to synthesize the essential values of open pedagogy from our vantage point. For us, open pedagogy signals a commitment to:

- **Access and equity:** reducing barriers that prevent equitable access to education, including economic, technical, social, cultural, and political factors.
- **Community and connection:** facilitating connections across the boundaries of learning experiences, viewpoints, classrooms, campuses, communities, and countries.
- **Agency and ownership:** protecting agency and ownership of one's own learning experiences, choices of expression, and degrees of participation.
- **Risk and responsibility:** interrogating tools and practices that mediate learning, knowledge building, and sharing that resist the treatment of open as neutral (Sinkinson, 2018).

Ultimately, we came to see open pedagogy as an ethos or as "a way of thinking, a way of acting" (Paquette, 1979: p. 2) when approaching learning and teaching in contemporary learning contexts. Our approach to open pedagogy became a means of continuing conversations with fellow educators that unveil beliefs and assumptions about the purpose of education as well as the relationship between educators, learners, and knowledge. In essence, we came to embrace DeRosa and Jhangiani's claim that open pedagogy is "a site of praxis, a place where theories about learning, teaching, technology, and social justice enter into a conversation with each other and inform the development of educational practices and structures" (DeRosa and Jhangiani, 2017).

Information Literacies

As we considered learning in open contexts, we were acutely aware that open networked technologies, while ripe with opportunities, also required careful interrogation on the part of teachers and learners. Opening up learning spaces that reach beyond gated learning management systems and closed-door classrooms present the opportunity for authentic interactions and contributions to broader knowledge communities, but these systems may also contain

threats. Take for example some of the current realities and tensions in open spaces: **surveillance capitalism**, **digital redlining**, **algorithmic-decision-making**, among others (Stewart, 2019). Many learners, and teachers, already occupy these spaces in their personal and civic lives and make choices about their presence, participation, and sharing practices constantly, both knowingly and unknowingly. Therefore, an additional area of concentration for our programming was to ask how we might cultivate critical approaches to digital communities, information landscapes, and the knowledge commons—including the technical, social, economic, and political forces that shape them. For us, this involved encouraging educators to explore the tensions of open environments alongside learners and to collaboratively ask what literacies might strengthen negotiations of those complexities. In other words, we stressed the importance of integrating information literacy into learning design so that it would provide opportunities for learners to cultivate critical decision-making about the information landscapes they inhabit.

Program Structure

Having established the theoretical foundations for our approach, we set out to respond to the energies in our community, our professional drive and interests, and a strong commitment to improving teaching and learning on our campus through the formation of faculty learning communities. The primary focus of this chapter is a faculty community formed in the fall of 2017, which directly introduced concepts and examples of open pedagogical practices while concentrating attention on the agency of learners and their ownership of learning experiences. Following this experience we built on the momentum and hosted two consecutive communities; the first of which was structured through informal gatherings where we explored tools and platforms that might support open pedagogy; the second of which extended exploration in a more formal structure and with a newly implemented instance of **Reclaim Hosting** at our institution, that was inspired by the **Domain of One's Own** initiative. The second and third iterations drew upon the foundations and values of open pedagogy to design the communities and the discussions we pursued.

Essential Components

Special Interest Groups

For each iteration, which we referred to as "Special Interest Groups" to match an existing professional development format, we designed conversations, participant interactions, as well as shared resources and readings with the aim of building community. Realizing that teaching can produce a sense of isolation and that changes to teaching approaches can be daunting, we hoped that conversations would reveal pedagogical questions and possibilities otherwise unrealized. We worked to establish spaces where teachers could comfortably examine and investigate their craft with fellow educators. We were influenced by Lave and Wenger's community of practice (CoP) model, that defines CoP as "people who share a concern or a passion for something they do and learn how to do it better" and "engage in a process of collective learning in a shared domain of human endeavor" (Wenger-Trayner & Wenger-Trayner, 2015). For that reason, we intentionally focused participant exploration with a statement that the structure would be characterized by an inquiry that was open to emergent, sometimes uncertain, dialog that might transform our approaches and assumptions. This communicated that the participants had the ability to move in directions meaningful to them and that as facilitators we would remain flexible and responsive to what we heard. Therefore, while we prepared materials for the sessions, if the participants pulled attention from our original plans, we allowed and encouraged those occurrences.

Interactivity

To foster community, we planned small and large group interactions, including strategies borrowed from liberating structures that work to enhance interactivity between participants (Lipmanowicz & McCandless). For example, during the first gathering, we invited participants to stand and mingle around the room while posing questions first to one partner, then transitioning to another, and so on. We suggested questions such as:

- What attracted you to this community?
- What do you hope to learn from members of the community?
- What do you hope to contribute to the community?

Another strategy we often employed could be described as think-pair-share, in which participants were given an opportunity to think in silence, then pair with another participant, and finally summarize responses with the full group. We took advantage of whiteboards, sticky notes, and flexible spaces to have small and large group brainstorms and cluster ideas or responses to learning.

Materials for Collaboration

Additionally, we used readings and shared digital spaces, including collaborative documents in Google Drive as well as a website that curated all content, to encourage discussion and collaboration between participants. For instance, we selected readings that introduced key open pedagogy concepts as well as case studies and narratives that relayed fellow educators' experiences implementing open practices (see Appendix A). We employed Google Drive heavily for interactive components of session discussions, for distributing worksheets, and for inviting collaborative authoring. All of the session materials were collected and made available virtually, either through a digital research guide or WordPress site (see Appendix B), where we also curated recommended tools and technologies that were of potential use to participants. Each of these components was intentionally designed to model good teaching practice and to mirror a student experience for faculty. The inclusion of online components maintained a transparent organizational structure for the participants by clearly outlining sessions and curating content. Additionally, it enabled reuse and future referencing of materials by all participants.

Student Voice

A final core component included in our latter two faculty cohorts was the perspective brought by a student assistant who co-led the sessions with us. Focusing on learners in all of our discussions and considerations of open pedagogy was vital to us and was aided tremendously by the student's participation, who was a paid undergraduate technology assistant. As we explored possible classroom activities and assignments, impromptu questions and dialogue between the student and faculty revealed insights and perspectives we may have otherwise overlooked. He also brought a great deal of technological expertise that faculty relied on as they experimented with new tools. In this way, the student, the participants, and the facilitators shared the tasks of teaching and pursued collaborative problem posing, investigation, and play.

Session Details and Iterations

During Fall of 2017, the faculty learning community was titled *Cultivating Students' Digital Ownership & Identity* and consisted of four sessions intended to explore the following questions:

- Why value student agency and identity?
- What does agency look like for our students today?
- What literacies might strengthen agency & identity?
- What about our current practices inhibits students' identity and agency?
- How might open pedagogy help address these barriers?
- How might we use these conversations to transform our practice?

Session One: Agency, Identity, & Literacies

This session focused on setting the frame and scope of the entire community, providing logistical and informational details, and introducing the guiding themes. The content of the session focused primarily on defining and discussing the meaning of student agency and ownership. Secondly, we introduced information literacy through guiding definitions and the *Association of College and Research Libraries (ACRL)* Framework for Information Literacy (ACRL, 2015). Participants were encouraged to interact through an impromptu networking activity, borrowed from liberating structures, and participated in paired and large group discussions (Lipmanowicz & McCandless).

Session Two: Current Practices

In this session, we introduced the concept "disposable assignments" or assignments that lack application beyond the classroom as defined by David Wiley, and contrasted them with assignments designed for authentic audiences or lasting impact (Wiley, 2013). Through reflective writing exercises and reading discussions, the participants considered the merits and pitfalls of disposable assignments and examined their own assignment design. Finally, the facilitators supplied a range of open pedagogy examples framed as renewable assignments, which participants investigated in small groups, then returned to a full group discussion.

Session Three: Open Pedagogy Overview

This session introduced participants to the open education movement and an overview of open pedagogy. Next, having collected examples of open pedagogy in action, we detailed those strategies such as collaborative textbook authoring, student-designed assessments, or collaborative annotation. Because these assignments transform traditional teacher and learner roles, we invited participants to describe the expectations and contributions of learners in these scenarios. Their brainstorming led to robust discussions that included an analysis of the readings.

Session Four: Transforming Assignments

In the final session, we briefly revisited the open pedagogy concept, values, and roles that the participants had generated in the previous session. Next, participants were invited to consider an assignment or a component of an

existing course that they might workshop. First, on their own, and then in pairs, they evaluated how that assignment might be adapted with qualities of open pedagogy and transformed from a disposable to a renewable assignment. Finally, we ended the session with an invitation to continue participating in the learning community in the following semester.

The following spring, we invited participants to explore Reclaim Hosting, an educational web hosting service, and to experiment with applications frequently used in open pedagogy projects: WordPress, Wikis, Scalar, and Omeka. During this iteration of the community, we introduced the Domain of One's Own project that originated at the University of Mary Washington and discussed how student-owned domains facilitated ownership, agency, and active practice of literacies. We carried forward the tone set in the fall: to be a community invested in learning together through wandering inquiry. We met four times to experiment with the technologies available through Reclaim Hosting while imagining how they might shape future open pedagogical enactments. Indeed, participants have since begun working with Omeka for student designed exhibits and with WordPress to facilitate course communications or to curate student-generated content.

Next, during Spring 2019, we offered a series of sessions that centered on the newly available Reclaim Hosting instance at our institution, BuffsCreate, and the possibilities it held to reach both personal and pedagogical goals for participants. Following an introduction to the project, the sessions guided faculty through the creation of a domain, a blog, and a digital calling card. We chose these examples in order to model activities that might be of interest to learners. The blog served as a general introduction to WordPress and a prevalent communication form while the calling card demonstrated an easy template for creating a digital landing space for a professional identity. The culminating session focused pointedly on how these applications and capabilities could be applied to classroom practices. Inspiration for these sessions came from similar models at the University of Mary Washington, Muhlenberg College, Ontario eCampus, and the University of Oklahoma (University of Mary Washington, 2015; Muhlenberg College, 2019; Ontario Extend, 2019; Long-Wheeler & Stewart).

Program Logistics and Collaborations

We relied heavily on previous collaborative experiences to inform our approach to planning, design, and shared distribution of logistical tasks. Typically, during the early phases of development, we held extended collaborative meetings to allow for generative brainstorming and negotiation of methods for community building. Preceding the design of individual sessions, we located and determined readings that we perceived would resonate most with faculty while taking into consideration teaching experiences, time, and risk involved in changing teaching approaches. We have found that shared readings and discussion often brought to the surface participants' areas of interest as well as hesitations or concerns. We prioritized case studies and first-hand accounts of open pedagogy to offer student and faculty testimonies while also providing practical blueprints for adaptation or adoption. Planning individual sessions, our work-flow followed instructional design best practices of developing primary goals and outcomes and then outlining the activities and interactions. Although we met frequently throughout these planning and design stages, we also collaborated using Google Drive to curate resources, annotate readings, and author materials and presentations. As a result, we have built a repository of shared resources that assists us as we build subsequent iterations.

We shared logistical tasks such as recruitment, which we achieved through available communication channels including newsletters, blog posts, and email lists. Additionally, we sent email invitations to specific faculty who had indicated interest in related topics through previous seminars or consultations. The size of our communities tended to be small, ranging from 6-8, which we found ideal for generating conversation and cross-disciplinary interactions. Meeting the group in centrally located buildings, sometimes we alternated the lead facilitator role and other times we adopted a more conversational tone in which we were equally engaged. Generally, we would meet early in the space to intentionally arrange the seating, white boards, and other materials to match the planned activities and group work.

In addition to the formal group settings, we offered individual consultations to participants as they considered designing new class activities and assignments. As requested, we met with faculty to brainstorm possibilities, to locate

resources, and to coach them through the design process. For example, we assisted a participant who was planning to digitize World War II library holdings in collaboration with students enrolled in a first-year history course. She, in collaboration with us and the University Libraries Special Collections staff, will be implementing an instance of Omeka to which students will contribute digitized artifacts and appropriate metadata over the course of several semesters.

Lessons Learned

These three cohorts revealed several areas for improvement and enhancement:

Increasing Learner Participation and Voice

While we were privileged to have a student assistant present in the latter two faculty communities, we would like to facilitate spaces where these questions and concepts are explored jointly by both faculty and learners. This might take the form of joint learner-faculty cohorts, annual symposia and celebrations, learner-led trainings for faculty, as well as having peer mentors available to assist faculty in learning design and implementation. Our appreciation of open pedagogy stems in large part from the importance given to learners' voice and participation in the learning process. In that spirit, we would like to actively include these voices in future learning communities.

Demonstrating Value of Labor Through Incentive Structures

We are aware of the competing demands on faculty of their time and the labor they extend above and beyond to participate in our cohorts over the last few iterations. We would like to obtain funding that would incentivize and award these dedicated teachers in their endeavors to improve learning. We hope to explore opportunities for funding participation with other campus groups, including the recently formed Center for Teaching and Learning. A more ambitious and long-term goal is to continue to advocate for stronger recognition of teaching excellence and innovation in the promotion and tenure process at our research-intensive institution.

Sharing and Circulating Reflections, Spotlights, and Stories

In the past, at the end of a semester-long seminar, we have requested that participants produce a reflective artifact or video, but did not do so for these communities due to timing and scheduling. Videos or textual reflections publically shared would serve to recognize open pedagogy champions and might amplify stories to inspire fellow educators. Therefore, we will incorporate these strategies in future iterations. They might take the form of personal blogs or curated videos as seen at the Ontario eCampus or video reflections from Coventry University's Open Web for Learning and Teaching Expertise Hub (Ontario Extend 2019; OWLTEH, 2018).

Learning from Fellowship Models at Other Institutions

We are interested in connecting with and borrowing from other institutions pursuing similar programs. For example, The City University of New York's Graduate Center Library (CUNY, 2019) hosts an open pedagogy graduate student fellowship that includes a bootcamp, a symposium, fellow generated guides and reflections. Kwantlen Polytechnic University hosted a faculty learning community on Open Pedagogy in 2018 that met virtually twice monthly to discuss readings concentrated on topics such as: OER to open pedagogy; diversity, equity, and inclusion; privacy, digital redlining, and educational technology; A Domain of One's Own; and information environmentalism (Kwantlen Polytechnic University, 2018). Alternatively, we might draw from Montgomery College's emphasis on social justice within their faculty fellowship program (Montgomery College, 2019).

Maintaining a Critical Lens on Open Pedagogy

We are committed to the many benefits and opportunities afforded by open pedagogical practices, but we are equally aware of the complexities therein. In order to maintain coherence with the underlying goals of open pedagogy, we would like to cultivate spaces where faculty and learners critically confront barriers and bottlenecks, such as issues of inclusivity and risk in open spaces.

Expanding Participation and Experimenting with Modality

We have considered the potential of virtual offerings that might appeal to those not regularly on campus or even members of other campuses or communities. Additionally, while we had a few individuals who were able to participate in consecutive cohorts, thereby building upon knowledge from previous communities, these alternate modalities might afford more opportunities for ongoing participation and knowledge building.

Conclusion

Overall, the success of our partnership rests on the common purpose, mutual trust, and shared ownership that drives our collaboration. Through formal and informal meetings, we remain open to the insights, practical and theoretical, that each of us bring from our respective fields and experiences. Occupying unique roles in education development, we offer one another a partner with whom we can approach the challenges of facilitating faculty learning and affecting a campus investment in crafting meaningful learning experiences.

Readied by these initial experiences and invigorated by areas for improvement, we plan to persist in extending the exploration of open educational practices across our campus. Through good fortune, we will do so in an energizing partnership that is intent on pursuing a dynamic culture of teaching and learning. We intend to cultivate communities of learners, both faculty and students, to reflect upon the risks and rewards of working with open pedagogy and the possibilities for local enactments.

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix A

Sample Readings and Rationale for Selection

DeRosa, R., & Jhangiani, R. (2017). Open Pedagogy. In E. Mays (Ed.), *A Guide to Making Open Textbooks with Students*. Retrieved from https://press.rebus.community/makingopentextbookswithstudents/chapter/open-pedagogy

> *We selected this text because of its wonderfully phrased introduction to open pedagogy as well as the thought-provoking questions the authors offer. Additionally, the text gives a nice array of open pedagogy examples.*

Reynolds, R. (2018). Eight Qualities of Open Pedagogy. Retrieved April 1, 2019, from *Next Thought*. Retrieved from https://www.nextthought.com/thoughts/2015/02/ten-qualities-of-open-pedagogy

> *We selected this reading because it captures a number of the qualities and characteristics that might connect open pedagogy to teaching values already held by our participants. It was a useful pivot point to inviting participants to consider the roles of learner and teacher in learning settings.*

Wiley, D. (2013, October 21). What is open pedagogy? Retrieved from *Iterating toward openness* website: https://opencontent.org/blog/archives/2975

> *We selected this reading to introduce the concept of disposable and renewable assignments and to provoke participants' consideration of the types of assignments they readily design. Additionally, we hoped this reading would prompt a consideration of learners as knowledge creators, active participants, and active thinkers.*

Dean, M. (2016). What an open pedagogy class taught me about myself. In *Interdisciplinary Studies: A Connected Learning Approach*.

> *We selected this reading to capture a student account and experience of an open pedagogy course. An important aspect of our approach towards the faculty communities was always to infuse student voices, where possible, and to encourage an empathetic approach to learners in our classrooms.*

Appendix B

Online spaces and shared resources

- Libguide for Fall 2017 and Spring 2018: https://libguides.colorado.edu/cop/open
- WordPress for Spring 2019: https://sig.possibility.buffscreate.net/

Open Pedagogy Big and Small: Comparing Open Pedagogy Efforts in Large and Small Higher Education Settings

SHANNA HOLLICH AND JACOB MOORE

Authors

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Project Overview

Project Discipline: Open Pedagogy Programs

Project Outcome: Research Study and Program Analysis

Tools Used: Otter.ai

Resources Included in Chapter:

- Interview Protocol

Introduction

As Rajiv Jhangiani noted recently, open education is now in its "adolescent" years (Jhangiani, 2017b). In 2016, both the Creative Commons organization and MIT's OpenCourseWare initiative celebrated their 15-year anniversaries, and these two foundational events are as good a way as any to mark the beginnings of the modern open-education movement. While awareness of open educational resources (OER) continues to be important, and education and advocacy continue

to be necessary, it is time to advance our thinking about what the next steps for the open education movement should be.

To that end, the authors chose to examine two current open pedagogy programs in two different higher education settings: one large, research-focused university, hereafter referred to as Large University or LU, and one small, private liberal arts college, hereafter referred to as Small College or SC. Through semi-structured interviews with faculty and staff members working on open education initiatives in various stages of development, the authors sought to compare and contrast the programs and the people involved in these efforts in order to better understand how open pedagogy works in each of these settings. For the purposes of these interviews and this discussion the authors use the term "open pedagogy" in a broad sense, to refer to a large number of open education initiatives, including use/adaptation/development of OER, open textbooks, open software, open data, and other tools and methods of experiential learning that focus on students as active creators and sharers of information and not simply as passive consumers of it. Put simply, the authors view open pedagogy as the use of any OER to support teaching and learning.

Literature Review

Existing literature has found a number of barriers to OER adoption in higher education, including faculty concerns about quality, absence of institutional support, and lack of ancillary materials (Annand & Jensen, 2017; Baraniuk et al., 2017; Bell, 2018; Hassall & Lewis, 2016; Hendricks et al., 2017; Jung et al., 2017; Murphy, 2013; Saeman & Saeman, 2018; Walz, 2017). However, despite such challenges, research also shows many advantages to OER adoption. One study found that students performed significantly better in classes that used OER, especially students who were part-time, non-white, or Pell-eligible; the same study also found that DFW (D, F, and Withdrawal letter grades) decreased in those classes that adopted OER in place of traditional textbooks (Colvard et al, 2018). Another study found that adopting an open textbook in an introductory physics course at a large research university resulted in significant student savings with little change in learning outcomes, that the open textbook was perceived to be the same or better quality than commercial textbooks used in other courses, and that many students specifically appreciated that the textbook was customized to the course they were taking (Hendricks et al., 2017). A similar open pedagogy program at a Canadian university has proven to be of financial benefit to the university as a whole, addressing long-term sustainability concerns: "Operating costs are lowered when OER is adopted because the University's tuition fees include the costs of all instructional materials" (Annand & Jensen, 2017, p. 11). Further research has pointed out other benefits to OER adoption, including easy access to materials in web browsers and on mobile devices, delays in financial aid no longer contributing to delays in access to course materials, and of course, significant cost savings to students (DeRosa & Robison, 2017; Jung et al., 2017; Saeman & Saeman, 2018).

The most interesting benefits of OER adoption in higher education are the implications for opening up the classroom to more engaging and innovative instructional techniques. DeRosa and Robison (2017) call this not just open textbooks but opening textbooks (along with all sorts of other educational materials and processes and pedagogies and instruction): "When we think about OER as something we do rather than something we find/adopt/acquire, we begin to tap their full potential for learning" (p. 122). OER adoption is one small step that can lead to more open pedagogy practices in the classroom, such as having students create "renewable assignments"–where students openly publish their assignments and share them with a wider community–as opposed to the usual "disposable assignments" that are only ever seen by an instructor (Jhangiani, 2017a; Wiley, 2013). Open pedagogy more broadly is characterized by a number of elements, including: giving students control over their own learning journeys; allowing for information to be shared, knowledge to be co-created, and informal learning to be valued; supporting autonomous learning and the development of critical social consciousness; integrating participatory technologies such as social networks and mobile apps; and developing trust, confidence, and openness for collaborating with others (Hegarty, 2015; Smyth et al., 2016). Many colleges and universities talk about preparing students to be global citizens, and open education prepares

students to work in a collaborative world where they will be expected to take responsibility for their own learning (Masterman, 2016).

Librarians are rarely identified as a source of information about OER (Bell, 2018), but the authors have found evidence that faculty collaboration with librarians and other instructional support staff can help surmount many of the traditional barriers to OER adoption, as will be seen in our discussion below. As West (2017) states, "Another level of putting students at the center of open-education initiatives is inviting student voice to the planning and implementation of overall projects. Librarians can assist in this conversation, because students often see libraries as safe places to share opinions and ideas" (p. 145). Librarians may also have specific training in issues around copyright and scholarly communications and are frequently required to obtain an expertise in the large-scale machinations of scholarly publishing that few faculty have the opportunity to gain. While it is ultimately up to individual faculty members to find, evaluate, and adopt OER in their individual courses, librarians and other instructional support staff (such as instructional designers) are frequently best suited to provide expertise and education that alleviates faculty stress in areas such as publishing platforms, content formatting and design, and copyright and licensing issues.

Methodology

Institutional Background

The study was conducted across two mid-Atlantic institutions, differing primarily in size. Table 1 below provides some additional background on the two institutions that may be pertinent to the observed trends.

Table 1

Background Information on the Two Institutions in the Study

Parameters	Large University (LU)	Small College (SC)
Approximate FTE	80,000+	1000
University Type	Public, Non-Profit	Private, Non-Profit
Carnegie Classification	R1 (Large, Doctoral Granting)	M3 (Small, Masters Granting)
Online Programs	Primarily Residential with Online Degree Programs	Primarily Residential with Online Courses

Data Collection and Analysis

To better understand the administrative structures and motivations at work in each of the higher education settings, the authors performed semi-structured interviews with faculty, librarians, and staff at the two institutions. Potential

participants with involvement in OER were identified by the authors or by other participants during the interviews, in order to get as full a view of the network of OER contributors as possible. At SC, interviews were requested from all identified individuals while at LU, the authors sought to interview a representative cross section of individual roles, subject areas, and OER project types.

The interview protocol, shared in the Appendix, focused on determining the nature of the OER work done by the individual, their motivations, and the structural incentives and barriers to OER development, adaptation, and implementation.

Between the two institutions, the authors interviewed 11 individuals (three individuals at SC and eight at LU). Though a sample size of three may not accurately reflect individuals at all smaller institutions, this number represented nearly the entire population of individuals involved in OER in any respect at the smaller institution at this time, and other small colleges are likely to have similarly small populations of early OER adopters.

All interviews were performed through virtual-conferencing software by the authors and recorded for later analysis. The audio was then transcribed with the Otter.ai software tool, with the authors fixing any errors they could find in those transcriptions. They then applied some basic thematic coding (adapted from Yin, 2009) to help draw out common themes in the discussions.

Discussion

The focus of this research was to compare and contrast open pedagogy efforts at large and small, higher education settings. Overall, the authors observed more similarities than differences, with the observed differences following logically from the institutional structures found at each setting. Mirroring the format of the interview protocol, the authors will discuss the similarities and differences in the individuals involved, their motivations, structural incentives, and structural barriers.

Individuals Involved

The first similarity that emerged in the data was the variety of individuals involved and their general roles. In all observed cases, course instructors took the central role for any individual project. With course materials selection in their hands, course instructors (or at least faculty committees or department chairs) had the final say in what materials they used in their classrooms. These instructors were a combination of tenured, tenure-track, and full-time teaching faculty. One group that was absent from the OER landscape at both institutions was adjunct instructors. Developing, and to a lesser extent, even adopting OER in the classroom is a long-term and time-consuming process. With limited time and limited job security, it is logical that adjunct faculty on year-to-year or even semester-to-semester contracts are not typically engaging in these initiatives.

One difference observed between the two settings was the age of the projects. At SC, the OER projects were only a couple of years old at the most, while at LU many of the projects were much older and longer-running. While it's difficult to generalize, it would seem OER adoption and advocacy at SC were lagging behind LU, likely due to the fact that LU's open education initiatives were established quite a few years before SC began working on open education advocacy, due to increased availability of staff and financial resources at LU specifically and at larger institutions in general.

In the non-instructor roles, librarians and other support staff served as OER advocates and educators, connecting and assisting faculty as needed. In both cases, librarians served a central role, though the exact nature of their jobs differed across the two higher education settings. At SC, OER advocacy and support served as one job responsibility among many for a single librarian's position. At LU, one librarian as well as a small staff office of three other people had jobs completely centered on OER. As the institutions get larger, librarians and staff will wind up with more specialized

and focused roles. With that narrow focus comes a much larger audience, however, with one OER-focused staff person at LU having reported meeting with more than 100 individual faculty members over a time period of just six months. As this represents more than twice the entire faculty body at SC, it highlights the differences in scope of these positions. Despite this, librarians and staff at both institutions reported the same kinds of activities: specifically, advocating OER to the larger institution and then assisting individual faculty who come forward looking to implement open pedagogy in their own curricula.

Motivations to Develop or Adopt OER

Across both large and small university settings, similar patterns emerged with regards to motivation. At the core of the majority of faculty's initial decisions to adopt or develop OER was the high cost of traditional textbooks for students. Some representative statements from faculty below illustrate this point.

> **SC 3** "And, you know, I don't know how familiar you are with the students at [*Small College*], most of them are like first-generation college, a lot of them don't have the money to spend on expensive, like having huge expenses on their books, and so forth."

> **LU 2** "And then as publishers, like Pearson, in particular, have become a lot more predatory, the way that they release new editions very quickly to kind of undercut the used-book market on the students. I found that very offensive."

Mirroring this focus on cost is the title of LU's program that monetarily supports OER adoption and development, which includes the word "affordable." Though this program supports the development of open content, it is important to note that the key word in that program's title is "affordable" instead of "open." While this has the effect of stressing the importance of cost reduction, it also adds to the confusion that the authors commonly see about what truly counts as open content versus content that is available at no cost to students but is not openly licensed, such as library subscription materials.

In addition to the growing unease with regard to the cost of textbooks (e.g., Senack, 2015), the authors also commonly found that one specific person or event was the precipitating factor in causing faculty members to begin seriously examining OER. This was sometimes the fact that a new edition of the currently used textbook was released, prompting faculty to investigate potentially making a change in course materials. Sometimes this was an email or other communication from a campus librarian. Sometimes this was hearing from another faculty member about a project they worked on. It was usually nothing huge, but a small external nudge to set things in motion seemed to be common among our interviewees and was something people specifically remembered.

> **LU 2** "I'm moving away from using standard textbooks. In large part because of the release of a new edition of the textbook that we designed the online courses to work with. It was such an earth-shattering change, it was a brand new co-author. And it was such a massive change, that we decided to continue using the old textbook, and then finally decided to just get rid of a textbook, and instead use freely available material online."

> **SC 3** "I think what started it was the email from [librarian] because she kind of laid out a nice plan of like, hey, these resources are available, they're free, they're very comparable to what our students are getting while paying an exorbitant amount of money."

While textbook costs were the most commonly cited motivation, other motivations were also mentioned. Among these were broader issues of access to content, particularly when considering students in online courses.

> **LU 2** "And the other major factor was the fact that I have students all over the world in my online courses, and someone in rural India, for example, doesn't necessarily have the opportunity to get a textbook that someone here domestically would have."

> **LU 8** "And so that model, that model of equivalent access is really important to me. So not identical,

but for online students, what can we be doing that provides an equivalent model to what we're doing, or serving, with our residential students."

There was also sometimes a more philosophical motivation for the knowledge to be open and public.

> **SC 1** "For me, there's a kind of bigger, there's a kind of philosophical grain to this, that really resonates with me. And so the idea of creating alternative spaces or venues and pathways to the development of and sharing of knowledge, I think is really important."

Sometimes OER authors simply were not content with the commercial resources available and decided to make their own content open.

> **LU 1** "Originally, it was because when I, back when I was a grad student, I noticed a need for software of some kind to do this job. And I was disappointed with my options. And that disappointment never really went away. And so I started writing my own software that did the job and started sharing it."

> **LU 6** "Well, I have never found a text that I liked for this course, and I've been teaching for 20... this is my 26th year, I guess. And I've used many different texts in this course, never found one that really satisfied what I need."

Though motivations varied from person to person, there was no evidence that the common themes in motivation differed between the interviewees in the large and small higher education settings.

Structural Incentives for OER

In terms of structural incentives for OER, an apparent difference between the large and small university was the existence of a program to provide some monetary support to faculty looking to adopt or author OER content for their classrooms. With large universities come larger budgets, making monetary support specifically for OER more common at large universities. Despite this difference, the existence of monetary support did not seem to be the key element in support for OER. Instead, connections and individual interactions seemed to be far more crucial. Those who received financial support appreciated it and the university recognition that came with it, but as illustrated in some of the comments below, the importance of personal support and interactions played a large role regardless of university setting or size. Here are some representative responses to questions on how faculty members felt well-supported in OER adoptions or development:

> **SC 2** "So I appreciate, you know, that I have a contact person [a librarian] that I can say, Okay, this is what I'm looking for. Can you help me? And know that there's someone to work with me at each stage."

> **LU 6** "Well, okay, so that whole team has been really helpful up there. I mean, I think it's been just a really, like five or six people, I've gone up to [LU] and just sat in a room with five or six people, and they'll stay with me the whole day and really help me get through stuff and be really, really helpful."

Clearly, these personal connections are important, and the complexity of these networks will vary with the size of the campus; however, once any support system has been established, it may be that quality of support matters more than quantity.

Faculty members who had been working with OER for more than a year all reported advocating OER to others around them. As time goes on and more people become involved in OER, there will be more advocates and likely more people investigating and adopting open education practices.

As a side note related to funding, though OER development was only explicitly supported by an internal funding source at LU, one of the three faculty members at SC had received grant funding via a general faculty professional development fund. Even if OER-specific funding is not available, there may be non-specific funding available for OER development activities, which can help provide support and incentive to encourage adoption of open pedagogy practices.

The final incentive for faculty seemed to be the students. While students did not expect or demand OER, it appears

that the faculty interviewed here universally perceived a positive student reaction once OER were implemented, providing instructors an incentive to continue the use of OER in their classrooms.

> **LU 6** "But overall, I did do like an evaluation at the end of the semester, to ask how they liked it. And it was like, overwhelmingly positive, it really was 90% or better in terms of the positive category on every question I asked in terms of how you were using it, how you liked it, compared to a traditional text, how, you know, how useful was this?"

Structural Barriers to OER

In terms of structural barriers, the biggest things holding people back in both settings seemed to be time and the uncertainty of the value of OER development and adoption. It understandably takes a lot of time to develop OER. Pretty much all interviewees acknowledged this and all also acknowledged that they have busy schedules that limit the time they can put into these projects. Additionally, though most interviewees felt that OER was supported by department or campus administrators, they were uncertain how OER was valued in comparison to other activities on which they could spend their time. While this is less of a concern for tenured faculty members, tenure-track and fixed-term instructors may struggle to determine the value of these activities, particularly in relation to promotion, tenure, and contract renewal.

> **SC 2** "I feel on my own in the sense that if I do this, it's going to take a lot of time. If I do come up with my own, you know, open-access source, and I don't know, I don't have a whole lot of faith that I would get administrative support in terms of getting maybe a course release or any kind of funding. There are, I mean there are some funding grants that the college gives, although they're more for, I'm not sure that developing my own OER would be kind of considered within the scholarly projects that those grants fund. Does that make sense?"

> **LU 5** "It is not the sort of thing, or at least I haven't been able to make it the sort of thing, that will lead to promotion to full professor; that is, I have struggled with what venues and what to put in refereed journals. So in a certain respect, I'm happily supported and happy, find fulfillment through the progress of my students, through the support of colleagues, the support of my administrators. But there is a bit of a struggle trying to navigate the traditional promotion and tenure process with such a portfolio."

> **LU 6** "The writing's all mine, right? I mean, there's no time allotted for it. That's a little frustrating and tiring, I would say. It would be really cool if there were a course release, or, you know, there was a day set aside that that's what I could do. But it's, you know... this is evening and weekend work."

For the interviewed participants, without an official peer review process and without clear publication dates (as many of these are ongoing projects), it is not clear how OER fits in as a publication on a faculty dossier. In terms of funding, the grant itself, regardless of amount, may be useful in establishing the legitimacy of the endeavor. The smaller grants usually available to support OER development and adoption also may have more perceived significance in settings where there is a lower expectation of grant funding, such as SC.

One difference that emerged between settings was the role of university bureaucracy hindering OER implementation in the LU. Though this was not a significant barrier, it arose twice during our interviews, as illustrated in the comments below:

> **LU 1** "The issue was live content. [LU] was way too concerned about security. So they would not give us a [LU] address to host the project from, but [support person] tried, she really did."

> **LU 2** "Well, right now I am waiting for [LU] risk management to finally approve a contract for me to, in essence, write my own OER textbook for one of my two online survey courses.... And, you know, we had gone through everything, I'm still waiting to see an MOU. And basically, it's just sitting with risk management for some reason."

Both instances seemed to revolve around perceived risk, which large universities may be more attuned to, and which relate directly to the concerns about long-term sustainability that have been mentioned previously.

Conclusions

These interviews indicate that the structural barriers and incentives to OER adoption are remarkably similar regardless of institution size. While these interviews are too few in number to be widely generalizable, their consistency in identifying the same sorts of challenges and incentives is promising. Faculty and staff at both LU and SC identify common incentives, such as personalized support and positive student feedback, as well as common barriers, such as the amount of time required to find and incorporate content and uncertainty in how OER efforts are rewarded; these findings concur with what has been previously identified in the literature. Additionally, though faculty at both institutions note that grant funding, tenure and promotion concerns, and course releases (i.e., additional time) are incentives for beginning to work on open education initiatives, the authors are impressed to discover that many faculty choose to look into open pedagogy practices because of advocacy from peers or strong philosophical beliefs in open culture, especially at SC where there currently are no direct financial incentives available for OER efforts. While the authors absolutely believe that faculty and staff deserve compensation for their work, they are heartened to see that other people are starting to understand the importance and potential impact of open education, and that OER adopters are enthusiastically advocating OER to their colleagues.

The major differences that the authors discovered between large and small institutions has to do primarily with structural and administrative support. It is clear that a larger institution such as LU has more opportunities for funding and more staff to support open initiatives; however, it is noted by some interviewees that this also results in more bureaucratic hurdles. LU is observed to have longer-standing OER projects than SC. With more budget constraints and a lack of staff time for training and development, smaller colleges may struggle to get OER efforts rolling, but once new programs are started, there is frequently less bureaucratic structure to contend with and new ideas can be implemented a little more nimbly. For example, faculty at SC do not need permission from a department chair to make changes to course materials or instructional methods and have a little more freedom to experiment with open pedagogy tools in their classrooms, while faculty at LU in large enrollment courses may be tied to a more standardized curriculum across multiple sections of a course.

The authors are also encouraged to see repeated references to librarian and staff support at both institutions. Personal support seems to be the single, most important incentive for OER development and implementation in the eyes of faculty, and this personal support is offered almost entirely by librarians and staff. Many of the barriers discussed—how to locate OER, where to get started with open pedagogy, identifying funding sources, advocating for more inclusive promotion and tenure requirements, evaluating copyright and other intellectual property implications—are issues in which librarians and instructional design staff are specifically trained.

Throughout this chapter, the authors have taken a broad view of what constitutes open pedagogy and have focused primarily on OER adoption efforts. This is where many open pedagogy initiatives naturally start, and it is where the primary work of the programs at both LU and SC reside. However, both types of schools are in a good position to begin expanding their open pedagogy initiatives to incorporate more inclusive and student-centered classroom activities and assignments. Many OER efforts concentrate on cost, and as seen in the interviews, cost is a major motivator for faculty to begin investigating traditional textbook alternatives; however, the benefits of open education go far beyond cost reduction for students. As open education grows into its adolescence, this is an area that deserves more concentration, and this also is an area where collaborations between librarians, faculty, and other instructional and support staff can truly shine.

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix: Interview Protocol

Please describe the nature of your job at your institution.

- Do you have any teaching responsibilities?
- Do you manage others in an official or unofficial role?
- Do you advise others in teaching roles?
- Does your job description involve OER advocacy explicitly?

Please describe your involvement with Open Educational Resources at your institution.

- What inspired you to pursue this/these efforts?
- Were there people or programs in particular that lead to your involvement in OER?
- Have you specifically advocated OER to others?

(Only for those running OER efforts) What programs or services do you offer to support OER adoption?

- What do you offer for those looking to adopt OER?
- What do you offer for those looking to author OER?
- Is there monetary support available for either?
- Are there explicit support staff reaching out to faculty?
- How long do these programs last?

(Only for those implementing OER) Describe the nature of the OER you have implemented / developed for your classroom.

- What institutional support, if any, did you receive before and during implementation?
- What people were offering support for OER implementation (what jobs do these people have)?
- Was there monetary support offered for adopting / adapting / authoring?
- In what ways did you feel well-supported in the process?
- In what ways did you feel on your own in the process?
- How did the OER implementation go over with students?

To what extent do you feel the time you put into OER implementation / advocacy is rewarded as part of your job?

- Do the administrators above you support OER in the classroom?
- Have they put specific programs or policies into place regarding OER?
- Does your work with OER come up during job performance reviews?
- Does OER come up during your review of others?

OPEN PEDAGOGY AS TEXTBOOK REPLACEMENT

Adapting Open Educational Course Materials in Undergraduate General Psychology: A Faculty-Librarian-Student Partnership

DENNIS E. SCHELL, DORINNE E. BANKS, AND NERINGA LIUTKAITE

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Project Overview

Institution: [The George Washington University]()

Institution Type: private, research, undergraduate, postgraduate

Project Discipline: Psychology

Project Outcome: Student Feedback Survey and Impact Analysis

Tools Used: OpenStax

Resources Included in Chapter:

- Student Survey Questionnaire
- Faculty Email Template
- OER Promotional Flyer
- Supplementary Sources for OpenStax Psychology
- Timeline for OER Textbook Adoption
- Course Goals

Introduction

The George Washington University (GWU) Libraries' OER Team was formed in 2016 in response to the rising cost of college textbooks and a need for advocacy for affordable course materials on campus. Building partnerships with campus stakeholders and aligning the **OER** initiative around college affordability, student success, and the student experience at our institution were key to gaining traction. The focus of this chapter is a detailed description of the process of switching from an expensive, required general psychology textbook to freely-available open course materials. Collaboration between the faculty member, OER Team librarians, and students made this project unique. This chapter is organized around the five strategic phases we used to adopt open course materials:

- Phase One: raising awareness of affordable course materials at GWU
- Phase Two: understanding students' perceptions and use of a textbook in **general psychology**
- Phase Three: reviewing the affordable options for general psychology
- Phase Four: adoption of the OpenStax general psychology textbook
- Phase Five: implementation and evaluation of student satisfaction of the OpenStax general psychology textbook

Effect of High Cost of College Textbooks on Students, Faculty, and Librarians

Affordability of college course materials is a major concern for many undergraduate students in the United States. According to The College Board (2018), students spend an average of $1,240 on books and supplies each year. Expensive textbook and course material costs negatively impact college students because students cannot learn from course materials that they cannot afford to buy. In 2018, the Florida Office of Distance Learning surveyed over 21,000 students at public universities in the state of Florida, revealing that students are responding to the high cost of textbooks by "not purchasing the required textbook (64.2%); taking fewer courses (42.8%); not registering for a specific course (40.5%); earning a poor grade (35.6%); and dropping a course (22.9%)" (Florida Virtual Campus, p. 13).

Selection of appropriate course materials is one of the most important ways faculty can contribute to the success of students in their courses. An increasing number of faculty are concerned about the high cost of textbooks and the financial burden imposed on their students. In a survey of 2,000 faculty members in 2018, Inside Higher Ed reported that "83% of faculty members agree, including 58% who strongly agree, that textbooks and course materials cost too much" (Jaschik & Lederman, p. 47) and 70% favor freely-available, open educational resources (i.e., teaching and learning

materials that are openly licensed, giving users the legal permission to retain, reuse, revise, remix, and redistribute the material) as a solution to the textbook affordability crisis. Despite faculty members' awareness about the impact that textbook costs have on student success, changing course materials takes a lot of time and effort, and faculty "often feel that they have been left on their own to find solutions" (Waller et al., 2019, p. 587).

In recent years, academic libraries across North America have responded to the **textbook affordability** movement in higher education. Many libraries have launched initiatives to encourage faculty to consider using alternative course materials such as library-licensed resources and/or Open Educational Resources (OER) to reduce the cost for students. Open Educational Resources are teaching and learning materials that reflect the following open values and practices (Cape Town Open Education Declaration, 2008; Hewlett, 2013; Wiley, 2014):

- Freedom to reuse: enabling open sharing of resources
- Free cost: offering free and open exchange of information
- Equitable access: providing universal access to knowledge

The content of OER provides accessible, affordable, and equitable access to shared knowledge.

Academic libraries, historically, have focused on providing access to knowledge and sharing knowledge, but library support for textbook affordability initiatives is not sufficient by itself. A successful way for libraries to serve the needs of both students and faculty is to build partnerships with other campus units on open educational initiatives, while demonstrating its value and improving visibility to stakeholders across campus. (Cummings-Sauls et al., 2018).

For students, the practical benefits of OER go beyond cost savings. Many students favor OER for: (a) providing them with immediate access to course reading materials, (b) the ability to access course materials from multiple devices, (c) replacing the need to carry heavy books to class, and (d) not being required to buy textbooks that they sell back at the end of the semester for a fraction of the price paid. Vojtech and Grissett (2017) studied the perceptions of students enrolled in psychology courses taught by faculty who use OER and found that, in general, students perceive faculty as more creative and kind when the faculty use OER and were more likely to take a class using an **open textbook**. Open textbooks, like all OER materials, have been published and licensed to be freely used, adapted, and distributed. Many open textbooks have been peer-reviewed by faculty to assess their quality. They can be downloaded for no cost, or printed at a low cost.

Phase One: Raising Awareness of Affordable Course Materials at The George Washington University

The George Washington University, a private, research university located in Washington, DC with a total student population of over 27,000 undergraduate/graduate students, is one of the most expensive universities to attend in the United States. Students from all around the world come to study at GWU. Despite all of this prestige, many GWU undergraduate students struggle to afford the cost of course materials and are faced with choosing between buying a required $250 textbook and groceries for the month.

Recognizing the financial pressures faced by students due to the rising cost of textbooks in higher education, in 2016, a small group of GWU librarians with a passion for advocating for affordable course materials self-organized and formed an Open Educational Resources (OER) Team at GW Libraries. The size of the OER Team varied (between three and five members) over the years, but a key to success has been recruiting library staff members who bring a diverse skill set (e.g. including instructional design, project management, course reserves, outreach/communications, and mid-level management) to the team. Team members spend a significant amount of time developing grassroots advocacy across appropriate constituencies of the university, educating faculty about alternatives to expensive textbooks, and researching appropriate open educational resources. This is in addition to their required duties, which makes it essential to have the support of one's direct library supervisor.

The motivation for GW Libraries' OER Team was based on the institution's strategic focus on improving the student experience. One way that the OER Team impacted student success was by encouraging faculty to replace expensive course materials with an option more equitable, affordable, and accessible–an open textbook. Open Educational Resources have gained traction in higher education as a cost-saving alternative to traditional commercial course textbooks and the OER Team's working strategy was to "save the most students the most amount of money on course materials." Numerous conversations with campus stakeholders helped to identify faculty teaching high enrollment, undergraduate courses with multiple sections, especially those using expensive required textbooks. The team held OER Workshops on campus, gave presentations at faculty events, and delivered email campaigns. In Spring 2017, email messages (see Appendix A) were sent to six faculty in the psychology department who were listed in the GWU Schedule of Classes as teaching PSYC 1001, an introductory-level, general psychology course. The OER Team received one response–from Dr. Dennis Schell, Assistant Professor of Psychology at GWU, who expressed his concern about the escalating price of general psychology textbooks and his interest in looking for an alternative option for the introductory-level, general psychology course that he taught each semester.

Additionally, he wanted to add engaging digital learning resources to augment course lectures. Members of GW Libraries' OER Team met with Dr. Schell to investigate the feasibility of transitioning from an expensive, traditional, general psychology textbook to an open textbook. The OER Team presented information hosted on their LibGuide, Open Textbooks and Resources for Faculty, to Dr. Schell, highlighting the unique benefits of open course materials for students and faculty–affordable and equitable access to course readings, convenience of digital access, ability to revise/remix content by tailoring it to specific teaching style and course objectives, and allowing for the sharing of learning content in multi-modal formats (see Appendix B). At a second meeting, Dr. Schell shared his course syllabus with the OER Team and discussed the current textbook's level of use and what was essential in a replacement. Over the next few weeks, librarians used their expert searching skills to locate peer-reviewed, general psychology open textbooks. The librarians spent many hours combing through curated OER collections (such as the Open Textbook Library and OER Commons) as well as lists of openly licensed college textbooks publishers (such as OpenStax) to find content best suited for an undergraduate general psychology course. Three peer-reviewed psychology open textbooks from the Open Textbook Library were initially selected and information on these sources was shared with Dr. Schell via email. As the subject-matter expert, Dr. Schell completed his review process over the course of several months in four strategic phases: (a) understanding students' perceptions and uses of a textbook, (b) reviewing the affordable options, (c) adoption of the open textbook and evaluation of its use, and (d) implementation and evaluation of student satisfaction.

Phase Two: Understanding Students' Perceptions and Uses of a Textbook in General Psychology

In order to contextualize the benefits of using an open textbook in his general psychology classes, Dr. Schell gathered feedback from students enrolled in his general psychology course over the span of several semesters (Spring 2017, Fall 2017, Spring 2018, Fall 2018, and Spring 2019) by conducting a brief four-question survey about textbook preferences in each of his four separate general psychology classes. These surveys, as well as the subsequent nine-question surveys (see Phase 5), were conducted anonymously with no identifiable data; and students were given 1% credit toward their grade (IRB#NCR202208, exempt). The four-question survey concentrated on textbook cost, students' preferred format of materials (print vs. digital), and students' perceptions of using an open textbook in the course. The questions were:

1. "The price of a textbook is important to me."
2. "I prefer my textbook to be: hard bound, soft bound, online."
3. "I would like having a textbook in general psychology online for free."

There was also a section for open comments. Approximately two-thirds of the students in each class were female, and

the classes were highly diverse in terms of race, ethnicity, and country of origin. Most students were first year students ranging from 17 to 22 years of age. The participation rate of the surveys ranged from 82.4% to 98.96% (see Table 1).

Table 1

Participation Rate for Students Enrolled in General Psychology

Semester	Total Students Enrolled	Number and Percentage of Students Responding to Survey
Spring 2017	94	86 (91.48%)
Fall 2017a (Section 13)	97	80 (82.47%
Fall 2017b (Section 15)	97	84 (86.59%)
Spring 2018	96	94 (97.91%)
Fall 2018a (Section 13)	91	85 (93.40%)
Fall 2018b (Section 15)	97	96 (98.96%)
Spring 2019	97	88 (90.72%)

The first question, "The price of a textbook is important to me," was given to students in all seven semesters (see Figure 1). Students overwhelmingly indicated the price of a textbook was important, which is consistent with recent research (Waller et al., 2018).

Figure 1

General Psychology Surveys: Both Pre- and Post-Adoption (Seven Semesters) Question 1: The Price of a Textbook is Important to Me.

	Spring 2017	Fall 2017a (Section 13)	Fall 2017b (Section 15)	Spring 2018	Fall 2018a (Section 13)	Fall 2018b (Section 15)	Spring 2019
Strongly Agree	41.18%	48.15%	39.29%	42.27%	67.06%	64.29%	79.55%
Agree	47.06%	40.74%	41.67%	44.33%	29.41%	27.55%	13.64%
Neither Agree Nor Disagree	5.88%	11.11%	15.48%	12.37%	2.35%	6.12%	4.55%
Disagree	5.88%	0.00%	3.57%	1.03%	1.18%	2.04%	1.14%
Strongly Disagree	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.14%
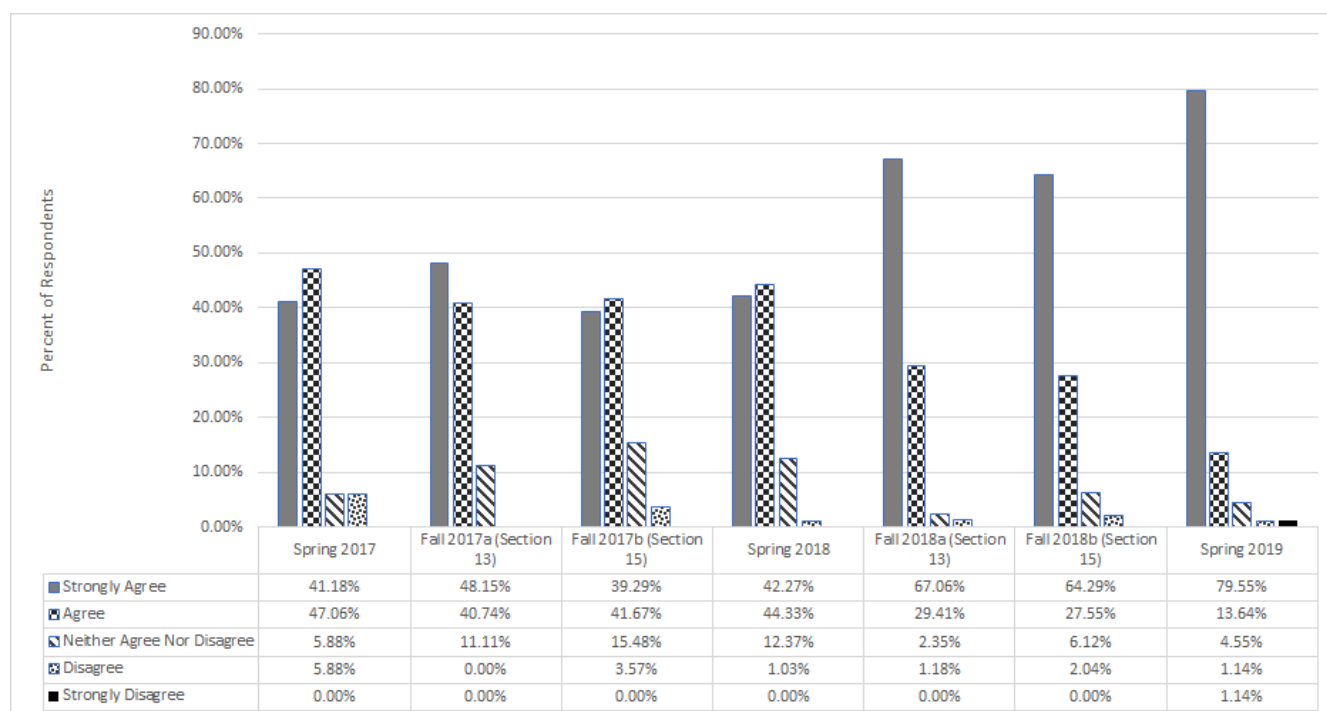
The second question, "I prefer my textbook to be hard bound, soft bound, or online," revealed that roughly two-thirds to three-fourths of students preferred a print copy (either hard bound or soft bound) over an online copy of a textbook (see Figure 2). This result aligns with similar findings in national studies that indicated a majority of students preferred print over an electronic format (Jhangiani et al., 2018; Millar & Schrier, 2015; Woody et al., 2010; Shepperd et al., 2008).

Figure 2

General Psychology Surveys: Pre-Adoption (Four Semesters) Question 2: I Prefer My Textbook To Be:

Type of Textbook	Hard Bound	Soft Bound	Online	Selected Both Hard Bound and Soft Bound	Selected Both Soft Bound and Online	Selected Both Hard Bound and Online
Spring 2017	30.59%	31.76%	25.88%	3.53%	5.88%	2.36%
Fall 2017a (Section 13)	34.57%	35.80%	23.45%	2.47%	2.47%	1.24%
Fall 2017b (Section 15)	31.71%	46.34%	15.85%	2.44%	2.44%	1.22%
Sping 2018	32.99%	38.14%	21.65%	3.09%	4.13%	0.00%
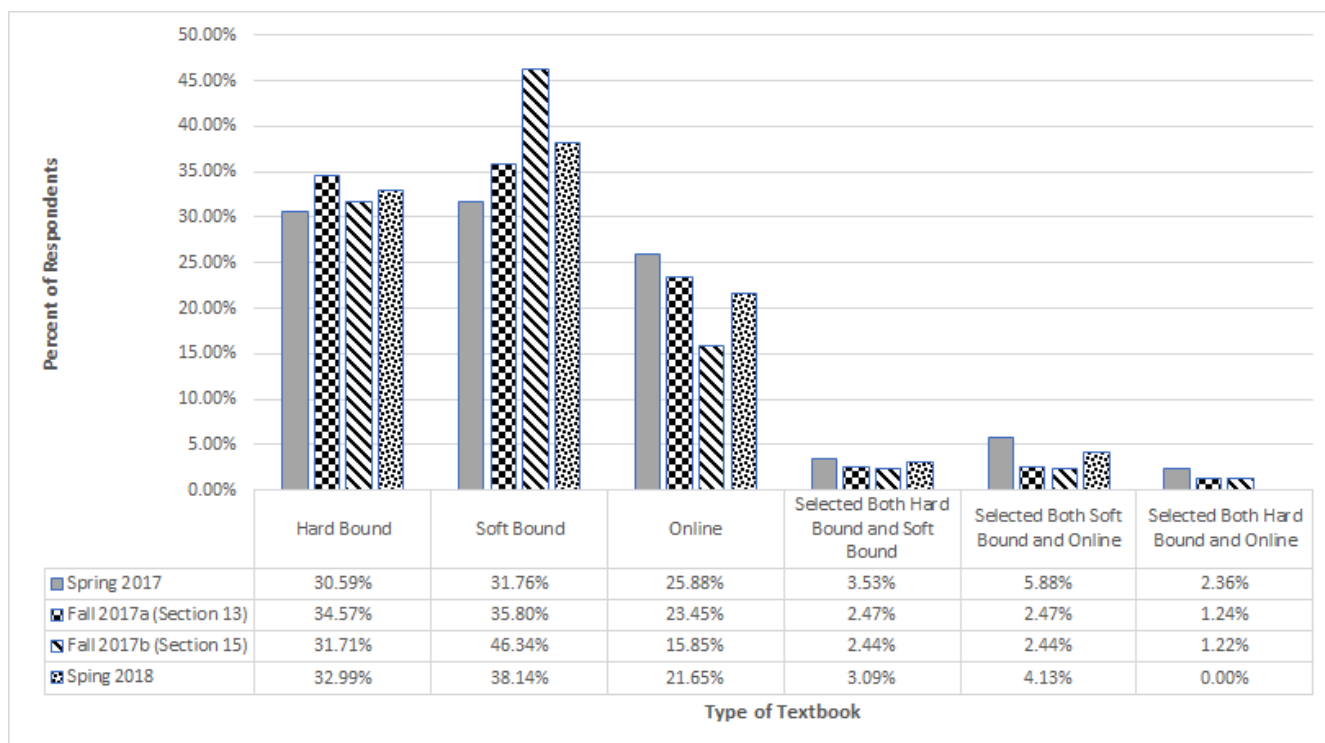
The third question, "I would like to have a textbook in general psychology online for free," revealed that students overwhelmingly would prefer a free online book (see Figure 3), in spite of the fact that they tended to prefer print copies (see Figure 2). In the open comments section, however, students were quick to point out that they should have a choice between a print copy and an online copy.

Figure 3

General Psychology Surveys: Pre-Adoption (Four Semesters)
Question 3: I Would Like to Have a Textbook in General Psychology Online for Free.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
■ Spring 2017	55.29%	22.35%	15.30%	3.53%	3.53%
▦ Fall 2017a (Section 13)	59.26%	27.16%	8.64%	4.94%	0.00%
◣ Fall 2017b (Section 15)	44.05%	35.71%	15.48%	4.76%	0.00%
▨ Spring, 2018	55.67%	28.87%	13.40%	2.06%	0.00%
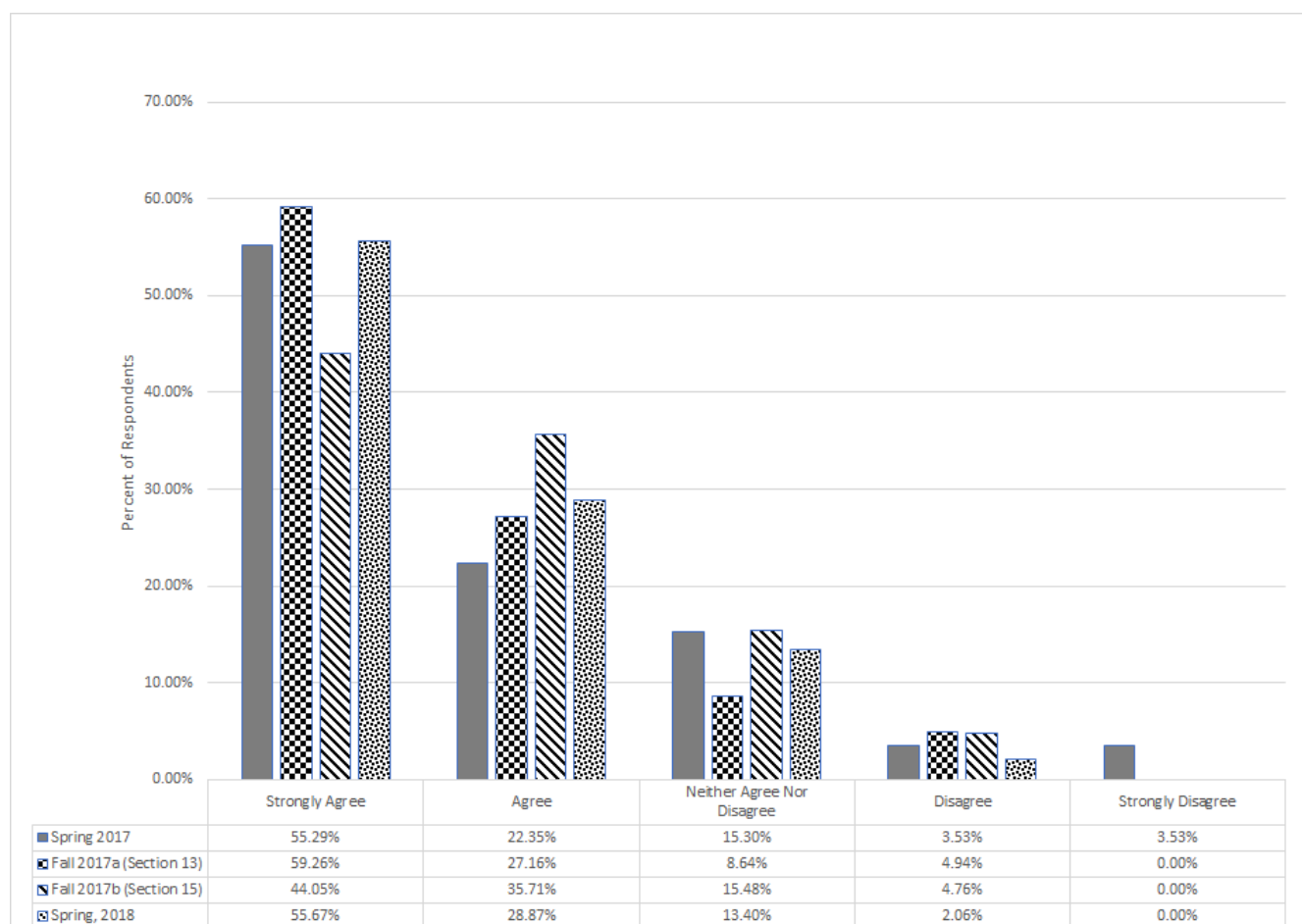
Phase Three: Reviewing the Affordable Options in General Psychology

Based on the findings above, Dr. Schell reviewed three psychology open textbooks suggested by the OER Team. Only one, OpenStax (Rice University), offered both a free online version and a print version (hard bound and soft bound) for purchase at a reasonable price ($50 or less). The OpenStax psychology textbook is peer-reviewed, customizable, and openly licensed under a [Creative Commons License 4.0 International](#) (OpenStax, 2017; Watson et al., 2017).

The textbook content also had to meet the standards of the American Psychological Association (APA). According to the February 2011 Report, *Principles for Quality Undergraduate Education in Psychology*:

> The introductory course and the psychology major provide a broad foundational understanding of the field from the perspective of content areas spanning levels of organization from cellular to ecological. Regardless of the structure of an individual department's curriculum, the major should incorporate multiple core perspectives on psychology. Because the introductory course is the only formal exposure to psychology that most educated citizens will have, this course should reflect the nature of psychology as a scientific discipline and include sections from different basic domains. Integration across perspectives should be incorporated into the introductory course by, for example, organizing the course topically or providing an in-depth topical "case study" of integration. Many of the controversies in psychology result from different perspectives on human thought and behavior, so in teaching about controversies (e.g., nature/nurture issues), faculty should expose students to theoretically diverse perspectives. Departments should consider carefully the depth and breadth of topics to cover in their classes. Content coverage has become a critical factor in the psychology curriculum as a result of

the explosion of research findings and the plethora of important topics that could be included in any course. (p. 13)

Dr. Schell hired a student, a junior psychology major, to review the contents of the OpenStax textbook. The student made a comprehensive list of topics typically covered in a standard general psychology course. The subsequent list of 249 topics was determined to be identical or similar to the major topics covered in most traditional, general psychology textbooks, and met the APA guidelines.

The next step involved hiring a second student, the third author of this chapter, who had been in Dr. Schell's general psychology class, which at the time, used a traditional textbook. She made a more in-depth analysis of the OpenStax book in a one-page document focusing on: (a) a comparison of the OpenStax book to the current traditional textbook used in Dr. Schell's classes, and (b) a comparison of the OpenStax print and online versions. She used the following criteria for her analysis: (a) the quality of language, (b) organization, (c) content, and (d) educational aids. Both the print and online versions were largely consistent in layout, thus allowing students to switch easily between versions. The presentation of the material (e.g., formatting, etc.) was the same and equally conducive to learning in each version. She also reported that the explanation and treatment of various psychological concepts, organization of chapters, graphics, etc. were on par with that given by other textbooks. Based on the student surveys and the two students' analyses, Dr. Schell decided to adopt the OpenStax open textbook on a provisional basis.

Phase Four: Adoption of OpenStax General Psychology Textbook

Dr. Schell selected the OpenStax open textbook, *Psychology*, as the best open resource to support the learning needs of students taking his general psychology course. Consequently, the chair of the OER Team, librarian Dorinne Banks, and Dr. Schell formed a collaborative partnership to transition from the previously used traditional, general psychology textbook, costing $250 (new), to the freely-available OpenStax psychology open textbook. For the more than 300 students who Dr. Schell teaches each year, that's a substantial savings per student. During the initial meetings and in follow-up emails, the conversations between Banks and Dr. Schell focused on what types of new material to integrate and specific topics/learning objectives that these materials needed to align with. For example, Dr. Schell knew that he wanted to include more digital content as a supplemental resource, so one student hiree and Banks provided links to freely-available educational videos online and library subscription content (see Appendix C). Redesigning a course's curriculum around a new open textbook and revising the course's syllabus is a time-consuming process (see Appendix D). Additionally, developing open course readings is just one part of the new design. The redesign process also influences class lecture content (e.g. PowerPoint presentations), learning assessments, homework assignments, etc. As a result, Dr. Schell was able to use the OpenStax psychology textbook to better match his learning goals (see Appendix E) for the students in his introductory-level general psychology course. The importance of a collaborative partnership between faculty and librarians was essential in this process.

Phase Five: Implementation and Evaluation of Student Satisfaction of the OpenStax General Psychology Textbook

Dr. Schell used the OpenStax textbook in all sections of the general psychology courses he taught—two sections in fall 2018 and one section in spring 2019. Implementation of a short, nine-question student survey was conducted in each class to determine students' satisfaction with the open textbook. The questions were:
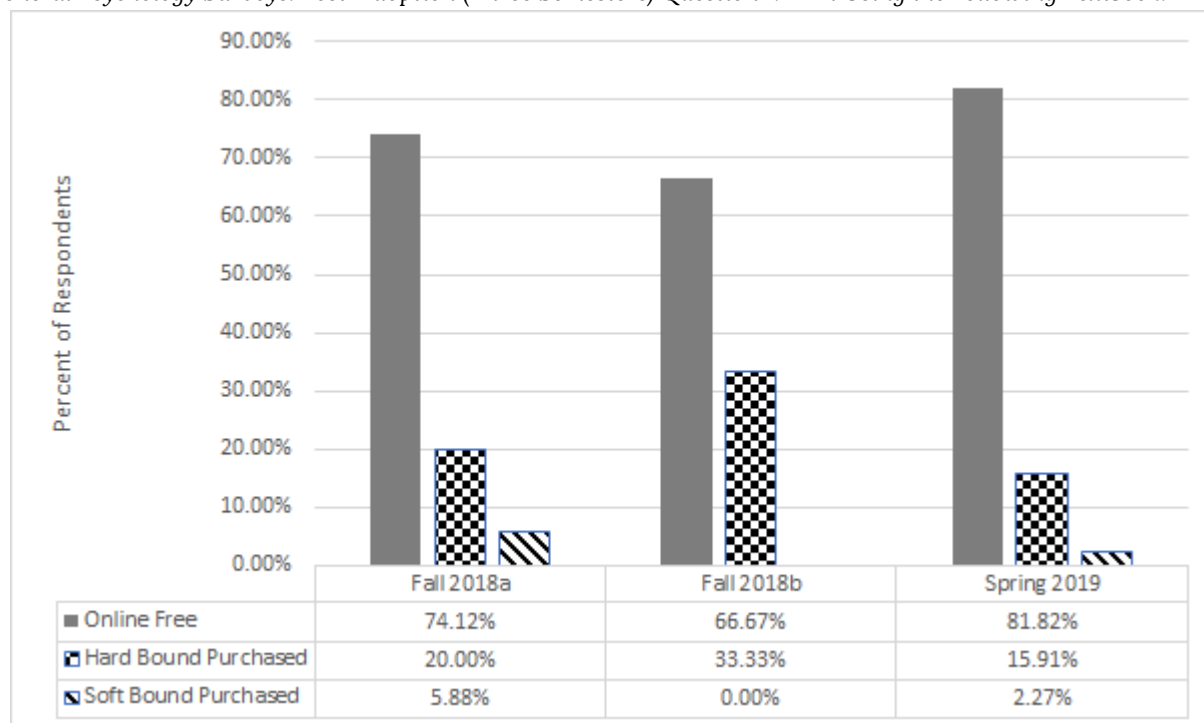
1. "I am using the following textbook: on-line free, hard-bound purchased, soft-bound purchased."
2. "The price of a textbook is important to me."

3. "The OpenStax textbook was easy to use."
4. "How would you rate the readability of the OpenStax textbook?"
5. "How would you rate the quality of the OpenStax textbook compared to other traditional textbooks you have used?"
6. "Would you recommend Dr. Schell continue using the OpenStax textbook?"
7. "What is the best thing about the OpenStax textbook?"
8. "What is the least favorite thing about the OpenStax textbook?"
9. "Is there anything else you would like to say about the OpenStax textbook?"

The first question asked, "I am using the following textbook:" The results showed that between 66.67% and 81.82% of respondents were using the online free OpenStax textbook, between 15.91% and 20% were using the hard bound printed version, and up to 5.88% were using the soft bound printed version (see Figure 4). It is to be noted that in the four surveys before adoption of the open textbook, students overwhelmingly indicated that they preferred print versions (hard or soft bound). Interestingly, post-adoption, most students used the online, free textbook version. It should also be noted that some students, for a variety of reasons (e.g., easier to read, easier to highlight/annotate), still wanted a print version, which is consistent with the comments students made in the four surveys prior to adoption.
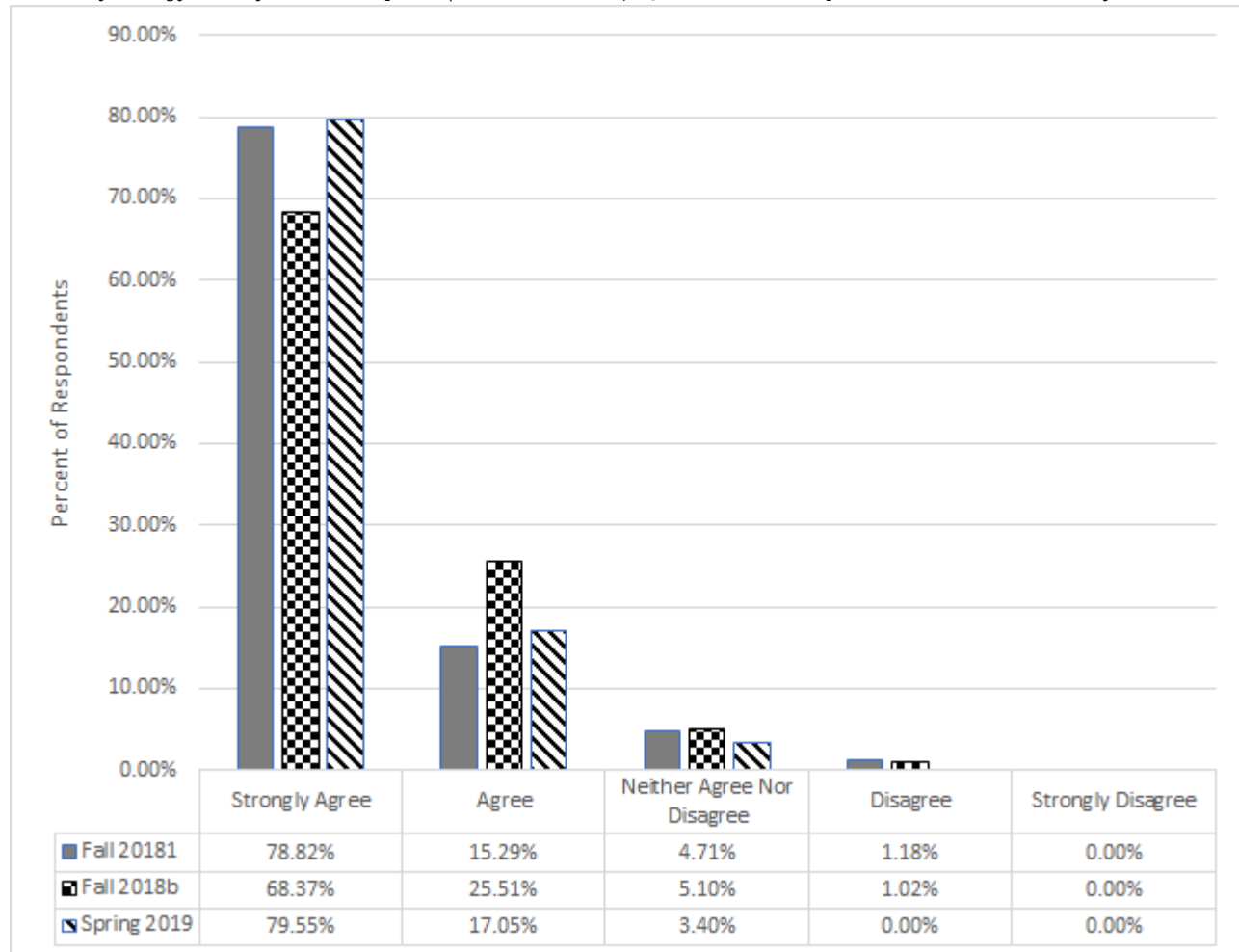
Figure 4

General Psychology Surveys: Post-Adoption (Three Semesters) Question 1: I Am Using the Following Textbook:

	Fall 2018a	Fall 2018b	Spring 2019
Online Free	74.12%	66.67%	81.82%
Hard Bound Purchased	20.00%	33.33%	15.91%
Soft Bound Purchased	5.88%	0.00%	2.27%

The second question asked, "The price of a textbook is important to me." Students overwhelmingly stated that the price of a textbook was important to them, which is consistent with the results of the four surveys (see Figure 1) conducted before Dr. Schell adopted the open textbook. When students were asked if "the OpenStax textbook was easy to use," (the third question) between 68.37% and 79.55% indicated they "strongly agree," and between 17.05% and 25.51% indicated they "agree." Clearly, students found the OpenStax open textbook easy to use (see Figure 5).
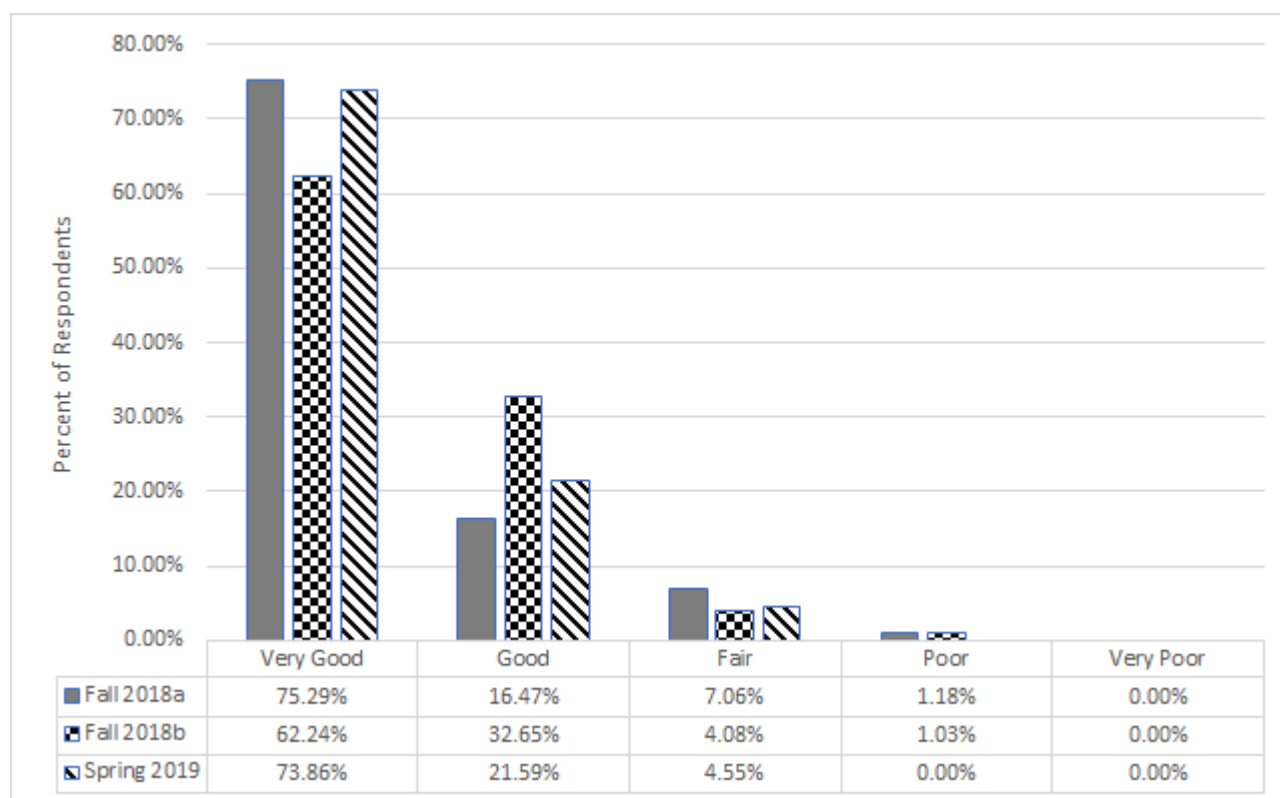
Figure 5

General Psychology Surveys: Post-Adoption (Three Semesters) Question 3: The OpenStax Textbook Was Easy to Use.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Fall 20181	78.82%	15.29%	4.71%	1.18%	0.00%
Fall 2018b	68.37%	25.51%	5.10%	1.02%	0.00%
Spring 2019	79.55%	17.05%	3.40%	0.00%	0.00%

When students were asked about the readability (i.e., "How would you rate the readability of the OpenStax textbook?"), between 62.24% and 75.29% indicated that readability was "very good," and between 16.47% and 32.65% indicated it was "good." A majority of students overwhelmingly thought the readability was good or very good (see).

Figure 6

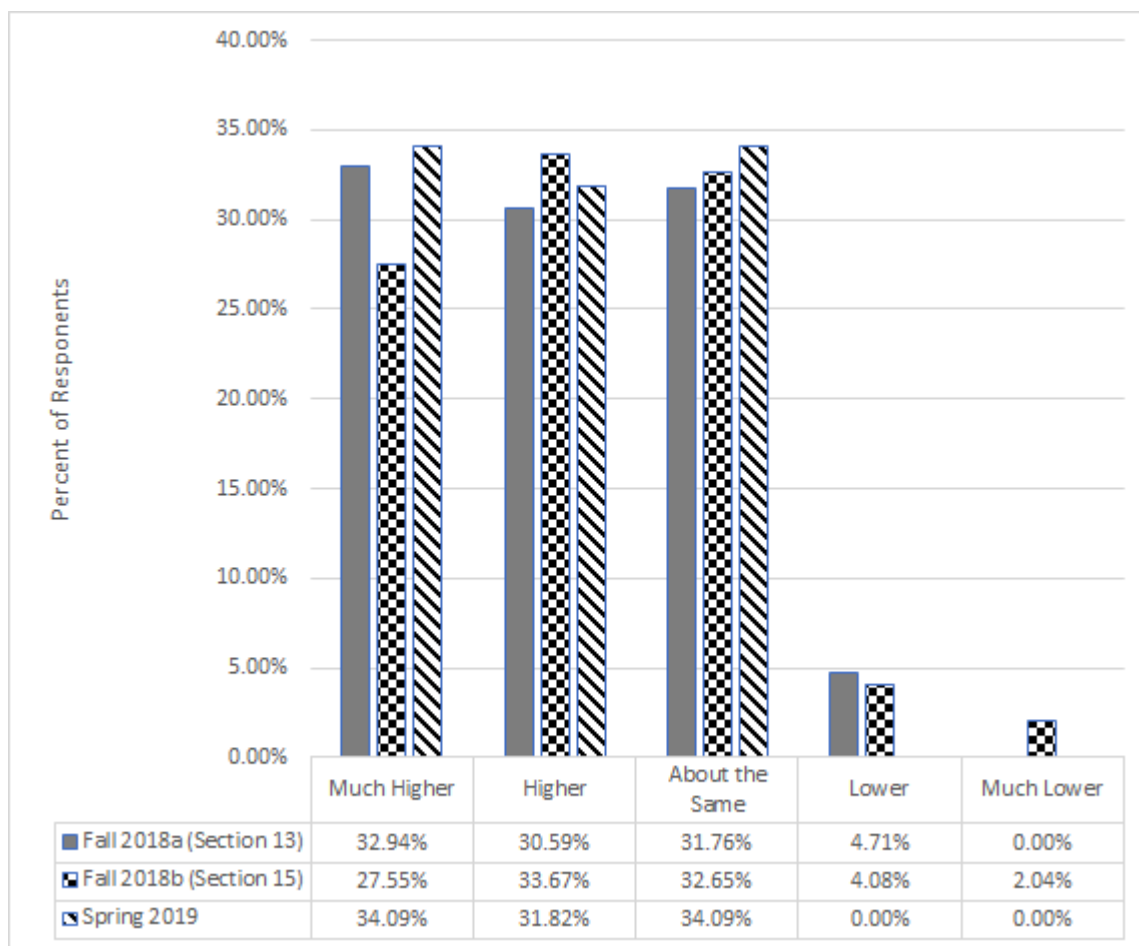*General Psychology Surveys: Post-Adoption (Three Semesters) Question 4: How Would You Rate the Readability of the OpenStax Textbook?*

	Very Good	Good	Fair	Poor	Very Poor
■ Fall 2018a	75.29%	16.47%	7.06%	1.18%	0.00%
▣ Fall 2018b	62.24%	32.65%	4.08%	1.03%	0.00%
◪ Spring 2019	73.86%	21.59%	4.55%	0.00%	0.00%

When students were asked to compare (see Figure 7) the overall quality (i.e., "How would you rate the quality of the OpenStax textbook compared to other traditional textbooks you have used?"), between 27.55% and 34.09% rated the OpenStax textbook "much higher," between 30.59% and 33.67% rated it "higher," and between 31.76% and 34.09% of respondents rated it "about the same." There were two trends observed. First, the majority of students rated the OpenStax textbook higher or much higher, which suggests the quality of the OpenStax textbook, in their opinion, exceeded that of most traditional textbooks. Second, about one-third of students rated the OpenStax textbook "about the same" as a traditional textbook and very few rated it as "lower" or "much lower," which suggests that students viewed the quality of the open textbook as matching or exceeding that of other traditional textbooks.
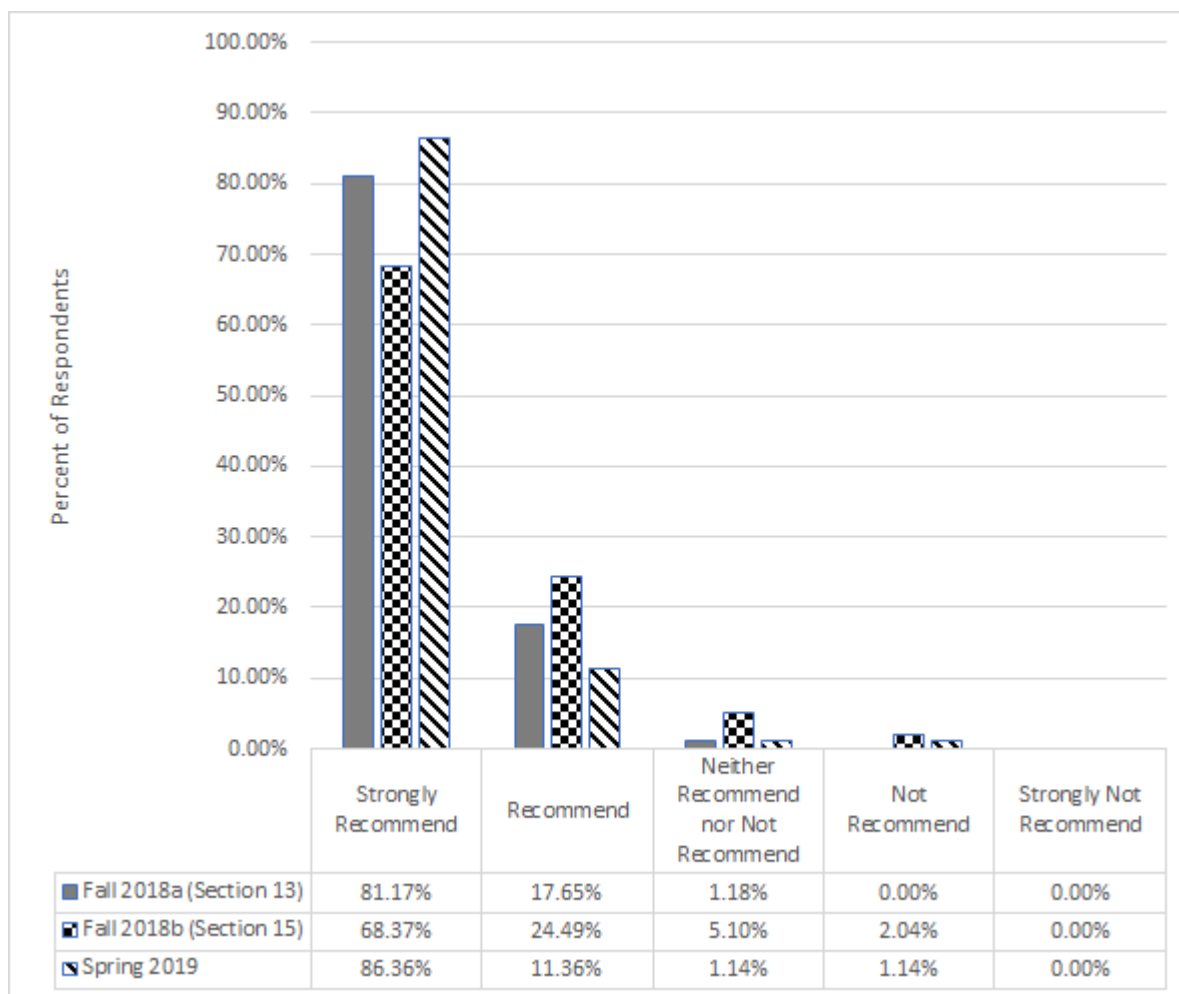
Figure 7

General Psychology Surveys: Post-Adoption (Three Semesters) Question 5: How Would You Rate the Quality of the OpenStax Textbook Compared to Other Traditional Textbooks You Have Used?

	Much Higher	Higher	About the Same	Lower	Much Lower
Fall 2018a (Section 13)	32.94%	30.59%	31.76%	4.71%	0.00%
Fall 2018b (Section 15)	27.55%	33.67%	32.65%	4.08%	2.04%
Spring 2019	34.09%	31.82%	34.09%	0.00%	0.00%

Students overwhelmingly recommended (i.e., "Would you recommend Dr. Schell continue using the OpenStax textbook?") that Dr. Schell continue to use the OpenStax textbook (see Figure 8). To summarize survey questions 4, 5, and 6, responses indicated that students were highly satisfied with the OpenStax textbook.

Figure 8

General Psychology Surveys: Post-Adoption (Three Semesters) Question 6: Would You Recommend Dr. Schell Continue Using the OpenStax Textbook?

	Strongly Recommend	Recommend	Neither Recommend nor Not Recommend	Not Recommend	Strongly Not Recommend
Fall 2018a (Section 13)	81.17%	17.65%	1.18%	0.00%	0.00%
Fall 2018b (Section 15)	68.37%	24.49%	5.10%	2.04%	0.00%
Spring 2019	86.36%	11.36%	1.14%	1.14%	0.00%

The last three questions in the survey were open-ended. The first question asked, "What is the best thing about the OpenStax textbook?" Out of 272 surveys completed, there were a total of 212 responses to this question (see Table 2). The most frequent comment was the fact that the online version of the book was free (67 comments), followed in descending order by: (a) how easily students could access the book, (b) how easy it was to use, (c) how easy it was to read, and (d) the review/practice questions at the end of each chapter. Additional interesting comments included: (a) "I like that I can download it and then use the search feature on my computer to find certain terms," (b) "I don't have to carry a heavy textbook," (c) "being able to put it side by side next to notes or Quizlet," (d) "The book won't get ruined," and (e) "Over break I didn't need to lug a book to study, and I was able to do my notes whenever, wherever." These GWU student comments mirror the findings from Grissett and Huffman's (2019) study of psychology open textbooks in which students identified cost, weight, and convenience as the biggest advantages of open textbooks.

Table 2

Most Frequently Occurring Responses to the Question: "What is the Best Thing About the OpenStax Textbook?

Parameters	Fall 2018a Section 13	Fall 2018b Section 15	Spring 2019	Totals
Number of Respondents	60	76	76	212
Cost/Price (Free)	24	25	18	67
Ease of Access	8	14	12	34
Ease of Use	10	9	15	34
Easy to Read	6	12	13	31
Practice Questions	3	9	5	17

The second open-ended question asked, "What is the least favorite thing about the OpenStax textbook?" Out of the 272 surveys completed, there were 179 responses (see Table 3). The most frequent comment was "none," "n/a," or similar suggesting that the student had no least favorite comment to make. There were 27 comments reflecting online issues such as: (a) "inaccessible without internet connection," (b) "scrolling between chapters," (c) "sometimes slow to load." There were 25 comments reflecting content issues such as: (a) "some sections seem oversimplified or not relevant," (b) "certain aspects could have been further explained," (c) "maybe sometimes it can be too repetitive." There were 15 comments noting that the chapters were too long and 13 comments that the authors provided only answers to the odd numbered practice questions. Finally, there were eight comments reflecting preference for print versions such as (a) "I just prefer having it on paper rather then my computer screen," (b) "sometimes I wish I had the physical book because I don't like reading on a computer," and (c) "a book is so easy to focus on rather than a screen, which makes it a little more difficult."

When transitioning from a traditional print textbook to an online version, it is crucial to obtain both positive and negative feedback. The negative feedback obtained here was particularly valuable because it allows Dr. Schell and the team to address the issues that may interfere with students' learning. For example, feedback confirmed that students need a choice between an online version and a print copy. The survey also provided important feedback about the practice questions, which can easily be remedied in future semesters by providing all the correct answers. The positive feedback was equally important. In this case, the feedback reinforced how well students liked the OpenStax open textbook and the decision to continue its use in future classes.

Table 3

Most Frequently Occurring Responses to the Question: "What is the Least Favorite Thing About the OpenStax Textbook?

Parameters	Fall 2018a Section 13	Fall 2018b Section 15	Spring 2019	Total
None/Not Apply	11	16	15	42
Online Issues	10	7	10	27
Content	4	11	10	25
Chapter Length Too Long	2	9	4	15
Practice Questions	3	2	8	13
Preference for Printed Copy	3	2	3	8

The last open-ended question asked, "Is there anything else you would like to say about the OpenStax textbook?" Out of the 272 surveys, there were 88 responses (see Table 4). The responses were overwhelmingly positive with 22 comments suggesting Dr. Schell continue to use the OpenStax textbook. Examples of positive comments include: (a) "I believe the idea behind the free online textbook is something that should be accessible for more courses," (b) "This is the second class I've used OpenStax and I still think it's great!", (c) "Great pick!" Examples of negative comments included: (a) "Knowing if there is a cheaper version beforehand would be nice," (b) "if there is a video for explanation, probably it is going to be more helpful and interesting," (c) "Better to have answers for even number problems."

Table 4

Summary of Type of Responses to the Question: "Is There Anything Else You Would Like to Say About the OpenStax Textbook?"

Parameters	Fall 2018a Section 13	Fall 2018b Section 15	Spring 2019	Totals
Number of Respondents	24	29	35	88
Positive Comments	10	12	15	58
Negative Comments	2	2	1	5
Continue to Use/ Recommend	5	6	11	22
No or None	7	9	8	24

One concern Dr. Schell had was whether students' learning (e.g., final course grades) suffered as a result of transitioning to the OpenStax textbook. The grades for all seven semesters were calculated based on the following formula (see Table 5).

Table 5

Letter Grade and Point Equivalent

Letter Grade	Point Equivalent
A	4.0
A-	3.7
B+	3.3
B	3.0
B-	2.7
C+	2.3
C	2.0
C-	1.7
D+	1.3
D	1.0
D-	0.7
F	0

An independent samples *t*-test was conducted to compare the grades of students using a traditional textbook and students using the OpenStax open textbook. There was a significant difference in the grades for students in the class using a traditional textbook (*M* = 2.96, *SD* = .814) in comparison to students using OpenStax (*M* = 3.20, *SD* = .713); *t*(663) = -3.986, *p*= .000. Students in the four semesters before Dr. Schell adopted OpenStax had an average letter grade in the C+ and B- range. Students in the three semesters after adoption had an average letter grade in the B- range. We cannot state that the OpenStax textbook was responsible for the increase in grade, but we can state that the use of the OpenStax textbook did not hurt student learning as assessed by grades. This aligns with research results from a large-scale study (Colvard et al., 2018) at the University of Georgia which showed that:

> OER adoption does much more than simply save students money and address student debt concerns. OER improve end-of-course grades and decrease DFW (D, F, and Withdrawal letter grades) rates for all students. They also improve course grades at greater rates and decrease DFW rates at greater rates for Pell recipient students, part-time students, and populations historically underserved by higher education (p. 262).

Conclusion

Transitioning to an online general psychology textbook that was peer-reviewed, affordable, customizable, accessible, and meets the standards of the American Psychological Association was no easy task. A thoughtful and rigorous process was needed in order to design a quality learning experience for students and this detailed process was time-consuming (see Appendix D). We learned a number of things as a result that may serve as a template for other faculty and librarians. Faculty interested in redesigning their courses by replacing a traditional course textbook with open course materials do not need to tackle this effort alone. A team effort is essential. The insights of a librarian who is knowledgeable about open educational resources as well as skilled in locating open materials and understanding open licensing will make the project easier.

A second important essential element is employing student feedback from the beginning. For example, we learned through student surveys that they preferred a print textbook (hard or soft bound), but strongly supported a free online

textbook, provided they had a choice of a print or digital version. Additionally, two student assistants who helped the faculty member evaluate the textbook, in detail, provided significant information about how well the textbook aligned with the American Psychological Association standards and how well it aligned with traditional, general psychology textbooks.

Third, after we adopted the OpenStax textbook, we learned through student surveys that they overwhelmingly liked having a free, online textbook and strongly recommended that Dr. Schell continue to use it. Also, students' grades did not suffer as a result of using the OpenStax textbook. This made the decision to continue using the open textbook easier.

GW Libraries' OER Team members currently continue their campus advocacy plan for affordable and open course materials based on the strategy that was successful when partnering with Dr. Schell: (a) purposefully aligning OER advocacy with the institution's strategic plan; (b) prioritizing advocacy to courses based on the strategy to "save the most students the most amount of money on course materials," (c) targeting faculty teaching high enrollment, undergraduate courses with multiple sections, especially those using expensive required textbooks; and, (d) having 1:1 conversations with faculty members while sharing examples of OER course materials in their subject area. Team members report that 1:1 conversations are the most successful format of outreach. These conversations conclude with team members asking faculty, "Are you interested in using open course materials?" Finkbeiner (2019) discussed this concept during her presentation: "Effectively encouraging OERs on your campus" (slide 9) in which she referred to it as a "direct tactic"–that is, a strategy that results in getting a direct faculty response of yes, no, or maybe–tell me more.

The team's less successful strategies included stand-alone OER campus workshops and email campaigns. For example, in the original email campaign to GWU faculty teaching a general psychology course, only one of six faculty responded to the OER Team's email. In fact, Nicole Finkbeiner (2019) stated in her webinar, "Effectively encouraging OERs on your campus" that only 23% of emails are opened by faculty. Since that approach was not effective, the OER Team adopted a new approach by directing personalized emails to academic department chairs in order to gain higher level buy-in before communicating with course level teaching faculty. We also learned the importance of clearly communicating the expectations of roles at the outset of a collaborative project. Time constraints will vary in amount depending on the librarian's availability at various times throughout the school year. In each project to switch to affordable course materials, Banks meets with the faculty member and discusses that her role in evaluating the suitability of OER content for a course is based on two factors: affordability and relevance. It is the faculty member's role to evaluate the quality, fit, and appropriateness of OER content. By using a thorough process that is well grounded in research and contributes to a quality learning experience for students, a collaborative team of faculty, librarians, and students provides the expertise necessary for selecting and adopting an appropriate open textbook.

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APPENDIX A

Draft Email to Psychology Faculty who Teach Large, Introductory Psychology Courses

Dear _____,

An important initiative promoted by Provost Maltzman and the Student Association Senate is underway at GW to encourage and support the adoption of open and affordable educational resources (OERs) in courses here. OERs are online course materials, such as open textbooks, that are available at no cost and are generally openly licensed such that faculty can freely use, remix, and adapt them. OERs are being used in courses at universities throughout the world, and there are many quality OERs available in a variety of subjects, including psychology.

I am writing to you as a member of the psychology faculty who teaches General Psychology to encourage you to consider adopting an open psychology textbook in lieu of a commercially published textbook the next time you teach this course. *[If textbook known: Your current textbook [Insert Title] costs [Insert Cost]. If textbook unknown: Many traditional introductory psychology textbooks cost $100-$200.]* This is a significant financial burden for our students, particularly for the many students receiving financial aid to attend GW. With the large number of students who enroll in General Psychology, transitioning to an open textbook in this course could result in thousands of dollars in savings for our students.

In addition to saving students money, OERs have a number of other benefits as well. Use of OERs can actually improve student learning and performance. This study, for example, found that in "three key measures of student success–course completion, final grade of C- or higher, course grade–students whose faculty chose OERs generally performed as well or better than students whose faculty assigned commercial textbooks." The authors suggest that these outcomes are a result of increased access in that all students in courses using open textbooks have free, online access compared to students in courses using commercial textbooks where some of them may not purchase the textbook due to cost. This is not surprising in light of surveys showing that many college students have chosen not to purchase a textbook due to its cost, even if they thought this would hurt their grade in the class.

If you are interested in adopting an open textbook in General Psychology or your other courses, please don't hesitate to contact me or any member of our Open Educational Resources Team at open@gwu.edu. We can help identify suitable

open textbooks or other OERs for your courses and answer any questions you have about these resources. Please feel free to forward this message to any of your colleagues who may be interested as well.
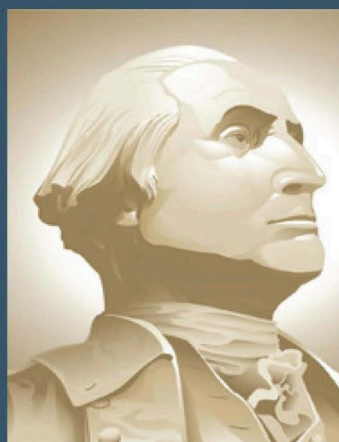
    Sincerely,

APPENDIX B

OER for Faculty

GW faculty and students are discovering the benefits of finding, using, and creating openly- licensed materials for teaching and learning. Unlike material that is copyrighted "all rights reserved," Open Educational Resources (OER) encourage adaptability enabling users to adapt content to specific learning needs.[2]

65% OF STUDENTS DON'T BUY TEXTBOOKS BECAUSE OF COST[1]

Benefits to GW Faculty

- Build Your Own Resources
- Promote Work to Global Audience
- Equitable Access to Course Materials

Find out more

HTTP://LIBGUIDES .GWU.EDU/OPEN TEXTBOOKS

Benefits to GW Students

- Reduce Student Spending on Course Materials
- Better Prepared for Classes
- Increased Engagement with Course Content[3]

1 Bidwell, A. (2014). Report: High Textbook Prices Have College Students Struggling. US News and World Report. http://www.usnews.com/news/articles/2014/01/28/ report-high-textbook-prices-have-college-students-struggling
2 SPARC Open Educational Resources page: www.sparc.arl.org/theme/open-educational-resources.
3 Feldstein, A., Martin, M., Hudson, A., Warren, K., Hilton III, J., & Wiley, D. 2012. Open Textbooks and Increased Student Access and Outcomes. European Journal of Open, Distance and E-Learning.

GW | Libraries

Full Text of Information Sheet: OER for Faculty

65% of students don't buy textbooks because of cost[1]

   GW faculty and students are discovering the benefits of finding, using, and creating openly-licensed materials for teaching and learning. Unlike material that is copyrighted "all rights reserved," Open Educational Resources (OER) encourage adaptability enabling users to adapt content to specific learning needs.[2]

   Benefits to GW faculty:

- build your own resources
- promote work to global audience
- equitable access to course materials

Benefits to GW students:

- reduce student spending on course materials
- better prepared for classes
- increased engagement with course content[3]

Find out more: http://libguides.gwu.edu/opentextbooks

   GW Libraries, CC-BY

APPENDIX C

Free On-Line Resources For General Psychology

Chapter 1: Introduction to Psychology

- Crash Course Psychology #1 (YouTube Video)
- Important Historical Figures in Psychology (Web Image)
- Perspectives in Psychology (Web Image)
- Psychoanalytic Theory, Freud (YouTube Video)
- Gestalt Psychology (YouTube Video)
- Behaviorism (YouTube Video)
- Humanism: Maslow's Hierarchy of Needs (YouTube Video)

1. Bidwell, A. (2014). Report: High Textbook Prices Have College Students Struggling. *US News and World Report*. https://www.usnews.com/news/articles/2014/01/28/report-high-textbook-prices-have-college-students-struggling
2. SPARC Open Educational Resources page
3. Feldstein, A., Martin, M., Hudson, A., Warren, K., Hilton III, J., & Wiley, D. 2012. Open Textbooks and Increased Student Access and Outcomes. *European Journal of Open, Distance, and E-Learning*.

- [Social Psychology](#) (YouTube Video List)

Chapter 2: Psychological Research

- [Crash Course Psychology #2](#) (Psychological Research) (YouTube Video)
- [Correlational Research](#) (Ch. 2 lecture YouTube Video)
- [Types of Psychological Research](#) (Web Image)
- [Psychological Research Comparisons](#) (Web Image)

Chapter 3: Biopsychology

- [Ch.3 Lecture](#) (YouTube Video)
- [Crash Course Biology #10](#) (DNA Structure & Replication) (YouTube Video)
- [Crash Course Biology #9](#) (Heredity) (YouTube Video)
- [The Human Genome/Your DNA](#) (YouTube Video)
- [What is a gene?](#) (YouTube Video)
- [What is DNA and how does it work?](#) (YouTube Video)
- [How Human Genome is Sequenced](#) (YouTube Video)
- [Khan Academy: Twin and Adoption Studies](#) (YouTube Video)
- [Chromosomes under a microscope](#) (Web Image)
- [Crash Course Psychology #3](#) (The Chemical Mind) (YouTube Video)
- [Crash Course Psychology #4](#) (The Brain Overview) (YouTube Video)
- [Crash Course Anatomy & Physiology #8](#) (Nervous System Part 1) (YouTube Video)
- [Crash Course Biology #26](#) (The Nervous System) (YouTube Video)
- [Khan Academy (Cerebral Cortex Overview)](#) (YouTube Video)
- [Khan Academy (More detail on Cerebral Cortex Structure and Function)](#) (YouTube Video)
- [Khan Academy (Anatomy of a Neuron)](#) (YouTube Video)
- [2-Minute Neuroscience: The Neuron](#) (YouTube Video)
- [2-Minute Neuroscience: Neuroimaging](#) (YouTube Video)
- [2-Minute Neuroscience: Synaptic Transmission](#) (YouTube Video)
- [A Rod Through His Brain: The Story of Phineas Gage](#) (YouTube Video)
- [Nervous System Basic Outline](#) (Web Image)
- [Peripheral and Central Nervous System](#) (Web Image)
- [Parasympathetic vs. Sympathetic Nervous System](#) (Web Image)
- [Neuron Structures](#) (Web Image)
- [Neurotransmitters](#)

Chapter 4: States of Consciousness

- [Crash Course Psychology #9](#) (Sleep) (YouTube Video)
- [Crash Course Psychology #10](#) (Altered States) (YouTube Video)
- [Oxford Sparks: Circadian Rhythms](#) (YouTube Video)
- [Ted Talk: Circadian Rhythms and Health](#) (YouTube Video)
- [Khan Academy: Sleep Stages and Circadian Rhythms](#) (YouTube Video)

- [Sleep Cycle Infographic](#) (Web Image)
- [Effects of Insomnia on the Body](#) (Web Image)
- [Dreaming Comic](#) (Web Image)

Chapter 5: Sensation and Perception

- [Crash Course Psychology #5](#) (Sensation & Perception) (YouTube Video)
- [Crash Course Psychology #7](#) (Perception) (YouTube Video)
- [TedX Education: Synesthesia](#) (YouTube Video)
- [TedX Education: How You See Color](#) (YouTube Video)
- [Khan Academy: Visual Cues, Monocular vs. Binocular, Constancies](#) (YouTube Video)
- [Psychology Vidcast: Subliminal Messages](#) (YouTube Video)
- [Sensation vs. Perception](#) (Web Image)
- [Gestalt Principles Summary](#) (Web Image)
- [Gestalt Principles](#) (Web Image)
- [Sensation and Perception](#) (YouTube Video)

Chapter 6: Learning

- [Crash Course Psychology #11](#) (Conditioning) (YouTube Video)
- [TedX Education: Classical/Operant Conditioning](#) (YouTube Video)
- [Classical Conditioning](#) (Web Image)
- [Operant Conditioning](#) (Web Image)
- [Operant vs. Classical Basic Comparison](#) (Web Image)
- [Operant vs. Classical more detailed Comparison](#) (Web Image)

Chapter 7: Thinking and Intelligence

- [Crash Course Psychology #23](#) (Intelligence Testing/Controversy) (YouTube Video)
- [Crash Course Psychology #24](#) (Brains vs. Bias) (YouTube Video)
- [TedX: The Optimism Bias](#) (YouTube Video)
- [Ted Talk: Dan Gilbert on Why We Make Bad Decisions](#) (Web Video)
- [Khan Academy: Theories of Intelligence](#) (YouTube Video)
- [Ted Talk: The Intelligence of Crows](#) (Web Video)
- [Koko the Gorilla](#) (YouTube Video)
- [Alex the Parrot](#) (YouTube Video)
- [Elements of Cognition](#) (Web Image)
- [Cognitive Bias Images](#) (Web Image)

Chapter 8: Memory

- [Crash Course Psychology #13](#) (Making Memories) (YouTube Video)

- [Crash Course Psychology #14](#) (Remembering & Forgetting) (YouTube Video)
- [Ted Talk: False Memories](#) (YouTube Video)
- [False Memory Test](#) (YouTube Video)
- [Ted Talk: How your working memory helps you make sense of the world](#) (YouTube Video)
- [Khan Academy: Information Processing Model](#) (YouTube Video)
- [BioEd Online: Learning and Memory Overview](#) (YouTube Video)
- [Ted Ed: How memories are formed and how we lose them](#) (YouTube Video)
- [Henry Molaison (H.M.)](#) (Web Image)
- [Information Processing Model of Memory](#) (Web Image)
- [Organization of Long Term Memory](#) (Web Image)
- [Types of Long Term Memory](#) (Web Image)
- [Types of Long Term Memory (simple diagram)](#) (Web Image)
- [Areas of the Brain Involved in Memory](#) (Web Image)
- [Storage](#) (YouTube Video)

Chapter 9: Lifespan Development

- [Crash Course Psychology #18](#) (The Growth of Knowledge) (YouTube Video)
- [Piaget's Stages of Cognitive Development](#) (Web Image)

Chapter 10: Emotion and Motivation

- [Exploring Facial Expressions with Paul Ekman](#) (YouTube Video)
- [Ted Talk: How to Spot a Liar](#) (Web Video)
- [Ted Talk: Lie Detection](#) (YouTube Video)
- [Self-Efficacy](#) (YouTube Video)
- [Maslow's Hierarchy of Needs](#) (YouTube Video)
- [Abraham Maslow](#) (Course Module)
- [Crash Course Psychology #17](#) (The Power of Motivation) (YouTube Video)
- [Crash Course Psychology #26](#) (Emotion, Stress, and Health) (YouTube Video)
- [The Psychology of Motivation and Emotion](#) longer one, not for class (very detailed) (YouTube Video)
- [Maslow's Hierarchy of Needs](#) (Web Image)

Chapter 11: Personality

- [Crash Course Psychology #22](#) (Measuring Personality) (YouTube Video)
- [Personality Theories Overview: Eight Major Approaches](#) (YouTube Video)
- [Khan Academy: Psychoanalytic Theory of Personality](#) (YouTube Video)
- [Khan Academy: Freud's Psychosexual Stages in Depth](#) (YouTube Video)
- [Khan Academy: Humanistic Approaches to Personality](#) (YouTube Video)
- [The Big 5 Personality Traits](#) (YouTube Video)
- [Cultural Dimension: "Me" or "We"](#) (YouTube Video)
- [Freud's Psychosexual Stages](#) (Web Image)

Chapter 12: Social Psychology

- [Crash Course Psychology #37](#) (Social Thinking/Cognitive Dissonance) (YouTube Video)
- [Crash Course Psychology #38](#) (Social Influence) (YouTube Video)
- [Crash Course Psychology #39](#) (Prejudice/Discrimination) (YouTube Video)
- [Crash Course Psychology #40](#) (Aggression/Altruism) (YouTube Video)
- [Khan Academy: Conformity and Groupthink](#) (YouTube Video)
- [TedX: Stories of Implicit Bias](#) (YouTube Video)
- [Stanley Milgram](#) (Web Image)
- [Milgram Shock Generator Control Panel](#) (Web Image)
- [Stanford Prison Study Newspaper Ad](#) (Web Image)
- [Stanford Prison Study, Prisoner with Guard](#) (Web Image)
- [Phillip Zimbardo](#) (Web Image)
- [Ethnic Identity Comic](#) (Web Image)

Chapter 13: Industrial-Organizational Psychology

- [Ten Minute I/O Psychology](#) (YouTube Video)
- [Motivation Theories and Principles](#) (YouTube Video)
- [I/O psychology](#) (Web Image)

Chapter 14: Stress, Lifestyle and Health

- [Crash Course Psychology #26](#) (Emotions/Stress/Health) (YouTube Video)
- [Ted Talk: How Stress Affects Your Brain](#) (YouTube Video)
- [Robert Sapolsky: Stress Response: Savior to Killer](#) (YouTube Video)
- [General Adaptation Syndrome](#) (Web Image)
- [Stress in the Brain and Body](#) (Web Image)
- [Psychology of Happiness](#) (YouTube Video)

Chapter 15: Psychological Disorders

- [Crash Course Psychology #28](#) (Psychological Disorders) (YouTube Video)
- [Crash Course Psychology #29](#) (OCD, Anxiety Disorders) (YouTube Video)
- [Crash Course Psychology #30](#) (Depressive & Bipolar Disorders) (YouTube Video)
- [Crash Course Psychology #31](#) (Trauma and Addiction) (YouTube Video)
- [Crash Course Psychology #32](#) (Schizophrenia, Dissociative Disorders) (YouTube Video)
- [Crash Course Psychology #34](#) (Personality Disorders) (YouTube Video)
- [Intro to the DSM](#) (YouTube Video)
- [TedX: Challenges and Rewards of a Culturally-informed Approach to Mental Health](#) (YouTube Video)
- [Ted Ed: Debunking the Myths of OCD](#) (YouTube Video)
- [The VisualMD: What is Depression?](#) (Web Video)
- [Auditory Hallucinations: An Audio Presentation](#) (YouTube Video)

- [Simulation of the Experience of Schizophrenia](#) (YouTube Video)
- [Ted Talk: Why Everything You Know About Addiction is Wrong](#) (YouTube Video)
- [Ted Talk: The Power of Addiction](#) (YouTube Video)
- [Ted Talk: The Voices in My Head (schizophrenia)](#) (YouTube Video)
- [Ted Talk: A Tale of Mental Illness (schizophrenia)](#) (YouTube Video)
- [Ted Talk: Mental Disorders as Brain Disorders](#) (YouTube Video)
- [DSM-V Anxiety Disorders](#) (Web Image)
- [Depressive and Bipolar Disorder](#) (YouTube Video)

Chapter 16: Psychological Disorders

- [Crash Course Psychology #35](#) (Getting Help) (YouTube Video)
- [Crash Course Psychology #36](#) (Biomedical Treatments) (YouTube Video)
- [What is psychodynamic therapy?](#) (YouTube Video)
- [Psychodynamic Therapy Role-Play](#) (YouTube Video)
- [What is Psychoanalysis?](#) (YouTube Video)
- [How Weed Works?](#) (YouTube Video)

APPENDIX D

Timeline For Adopting the OpenStax General Psychology Textbook

Semester	Task
Spring 2017	• Held two meetings with librarians who researched and/or recommended three free online general psychology textbooks and discussed their possible adoption in Dr. Schell's general psychology course. Further research continued. • First survey given to Dr. Schell's general psychology class to determine if students would embrace a free on-line textbook.
Summer 2017	• Dr. Schell selected the OpenStax general psychology textbook so he could review it and compare with the book currently in use.
Fall 2017	• Hired a student to review the OpenStax general psychology textbook and parse out the major concepts (249 concepts) that students should know. This was done to ensure that the topics covered in this text matched the topics covered in most general psychology courses. • Survey given to Dr. Schell's two general psychology sections to determine if students would embrace a free online textbook. • Librarian Dorinne Banks began working with Dr. Schell to compose free online resources to accompany the textbook and lectures that would engage students in their learning through open educational resources.
Spring 2018	• Hired a second student who had been in Dr. Schell's Fall 2017 general psychology class, to do a critical review of the OpenStax general psychology textbook. • Survey given to Dr. Schell's general psychology class to determine if students would embrace a free online textbook. • Adopted the OpenStax general psychology textbook for the 2018-2019 academic year.
Fall 2018	• A more extensive survey given to both sections of general psychology to determine students' experiences with the OpenStax textbook.
Spring 2019	• The same extensive survey was, again, given to Dr. Schell's general psychology class to determine students' experiences with the OpenStax textbook.

APPENDIX E

Dr. Schell's Course Goals as Stated in his Syllabus for General Psychology

QUINTESSENTIAL COURSE GOALS:

There are three quintessential objectives of the course:

1. **To master** knowledge of psychology at the introductory level
2. **To think** like a psychologist
3. **To ask** fundamental, heuristic, and intriguing (e.g. Socratic) questions.

OBJECTIVES REFLECTING THE ELEMENTS OF REASONING:

A good critical thinker in general psychology employs the elements of reasoning in a systematic way that allows the fullest breadth and depth in thinking. The elements of reasoning are reflected both in the logic of science and in the logic of general psychology. They include:

- **Key Question:** How can the science of psychology help us describe, predict, control/change, and explain human behavior and mental processes?
- **Interpretation and Inference:** Students will learn how psychologists gather and interpret data and apply same to the issues studied in the course.
- **Information**: Students will learn the benefits and limitations of the scientific method and theory in describing, predicting, controlling/changing, and explaining human functioning and adaptation.
- **Essential Concepts:** Students will learn basic concepts (e.g. operant conditioning, synaptic transmission, intelligence quotient, etc.) and theories (e.g. psychodynamic, behaviorism, etc.) that underlie the psychological understanding of human behavior and mental processes.
- **Assumptions**: The fundamental assumption of this course is: there are intelligible and discoverable reasons why humans behave, think, and feel the way they do.
- **Implications and Consequences:** Students who reason well about psychology should be able to better understand their own behavior, thinking, and emotions as well as better understand the behavior, thinking, and emotions of others.
- **Points of View:** Students will learn how to reason using data derived from the scientific method (i.e. careful observation and systematic study) and to analyze and evaluate human behavior and mental processes through the lens of six major psychological perspectives (theoretical orientations): (1) biopsychological, (2) learning/behavioral, (3) cognitive, (4) socio-cultural (5) psychodynamic, and (6) humanistic/existential.

OBJECTIVES REFLECTING THE INTELLECTUAL STANDARDS:

In order to accomplish the broader objectives, you need to:

- **Describe accurately, clearly, and precisely** basic terms, concepts, theories, research, and relevant issues in psychology today.
- **Analyze**, **evaluate**, and **apply** the above to human functioning and adaptation AND to issues of diversity and technology.
- **Apply** good critical thinking (See "Critical Thinking in Psychology") to the concepts, theories, and knowledge bases in psychology.
- **Excel** in a learning environment that respects the cultural, individual, and role differences, including those due to age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, language, and socioeconomic status of members of the class.
- **Engage** in a course pedagogy that will include lecture, discussion, demonstrations, and Socratic questioning.

OBJECTIVES REFLECTING BLOOM'S TAXONOMY:

The learning objectives are specified via Bloom's (1956) Taxonomy:

Cognitive Skill	Specific Examples
Knowledge	**recall, define**, match, name, list, outline, observe, record
Comprehension	**recognize**, locate, **identify,** summarize, report, **explain**
Application	solve, demonstrate, organized, **illustrate,** research
Analyze	classify, relate to, map, **compare/contrast**, infer, refute, **interpret**
Synthesize	construct, create, plan design, speculate
Evaluate	prioritize, persuade, assess, predict, **criticize**

More specifically, what is it that you should know and be able to do at the end of the semester? In other words what would distinguish you, who have taken the course, from a student who did not take the course? The answers to these questions are set forth in the following specific objectives:

- **Objective 1:** As a result of taking this course you will be able **to recall, recognize, identify and define** basic terms, concepts, theories, research, and relevant issues in psychology [assessed via exams (graded), chapter quizzes (graded) and in-class dialogue (non-graded)].
- **Objective 2:** As a result of taking this course, you will be able **to explain, analyze, evaluate, and synthesize** the various psychological concepts and theories pertaining to human functioning and adaptation and to issues of diversity and technology [assessed via exams (graded), chapter quizzes (graded), in-class dialogue (non-graded).
- **Objective 3:** As a result of taking this course, you will be able **to compare and contrast** the major perspectives and **interpret** the research reflecting the efficacy of psychological concepts. [assessed via exams (graded), chapter quizzes (graded), in-class dialogue (non-graded).
- **Objective 4:** As a result of taking this course, you will be able **to apply** cases **to illustrate** psychological concepts [assessed via exams (graded)].

RATIONALE OF COURSE OBJECTIVES:

The American Psychological Association (American Psychologist, 2007, pp 650 to 669) published an article entitled, "Quality Benchmarks in Undergraduate Psychology Programs." The article stipulates that all courses in psychology should be grounded in the scientific foundation of the discipline and strive for the following student learning outcomes: (1) writing skills, (2) speaking skills, (3) research skills, (4) collaborative skills, and (5) information literacy and technology skills. To that end the Psychology Department developed the following mission statement for the undergraduate curriculum: "The overarching goal of the undergraduate program in Psychology is to introduce students to current theories, research, and methodologies within the field. Through a variety of courses, at the introductory level and then in advanced seminars, students learn to understand and explain how humans function behaviorally, cognitively, emotional, and socially. They also learn to analyze and evaluate the many factors that influence human functioning

and how the human mind integrates these factors in shaping an individual's adaptation to the environment. Students receive scientific training through courses on research design and methodology, and these methods are incorporated within courses throughout the curriculum. Courses are also designed to stimulate critical and analytic thinking, and to foster effective communication skills. At the undergraduate level the department outlined the following student learning goals: knowledge and comprehension of theories and basic research in the major domains of psychology; knowledge of quantitative and research methods in psychology; acquisition of critical thinking skills; and acquisition of effective communication skills."

Reading British Modernist Texts: A Case in Open Pedagogy

MANTRA ROY, JOE EASTERLY, AND BETTE LONDON

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Project Overview

Institution: [University of Rochester](#)

Institution Type: private, research, undergraduate, graduate

Project Discipline: English Literature

Project Outcome: Annotated Online Texts

Tools Used: WordPress, CommentPress, Reclaim Hosting

Resources Included in Chapter:

- Images

In this paper we discuss the application of open pedagogical strategies in a library session for undergraduate students. I, Mantra Roy, was then the humanities librarian at the River Campus Libraries at the University of Rochester.[1] Dr.

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1. Although Mantra will use the first-person "I" through the paper, "we" will be used whenever Joe and

Bette London of the English department was teaching the course Making Modernism New Again in Spring 2017. My colleague, Joe Easterly, the digital humanities librarian, worked with the platform, CommentPress, that enabled our implementation of open pedagogical practices. By enabling students to gain agency in their own learning and by using literary texts in the public domain, we adopted open pedagogy in praxis.

Background: Critical Pedagogy and library instruction

Open pedagogy, variously defined, comprises a number of core tenets: agency of students in their own learning, creative or innovative ways of learning, and participatory technological tools that enable community learner-generated outcomes (Hegarty, 2015; Reale, 2012; Wiley, 2013). Based on the above tenets, I argue that open pedagogy is inspired by critical pedagogy. As espoused by Paulo Freire (1970) in *Pedagogy of the Oppressed*, critical pedagogy emphasizes the breakdown of barriers in the power dynamic of learning. When students recognize that they are active contributors in their own learning, even if it is a single lesson in a library session, they pay attention and are encouraged to embrace the content as their own. Their shared power in the process of transmission of knowledge gives them autonomy in their own learning process (Reale, 2012, pp. 83-86). Librarians often employ active learning methods to engage students in learning about library resources. The power shifts from the library instructor to the students who, feeling more empowered, take the lead in their own learning. When, as a librarian-instructor, I have created a scavenger hunt for students to explore the library building and find artefacts that fascinated them, I have made possible critical thinking and reflection among students, who have been spared my individual perspective on what the physical library has to offer. As students report back in class about the rare pens or diaries they spotted in the Rare Books and Special Collections or the quiet study corners tucked away from most eyes, I have helped to "liberate the[ir] consciousness" (Freire, 1970, pp. 52-53). The state of being "oppressed" may be understood as students being compelled to receive information from multiple sources and from predetermined perspectives, each source convincing them of its absolute authority. In other words, as Jesse Stommel described in a 2018 online post, *Textbooks, OER, and the Need for Open Pedagogy*, open pedagogy enables students to "co-construct their own educations." Students are in full control of how they want to locate information, a critical skill librarians want them to learn in library sessions. Such an untethered class activity, especially in a class of first-year students for whom the library session is often the very first time they enter the building after orientation, demonstrates students taking responsibility for their own learning when instructors practice open pedagogy.

Similarly, when I pose questions for students to find articles or bits of information by exploring the library website, the multiple ways they employ to locate a digital object have often surprised me, and I have learned about pathways to find a LibGuide that I had not explored yet. Effectively, as Freire (1970) insisted, education should dissolve the distinction between teacher and student so that both are "simultaneously teachers *and* students" (p. 59; italicized in the original). As Freire (1970) wrote, one cannot learn "for" the students; they have to learn by themselves (p. 54). Moreover, Freire's concept of praxis—thought and action—becomes evident when students engage critically with the objects they encounter, whether in the physical library or the digital portal, and assume control of how they demonstrate their learning (action) about the library resources (Swanson, 2005, p. 67).

Introduction

Drawing on Freire's (1970) theory of empowering students in their learning process, it is arguable that designing tasks for

Mantra's collaboration is referred to. Joe contributed the particulars about the technical platform and Bette reflected on her assignment objectives and students' learning via email.

students in order to learn actively leads to a pedagogic style that is open and flexible. It is more impactful than pursuing a rigid lesson plan in which students are expected to learn a carefully curated number of ideas, a pedagogic style that allows for no agency among students. The flexible pedagogic style often involves peer-to-peer learning and sharing, both of which are identified by Bronwyn Hegarty (2015) as two attributes of open pedagogy. Open pedagogy enables instructors to practice "*co-intentional* education" (italicized in the original) in which teachers and students, as subjects, come to know or learn about a problem critically, and engage in the "task of re-creating that knowledge" (Freire, 1970, p. 56). Per Freire, such pedagogy focuses on student-centered learning that helps students create new knowledge, a characteristic Hegarty (2015) calls "learner generated."

As Rajiv Jhangiani (2017) wrote in *Definitions vs Foundational Values*, open pedagogy "values access, agency, transparency, and quality" (n.p.). The process of learning must be transparent and it is possible with the use of technologies that provide sharing or community access to learning platforms. Finally, the quality of knowledge or content produced must be determined by the instructor who designs open assignments. Most importantly, students must have access to sources of learning and that is where open texts or open educational resources (OER) come in.

If the definition of *open* is founded upon access, agency, and transparency, as Jhangiani noted above, then the use of OER, which are zero or low-cost learning resources that can be retained, reused, revised, remixed, and redistributed (See Clarifying the 5th R; Wiley, 2014), is, in my view, a critical characteristic of open pedagogy. The movement to adopt, adapt, and create OER is being embraced by several campuses today, primarily in response to the debilitating costs of textbooks. According to "*College Textbook Costs & Open Educational Resources*," an article posted by the Robert W. Van Houten Library of the New Jersey Institute of Technology, costs of textbooks rose by 82% between 2002 and 2012, and two out of three students skipped buying required textbooks because they were too expensive. Another critical aspect of open pedagogy, as David Wiley (2013) famously wrote, is to do away with disposable assignments. Open assignments, in which the end product is anticipated but not confirmed, enable students to learn critical issues, problems, and contexts actively from their own perspectives. They are different from 'disposable assignments' that are developed by instructors and which are forgotten by students after submitting them although they may have put in several hours to produce them. Disposable assignments, such as term papers, do not contribute any value to the world, argues Wiley, and I agree because students are expected to demonstrate what they have learned in the course from the instructor's perspective which will then earn them a grade.

David Wiley and John Hilton (2018) add another layer to the understanding of open pedagogy by broaching the concept of "OER-enabled pedagogy" which is best demonstrated by "renewable assignments". Such assignments are identified by the following criteria:

1. Are students asked to create new artifacts (essays, poems, videos, songs, etc.) or revise / remix existing OER?
2. Does the new artifact have value beyond supporting the learning of its author?
3. Are students invited to publicly share their new artifacts or revised / remixed OER?
4. Are students invited to openly license their new artifacts or revised / remixed OER? (p. 137)

In the following section, where I describe the library session and assignment, we must note that the work developed by the students was not technically an OER as access to the work was limited solely to the University of Rochester campus Internet, and thus was not freely accessible to the public for reusing, remixing, and revision. But firstly, the free texts from Project Gutenberg were in the public domain and enabled live commentary in the CommentPress environment. Secondly, students contributed to the commentary on texts that can be read as student-produced OER. Per Hegarty's (2015) attributes, students used participatory technologies and trusted the openness of the online community where they collaboratively learned (pp. 5-6). They did not work in silos while interpreting literary texts but instead applied their knowledge as a community of peer-learners and created new meaning out of seminal passages. Like renewable assignments, the new artifacts had value for all learners (Wiley & Hilton). The result was open pedagogy in praxis.

Making Modernism New Again and Open Pedagogy

At the University of Rochester in Spring 2017, Dr. Bette London, professor in the department of English, taught a course entitled Making Modernism New Again. In re-examining iconic texts of modernism, Bette introduced contemporary artists who have reimagined and recast canonical novels through digital as well as traditional media. For example, students learned about multimedia artist Kabe Wilson's reworking of Virginia Woolf's seminal text *A Room of One's Own*, in which Wilson rearranged all of the 37,971 words of Woolf's text to create a new novella. In addition to guiding students to engage with the dynamism and potential for novelty of modernist texts, Bette approached two librarians, Joe Easterly and me, to develop an assignment that would introduce students to the act of making new meaning of modernism by engaging with primary texts in a digital medium. Bette wrote in an email correspondence:

> After I incorporated some digital "remaking" projects into my syllabus, however, the experiential component of such an assignment became an increasingly important objective. Students had been especially intrigued by Kabe Wilson's artwork, both for its inventiveness and its deep engagement with Woolf's writing. As a result, I wanted the library assignment to give students the experience of actually "making" something new themselves out of modernist materials – not just reading about or viewing what the digital could do but actively engaging it. B. London (personal communication, July 15, 2019).

In other words, Bette wanted new knowledge that Hegarty (2015) identified as "learner generated", an attribute of open pedagogy, in which students generate content and "reconfigure" prior knowledge (p. 8).

In a few meetings with Bette, we decided that Joe would provide access to the digital texts of five selected modernist works and Mantra would develop an assignment that helps students apply their understanding of modernism and its tenets. Joe located the five selected texts of modernism in their public domain version, free of copyright restrictions, in Project Gutenberg and incorporated them into the CommentPress platform available through the subscription service, Reclaim Hosting. Joe explains,

> Reclaim Hosting, branded at the University of Rochester as Digital Scholar, is a platform for students and faculty to create web-based personal portfolios, CVs, or use tools such as WordPress, Omeka, Mediawiki, and others in pursuit of digital scholarship. In the years since it has been implemented, hundreds of members of the UR community have created projects using it. J. Easterly (personal communication, October 31, 2019).

Moreover, writes Joe, "Reclaim Hosting is by default open, but professors may want to limit access to websites to either protect student privacy, or because they feel that the content being created isn't yet ready for public dissemination." J. Easterly (personal communication, October 31, 2019).

In our case, Bette did not want to make the platform open to public comments in the very first pilot of the assignment.

CommentPress is a plugin for WordPress developed by the [Institute for the Future of the Book](#). While WordPress has always supported comments at the bottom of any page of text, CommentPress positions comments next to their associated passages. This makes it more natural for students to see the text and commentary as a conversation and encourages them to engage with it. Joe created user accounts for the four modernist authors and then distributed them to the students, so they could engage with peers as their online personas. The assignment was conducted over three class sessions and students met in a library instruction room that was equipped with big monitors for students and featured a large LED-TV screen that helped Joe demonstrate the different features of the CommentPress interface.

Workflow

In order to prepare Bette's students for the digital assignment, Joe and Mantra shared "Reading the Database: Narrative, Database, and Stream of Consciousness" from Jessica Pressman's (2014) *Digital Modernism: Making It New in New Media* and Lev Manovich's essay on "[Database as a Genre of New Media](#)" with Bette. Bette posted them on Blackboard. *Digital Modernism* was available as an eBook through the library catalog.

In the weeks leading up to the library sessions, Joe built accounts in [CommentPress](#) and created five pages for the five modernist texts—*Heart of Darkness*, *Howards End*, *Ulysses* ("Telemachus" and "Calypso"), *A Room of One's Own*, and *Mrs. Dalloway*. Mantra designed the lesson plan such that students would work in pairs or groups of three and each group would elect to assume the name of one of the four authors. So, one group became James Joyce, another group became E. M. Forster, another one became Joseph Conrad, and yet another group became Virginia Woolf. Each author-group would select a modernist text by one of the remaining authors. On the page featuring the text, the author-group would select a couple of seminal passages and comment on them using phrases written by their chosen author. For example, Conrad would comment on Woolf's *Mrs. Dalloway* by using phrases from *Heart of Darkness*. Students would have to use appropriate citation guidelines within their comments. Students would thus practice rearranging modernist language to respond to modernist texts in a digital medium (see [Figures 1](#) and [2](#) for examples of how the assignment will look).

Figure 1

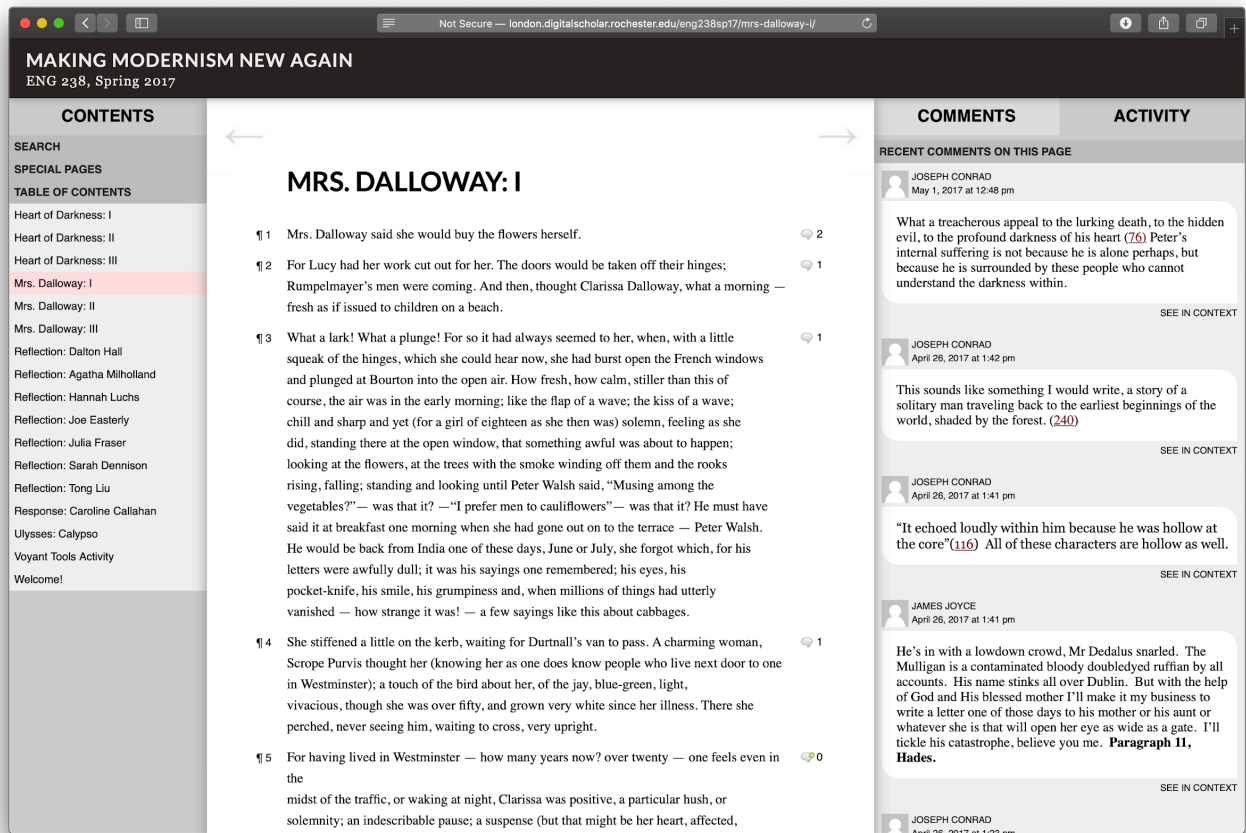*Screenshot of the CommentPress interface in Reclaim Hosting*

Figure 2

Screenshot of another version of the assignment in the same interface

By assuming the voices of the four modernist authors and by using their words to comment on literary texts written by peer-modernists, students were encouraged to refashion the meaning of texts. They applied what they had learned about the core tenets of modernism, such as "making it new" with innovative use of language and voices, and rediscovered new ways of commenting on the texts. They drew upon their rigorous learning about the movement and engaged in student-owned learning with full accountability, all recognized as strategies of open pedagogy.

Conclusion

We exercised open pedagogy in the library session through our pedagogic style. Bette reflects on what she learned through the assignment:

> It was an opportunity for me to reflect on my own pedagogy by ceding and sharing pedagogical authority more than in my normal teaching practice, both in the design of the assignment and its implementation. B. London (personal communication, July 15, 2019).

Hegarty (2015) wrote when instructors reflect on their pedagogies and begin to share with peers and learn about innovative ways to approach pedagogy, open pedagogy ensues because pedagogy stands transformed.

The critical responses about assigned course texts were innovative and helped produce an open assignment in which outcomes were not confirmed. Bette writes:

> Because I had been unsure what I could reasonably expect from the assignment, and because I lacked clear criteria for its assessment, I had decided not to formally grade it. I still have some of these same concerns and

questions. I believe, however, that the assignment's value lies more in the experience than in the product. B. London (personal communication, July 15, 2019).

Within the scope of the lesson, considering that the public domain texts were zero-cost, that students took responsibility for their own learning, and that there was minimum mediation by either Bette or the librarians (in fact, Bette was not present for two of the sessions), this library session was a successful experiment with open pedagogy.

In the spirit of open pedagogy, Bette's reflection, on how the assignment could be more integrated in her course the next time she offers it, highlights the role openness plays in textual analysis and annotation:

> Digital annotation and commentary projects could be linked to already-existing class time sessions, like those devoted to *Ulysses*, for example. Projects of this sort might include: *Ulysses Versioned*; the *Joyce Project*; *The Year of Ulysses*, including Twitter Chats (#yearofulysses). All of these things would provide a deeper context for the assignment and help students think about how to rigorously and thoughtfully engage in a process of annotation and how to think through the relationship between creation and commentary. B. London (personal communication, July 15, 2019).

The overall experience with open pedagogy was liberating because it was experimental for all instructors as well as students and we came away learning a newer pedagogic approach.

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Humanities in the Open: The Challenges of Creating an Open Literature Anthology

CHRISTIAN BECK, LILY J. DUBACH, SARAH A. NORRIS, AND JOHN VENECEK

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Project Overview

Institution: [University of Central Florida](#)

Institution Type: public, research, undergraduate, postgraduate

Project Discipline: Humanities

Project Outcome: literary anthology

Tools Used: Institutional Repository

2020 Preface

Six months into the year and 2020 has been witness to some of the most transformational events to take place in generations. The COVID-19 pandemic caused universities to move entirely online in a matter of weeks (in some cases days), countries world-wide went into lockdown, and the highest rate of job loss since the great depression hit the United States. During this global crisis, the US erupted in protest over the murder of George Floyd, Jr. at the hands of a Minneapolis Police Officer. As universities discuss how best to resume classes in the fall and the US debates how to

fix its systemic racism, it seems strange to further advocate for the implementation of an OER...but this is 2020 and "change" and "strange" might best characterize this year. With these pivotal events in mind, we would like to reiterate that the challenges of creating an OER, as discussed in our chapter, do not begin to outweigh the benefits of making education more affordable and culturally relevant.

The past few months have underscored the need for openly accessible course materials. Many students and faculty at the University of Central Florida, and institutions globally, had challenges accessing textbooks and other course materials when courses rapidly transitioned online in March. With libraries' physical buildings closed, there was no access to print course material. With face to face courses cancelled there was not an option for students to share texts. Compacted with accessibility, the need for affordable course materials for students (many of whom are facing financial challenges) is even more necessary. OERs pose many difficulties, but the world we are currently living in desperately needs access to free, open, and critical educational resources.

In addition to affordability and accessibility, our chapter argues that designing an anthology around the idea of "radical familiarity" allows readers to make connections between historical literature and current socio-political events. As the United States faces difficult realizations about the embeddedness of racism in its culture, society, and institutions (including higher education), consciously making room for diverse student voices not only within the course, but also in the selections and introductions to the readings is essential for equity in education. Integrating topics such as police brutality, the role of "monuments" in a society, systemic oppression, "traditional values," and governmental policing/control into a course and its anthology is not simply a pedagogical approach to critical thinking, it is a cultural duty of social justice to confront racism and actively advocate and practice anti-racism.

What is in store for the second half of 2020, let alone the rest of the decade, is anyone's guess. However, it is in times like these that information, literature, critical connections through diverse perspectives, and the availability of resources for intellectual pursuits become that much more important. In the end, we believe that the challenges of creating an OER pale in comparison to what you are able to offer students and society in general.

–Christian, Lily, Sarah, John

Textbook affordability and Open Education Resources (OER) have become increasingly important as educators search for ways to decrease costs while providing access to the best possible resources. One solution is to incorporate open access and public domain materials into classes across the curriculum. We addressed these issues in an English Literature survey course at the University of Central Florida. A team of librarians, an instructional designer, and a literature professor collaborated to replace a traditional anthology with a text that students could access for free. While this project has been a success, our team had to overcome a variety of obstacles related to copyright and intellectual property, issues that might provide challenges for anyone interested in adopting an OER.

This chapter will discuss the process of building an OER from scratch and the pedagogical implications of incorporating an open anthology in a literature course. Traditional anthologies supply the reader with historical context and authorial background–both important aspects of a literature survey course. They run through literary history in a linear and temporally cogent fashion, precisely the methodology that seeks to understand history and culture through the lens of literature. To be clear, we are not arguing against a historical approach or the intermingling of history and literature in a survey course. Rather, we suggest that remaining firmly and solely bound to a historical context in a literature course denies the contemporary reader the ability to engage with texts in dynamic ways and make connections between texts and contemporary culture. In many ways, this dynamic approach to the study of a literary text mirrors the process of how we built our open anthology. The building process, as well as the text of the anthology itself, is what Gilles Deleuze and Félix Guattari refer to as "rhizomatic." In other words, our discrete departments and specializations are connected by and through the issues we encountered–i.e., locating open source material; dealing with Creative Commons licenses; obtaining copyright permissions and identifying quality translations; building the anthology including platforms, access, and the scalability of constructing a cohesive collection of texts; as well as working with our university's General Counsel. In the end, the rhizomatic connections found in the anthology are a product of the connections made in the development process and continues, in its pedagogical use, to produce new connections that exceed the voices of its initial creators to include the diverse learners using the text.

As a term that originated with underground organic plant structures, the rhizome was given new conceptual life

through Gilles Deleuze and Félix Guattari's *A Thousand Plateaus* (1980/1987).[1] Much like the plant structure, the conceptual rhizome connects seemingly disparate and unrelated objects, ideas, or concepts through unseen, "underground" routes. Just as two blades of grass on opposite sides of a large yard are connected through complex underground root structures, the process of creating an open anthology, with its multifaceted authorial, legal, and technological issues, creates connections within (and beyond) the university structure, establishing an unforeseen network of production that highlights, rather than effaces, the labor of librarians, staff, students, and faculty.[2] An anthology, as we imagine it, is always growing and changing. Consequently, this project remains in flux. As the needs of the class change, so too can the anthology. This chapter then summarizes the origin and current state of the project and concludes with a look toward the future of the always-changeable anthology. The latest update of the [English Literature anthology](#) (Beck et al., 2019), and soon a second OER for World Literature, can be found through STARS, the University of Central Florida's institutional repository.

The University of Central Florida's textbook-affordability efforts have included participation from a variety of campus units. In particular, UCF Libraries and the Center for Distributed Learning (CDL) found that we had many similar goals and perceived barriers when supporting textbook affordability. With this, the two units formed a partnership. Starting in 2015, a working group composed of three librarians and two instructional designers met regularly to coordinate efforts related to textbook affordability. The group also included other librarians and instructional designers for specific projects that helped support faculty in transitioning to free, library-sourced, or low-cost alternatives to traditional textbooks. The working group focused on both macro and micro efforts related to textbook affordability. While the macro efforts primarily focused on informing UCF leadership about efforts at the local, state, and national level, the micro efforts reflected a grassroots approach to promoting textbook affordability to individual faculty (deNoyelles et al., 2017). One such effort included campus presentations.

In spring 2016, the working group conducted an OER workshop at the Faculty Center for Teaching and Learning (FCTL). While several attendees expressed interest, none were prepared to abandon their traditional textbooks at the time. One instructor expressed concern about losing access to introductory material, annotations, and discussion questions while another worried about the time commitment involved in creating new course content from scratch. Both of these issues, we would learn, are common barriers to OER adoption. Shortly thereafter, we expanded the scope of our outreach by sending a call for participation to the departments of English, Art, and History. While the call generated some interest and appreciation for our efforts to address textbook affordability, only one faculty member was prepared to revamp his courses at the time. Dr. Christian Beck, a Medieval Literature professor—and co-author of this chapter—was the only one to express interest in replacing the *Norton Anthology* he had been using in his English Literature survey course with an OER that students could access and use for free.

The multifaceted nature of this project necessitated strong collaboration from a diverse team including the literature professor, an instructional designer with the CDL, a humanities librarian, a scholarly communication librarian, and a scholarly communication adjunct librarian. To begin the process, Dr. Beck had lengthy discussions with the Humanities Librarian, John Venecek, regarding the types of texts the course needed—approximately twenty-seven separate texts, ranging from the Early Medieval Period to the eighteenth century, which included texts such as *Caedmon's Hymn*, Shakespearian sonnets, and Robert Herrick's *Hesperides*. Even though these are well-known works, finding public domain editions was more complicated than expected. Although we could not cite directly from the *Norton Anthology*, it served as a reference for finding public domain versions of the preferred sections of works. For example, certain

1. For a full discussion of the rhizome's characteristics and conceptual function, see Deleuze and Guattari (1980/1987, p. 3-25).
2. Deleuze and Guattari (1980/1987) write, "A rhizome ceaselessly establishes connections between semiotic chains, organizations of power, and circumstances relative to the arts, sciences, and social struggles" (p. 7). By working together and creating an ever-changing textbook, we are, in effect, subverting the established power(s) of the textbook industrial complex.

works had alternative titles or nuances in translations that made our search more difficult unless we were already familiar with the content of that particular work. This work fell primarily to the Scholarly Communication Adjunct Librarian, Lily Dubach. She initiated the first search, looking through library databases, open access repositories, and other sources to find open materials for the OER. She provided a detailed, color-coded spreadsheet to function as a starting point for John Venecek who stepped in to conduct follow-up searches for the harder-to-find texts and texts requiring permissions.

In the beginning, copyright status and permissions seemed straightforward. Since all the works were written before 1923, they fell into the public domain. However, there were several instances in which Dr. Beck preferred specific translations, formatting, annotations, and stage directions. These preferences raised legal questions, requiring permission from individual copyright holders. Most allowed use of their work with attribution for educational purposes. In the rare cases where we could not obtain written consent, we provided a full attribution in the online course and maintained records of our efforts to secure permission. These entries, however, would eventually be removed from the final edition due to lack of permission. Additionally, we wanted to maintain rigorous standards, and several instances presented quality-control challenges. Most notably, we could not locate a suitable translation of *The Wife's Lament*, so Dr. Beck translated and annotated [the poem](#) (Beck, 2017) then assigned a Creative Commons Attribution-Noncommercial-No Derivative Works 4.0 License to his work. Before making this translation accessible worldwide through STARS, Sarah Norris, Scholarly Communication Librarian, discussed with Dr. Beck the variety of Creative Commons licenses available to apply to his translated work. Ultimately, he chose a more restrictive license, which allowed anyone to access and use the work for research purposes but that restricted commercial use of his scholarship. It is important to note that this particular license was more restrictive than the broader English Literature anthology, which was licensed with a more open and flexible CC BY 4.0 license. Because of this, the anthology needed to provide a link to *The Wife's Lament* in STARS instead of including the full-text directly. This was an important lesson in developing future OER texts and assigning appropriate and aligned licensing. In the end, every OER team could work to create one Creative Commons-licensed text in an attempt to increase the availability of texts to be used in open source projects like this one. This would continue the trend of teams working together to help other (unknown and possibly unrelated) teams create projects that make literature more widely available.

In addition to quality control, we were equally concerned about creating a seamless, readable, user-friendly product. The first stage of this process involved compiling hyperlinks to library-sourced materials from various databases, e-books, repositories, and a variety of online resources. We gathered this information in spreadsheets with permalinks to the source material. However, the final product needed to be more than a mere reading list with links to resources on websites and platforms of varying quality. With this in mind, the Instructional Designer, John Raible, converted the literature into a streamlined, consistently-formatted PDF that could be downloaded on a variety of devices and would not require an internet connection, all the while ensuring the accessibility of the document. This also provided consistency for Dr. Beck who could direct the students to specific passages, discoverable via keyword searching, that they could then highlight and annotate. In this way, the collection would be a fully-functional electronic text.

The original incarnation was limited to the English Literature survey course where students could download the book for free. Dr. Beck began using the customized text in the spring of 2016. Since then, it has been used eight times reaching 493 students for a total estimated savings of $34,510. As impressive as these totals are, the anthology was not yet a true OER. An authentic OER should be able to connect people and projects beyond a single course, department, or university; it should be accessible to anyone looking to engage with literature and should be a source through which new connections can be established—thus, fully embodying the rhizomatic nature of the text. Much like the pedagogical approaches discussed below, the availability and versatility of the text are key features of a true OER. To achieve true OER status for our anthology, we sought to broaden the scope of the project by uploading the collection to STARS, our institutional repository. This process, however, would raise several issues that would be more complicated than anyone anticipated and result in us making contact and connections with other members of the university. First, some content had been retrieved from library-licensed databases and e-books, which are restricted to UCF students, faculty, and staff. Second, the rights we initially received from the copyright holders had been limited to use in the survey course. As a result of this new scope, we had to conduct a second review of the selections to ensure that none of the content was

from library-licensed resources. We also had to obtain a second round of permissions from the copyright holders before we could make their content available in STARS. In most instances, we succeeded in locating open source material and in gaining the necessary permissions, but there would be more unanticipated and increasingly complex issues that we would have to negotiate before we could make this anthology widely accessible.

Throughout the development of this project, including the work to make the anthology widely accessible through STARS, we were in constant contact with UCF's Office of General Counsel (OGC). Though we were confident in addressing copyright concerns and obtaining permissions, we also felt it was appropriate to engage with the OGC for additional oversight and recommendations regarding the licensing for the anthology. Like our initial perceptions of copyright status and permissions, we assumed this process would also be straightforward. However, our interactions with legal representation revealed a variety of considerations that we had not yet anticipated.

During our initial conversations with the OGC, we discussed general copyright concerns and addressed any questions OGC had regarding public domain, Creative Commons licenses, and copyright permissions obtained from the copyright holders. Beyond this were broader discussions regarding ownership and faculty research. Currently, the UCF Faculty Collective Bargaining Agreement (CBA) does not explicitly address OER as a part of faculty research (UCF, 2015). Such research is typically considered an exception within the CBA; however, the OGC noted that any work, regardless of intended purpose, that relied on appreciable university support (which in this case included librarians and instructional designers) may become the intellectual property of the university. With this in mind, we engaged in conversations about OERs, their intended use, and existing copyright within such works. Ultimately, we decided not to make the anthology widely available through STARS until summer 2019 due to the complexities discussed with the OGC. Further, these conversations and guidance from the OGC have prompted us to approach assisting faculty with copyright clearance differently moving forward in order to avoid any potential concerns regarding appreciable university support. While the goal of making the anthology accessible was delayed, we are pleased that this was eventually accomplished and that students at UCF and other institutions can benefit from this freely accessible anthology.

The nuances of working with open source texts in a class have far-reaching implications as well. Unlike a traditional static text, the dynamic nature of an anthology such as this means that it can (and should) change as the needs of the course change. For this reason, our project does not end with the text simply becoming available: The students must also actively engage with the material in dynamic ways. The learning experience of the text ought to mirror the connectivity and teamwork that were manifest in building the OER. As a result, new collaborative and integrated pedagogical approaches must be part of how the anthology is used.

From a pedagogical perspective, collections of literature are, on the one hand, useful tools as a "one-stop shop" for all your literary needs. Anthologies supply all the literature you want students to read in a single text, uniformly presented and standardized. On the other hand, the anthology presents an issue of exclusion: The problem is not what to include, but what to exclude from the collection. Hand an anthology to any literature instructor and he/she will undoubtedly state something to the effect of, "Oh, I wish it included [fill in a title here]." Indeed, it is impossible to include everyone's favorite pieces in a single text, but using public domain or openly accessible materials to build a collection of primary sources that suits the individual instructor's needs makes this goal achievable . Additionally, an OER that is available to everyone should be flexible enough to support new additions (or editions) that make the text timely, engaging, and relevant to contemporary readers.

Part of what allows us to develop an OER is the various digitized literary pieces found in digital repositories. As the initial iteration of this anthology testifies, library digital resources are a great place to start. Many of the texts that were originally included in the collection were subscriptions and permissions acquired for UCF students, faculty, and staff and could be easily included in the anthology for local use. This means, even from the outset, the new literary collection is digital in nature: We are using new technologies to produce a powerful pedagogical tool that has the potential to be something more than the traditional linear, static collection of literature. Rather than simply engage in a "repetition of the same" by producing a digital version of its analog, printed predecessors, our digital anthology combines literary texts sought through open access means, as well as other online digital material that are freely accessible and connected to

the text through permalinks.[3] Due to its digital nature, our anthology can link to, include, and expand on resources that exceed the traditional compilation of literature. Many free online resources can be used to enhance the learning process and by including them in the collection, students connect to the content in more dynamic ways, a practice we refer to as "**radical familiarity**."

When encountering historically distant literatures for the first time, many students find it easy to enumerate the differences in a piece's attributes, characterizations, structure, plot, setting, and even language. However, asking students to make connections between the text and our contemporary moment is a more challenging and pedagogically productive exercise. Through this experience of radical familiarity, students often find that a text that might have previously seemed unrelatable or difficult to understand becomes familiar and accessible in surprising ways. This type of radical familiarity overcomes the objections of a type of literature being too old or irrelevant for our contemporary culture and creates connections between the past and the present. Dr. Beck models this approach in his written introductions to individual texts contained in the collection. For example, in the World Literature I anthology, he discusses how women may make their voices heard in the introduction to *Lysistrata* and provides a link to an article examining the effectiveness of Alexandria Ocasio-Cortez's Twitter feed. This and other connections are not made lightly or superficially but rather through clear argumentation and textual support, and students are asked to engage in the same type of thinking. By encouraging students to see literature as radically familiar and interconnected, they not only learn about the historical context and discourses in which the literature was produced, but also view contemporary issues, writing, and culture as a confluence of literary, cultural, and historical events. By opening the educational discourse to allow for new connections, we can create fresh forms of reading and writing about the past. Again, Deleuze and Guattari (1980/1987) write, "Writing has nothing to do with signifying. It has to do with surveying, mapping, even realms that are yet to come" (p. 5). In other words, the class as a whole (instructors, teaching assistants, and students alike) create new ways of viewing the world, investigate unexplored territories, and use the connections made through the course as a catalyst for future knowledge, change, and socio-cultural insight. This act of creation then becomes a part of the OER itself.

As a means to make the text performative in its openness and malleability, the students are presented with a final group project in which each group chooses a piece of literature we have read during the semester and seeks external content that they believe shares discursive similarities to the chosen text. They must write a brief introduction to the external content; describe, in detail, how the content relates to the piece; and explain the socio-cultural importance of the relationship between the content and the literature–i.e., why should people be aware of this connection and how does it enrich our cultural or intellectual heritage? After the projects are completed, all the projects are made available for everyone in the course to view. The instructor composes a (compulsory) survey and asks students to vote on the most interesting and relevant project. The project that receives the most votes will be embedded into the anthology for future classes to use. This project, an example of radical familiarity, allows the anthology to grow and change every semester and to become a rhizomatic text. Through the inclusion of student voices, the anthology grows in dynamic

3. "Repetition of the same" is a phrase used by Gilles Deleuze in *Difference and Repetition.* Deleuze (1968/1994) differentiates between two types of repetition: One that is "static," "revolving," and "ordinary" and the other "dynamic," "evolving," and "distinctive" (p. 23). Deleuze (1968/1994) writes, "In every case, repetition is difference without a concept," but, he states that in one instance there is a "difference between objects represented by the same concept"–i.e., an Open Access anthology that is structured precisely like previous anthologies–and in another instance the repetition "includes difference, and includes itself in the alterity of the Idea, in the heterogeneity of an 'a-presentation'" (p. 24). Indeed, I am suggesting that we engage in a form of repetition by producing an anthology but contained within the repetition is a distinctive difference, something that is "dynamic" and "evolving."

and unforeseen ways. The diversity of voices challenges the idea of who can construct, write, and edit a collection of literary artifacts. While students might not have the "expertise" or "specialization" of a literature professor, the inclusion of intergenerational voices that can link literary content to an ever-changing plane of cultural media expands the anthology into new territories most likely unfamiliar to those with siloed specialties. This approach has the added benefit of keeping the collection relevant and engaging for future audiences.

As discussed above, however, the rhizomatic text does not end with its expansion and changes. As an OER, this anthology's changes become available to people and projects beyond our course. This means that the new additions, as authored by the students themselves, become available and accessible to unknown audiences. There are two important implications here: 1) the anthology is no longer "authored" by the OER team, and 2) rights and permissions must be sought from the new authors (i.e., students). This element of the text/course is a new addition and will not be set to test run until next academic year (2020-2021), so we have not yet had to deal with this iteration of the text or these obstacles—as we said in the beginning, this project is very much in flux. Our idea for the future of this anthology is to have an organically grown and dynamically organized text that highlights the work of all facets of a university structure: librarians of all ranks and specializations, students, faculty, instructional designers/technical advisors, legal advisors, and web designers. The product can then be accessed and built upon by other groups only to incite new ideas and projects that this singular text could have never anticipated.

In the end, the open access, rhizomatic anthology does not just deliver content, it is an interactive, self-guiding pedagogical instrument that exceeds the specialist's lone voice by including and reflecting the voices and experiences of culturally diverse learners. The navigation of "rules" in the developmental process of the OER leads to a text that defies the "rules" not just of a traditional anthology, but also of the standard literary historical survey course. The only "rule" of this new literary assemblage then is that it should never be static. The unchanging text "imposes the verb 'to be'" and insists upon a singular form of truth, whereas "the fabric of the rhizome is the conjunction, 'and…and…and…'" (Deleuze & Guattari, 1980/1987, p. 25). Mirroring the connections created through collaborations among librarians, instructional designers, faculty, and legal counsel, our anthology reflects our ever-changing and increasingly connected world and is dynamic enough to adapt to these changes. Much like our world, our project is in flux, and the work we put into its creation continues with new iterations, changes, and connections. As a product of our collegial connections, new socio-cultural literary connections are forged, which when added to the OER, help us create and make visible the connections between students, faculty, educational resources, educational staff, and technological staff. The OER is more than an open resource for all to use and experience; its very production is a testament to the open collaboration and connections among all university personnel, with the hope of shaping unforeseen connections beyond our university.

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

A 2-for-1 Deal: Earn Your AA While Learning About Information Literacy Using OER

MARY LEE CUNILL, SHERI BROWN, AND TIA ESPOSITO

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Project Overview

Institution: [Florida State College at Jacksonville]()

Institution Type: public, community college, 4-year, undergraduate

Project Discipline: Public Speaking

Project Outcome: OER-Based AA Degree, Information Literacy Course Lessons and Stand-Alone Course

Tools Used: Achieving the Dream OER Degree Initiative, LibGuides

Resources Included in Chapter:

- Sample OER Degree Plan

2020 Preface

As a result of COVID 19, our college moved online on March 13, 2020. In making this move, we noticed that the effects of the digital divide surfaced within the first week. FSCJ's approach was to pull together a task force to remedy these challenges. This included scholarships for technology so students who were without them could purchase laptops, local

partnerships with cable companies to provide internet for free or discounted rates, and increased tech support for educators and students. The college made available trainings in all arenas of technology, making the transition as smooth as possible.

As we near month three of teaching from home, the comfort level has increased significantly for the new style of teaching and learning, though there is certainly the desire to return to campus. There were also many innovations that grew from this experience, including online synchronous courses. Prior to this, our online courses were asynchronous. To preserve the face to face aspect of in-person courses that were moved online, this was a productive and effective approach. As Florida COVID cases currently spike, the decision has been made to remain online with the exception of courses that need to be help on campus due to contact hours or use of facilities (nursing, aviation, etc.). As we mention in this chapter, the vital nature of digital tools is once again apparent, bridging gaps that would otherwise have been much more difficult to navigate with the overnight shift from in-person to online courses.

Another aspect worth mentioning is that the reporting of information related to COVID has revealed, more than ever, the need to educate on information literacy and critical thinking skills. With society being inundated with varying pieces of information from a wide variety of sources, citizens must be able to differentiate between factual information and opinion. Let this serve to advance our cause for college wide initiatives to promote information literacy.

As we move forward, we hope the recommendations shared in this chapter motivate you to connect with colleagues to develop additional teaching tools and initiatives. With social distancing, it is great to see a smiling face, even if it is through the use of collaboration software! There is no better time to connect and get to know your colleagues better while adding to your university's resource pool!

—Mary Lee, Sheri, & Tia

Introduction

Working at a state college like Florida State College at Jacksonville (FSCJ), there is a constant balancing act between providing the highest level of resources to our students while increasing accessibility, given a majority of our students' socioeconomic challenges. Providing intensive and focused education on information literacy is particularly important for students who may not have the same access to credible sources as those in higher socioeconomic situations. FSCJ librarians and faculty are faced with the challenge of providing rigorous and challenging courses for their students that promote critical thinking and information literacy, but are inaccessible due to socioeconomic barriers.. With this in mind, librarians Tia Esposito and Sheri Brown have partnered with Professor of Communication faculty, Dr. Mary Lee Cunill, on projects that advance Open Education Resources (OER) and Information Literacy. In Project 1, learn how our college leveraged an Achieving the Dream grant to provide a full Associates of Arts (AA) program using Open Educational Resources, with an elective Library Information Services course. In Project 2, follow a faculty-librarian partnership that improves understanding of information literacy while enhancing librarian and student connections.

Getting to Know Our Students

Florida State College at Jacksonville's student population survey shows that over 70% of our 55,000 students make a family income of less than $50,000 per year; 50% of our students work full-time; 40% are parents of young children; and 25% are first-generation students. That means a majority of our students balance work, family life, and attending school. We know there is a high instance of food insecurity, a lack of affordable housing, and multiple public transportation challenges within the city of Jacksonville, Florida, where our five campuses are located.

To highlight a specific student who was affected by this project, we introduce Jorge. Jorge was a culinary arts student taking his required Public Speaking class in the evening. He cared for his three children under the age of 15, worked

full-time during the day as a cook, and was part-time in our culinary program in the hopes of owning his own restaurant someday. He needed more flexible hours, he explained, to help his children be successful and support their growth and learning. FSCJ's OER AA program allows him the time and flexibility to care for his family.

Project 1: OER Associates of Arts Program via Achieving the Dream Grant

FSCJ was a 2017 recipient of the [Achieving the Dream OER Degree Pathways grant](#) . As a result of receiving this grant, FSCJ has developed an Associate of Arts program that can be earned entirely using Open Educational Resources (OER) through online, hybrid, and face-to-face modalities. For FSCJ, OER is defined as courses that have no textbook costs affiliated with them and include access to library resources paid for by the school. No out-of-pocket expenses are needed for these students to access the texts and the library databases across our five campuses in this program.

Educators Serena Henderson and Nathaniel Ostashewski state that, "understanding barriers to full adoption, administration, and acceptance of OER is paramount to fully supporting its growth and success in education worldwide" (2018). One such barrier we recognized at our school was the digital divide. Students often didn't have access to computers or the internet in their homes, and they often had limited transportation or time to be able to visit the physical library building. This challenge, made evident in this partnership, reaffirms the need for meeting students where they are, in terms of the population our state college attracts. To combat this, FSCJ librarians have implemented new digital learning tools to offer quality OER that integrate easily with smartphones and tablets. These include LibGuides, or easy to use content management guides created by librarians and used at thousands of libraries worldwide. FSCJ librarians partner with faculty to create LibGuides focused on specific course related topics, increasing the ease of access for students. In addition, librarians have developed digital learning objects that coincide with classes, hybrid LIS courses, and more. The university library and the growing cadre of OER librarians and instructional design librarians are exceptionally well-situated to be the hub of access to course content. Not only do they provide faculty members support in the discovery of needed content and resources, but they develop tools and platforms capable of aligning to, or replacing, current learning management systems. Librarians are able to package in a more user friendly manner online homework products and other supporting frameworks for online education (Parker, 2019, para. 1).

Our librarians are creating versatile and responsive OER such as Libguides, videos, tutorials, online surveys, and learning objects that supplement textbooks to make research accessible regardless of access to a physical library or one's geographical location (Esposito, 2015). "The proliferation of mobile phones and access devices suggest the potential of mobile learning. Students are already using mobile devices to communicate, access, and share information, conduct research, and analyze data. These devices are the gateway to digital learning" (Alliance, 2011). Providing tools that interface with the technology students are already familiar with increases use and accessibility.

Recognizing that a large population of our students utilize public transit to commute to and from school, they can use that travel time for research and study (approximately three hours) if they are able to access online learning forums and the library via cell phones, iPads, and laptops. If a student uses the bus system daily, this accounts for 15-20 hours a week that they can devote to studying, freeing up time when they arrive home for themselves and their families. Put frankly, without pedagogical approaches such as this, students would not have the time or resources to work, raise a family, and go to school full-time.

Currently, FSCJ is one of only 38 colleges in 13 states to be part of this national project that allows students to get their associates degree without ever having to purchase a textbook. In the library we provide students with a degree outline illustrating a sample A.A. General Education Academic Degree Plan ([Figure 1](#)), listing courses that currently offer only OER textbook options.

Figure 1

Sample A.A. General Education Academic Degree Plan

FSCJ is committed to reducing the cost of course materials by offering classes that use free Open Educational Resources (OER) or low-cost digital materials that are accessible to all students.

Sample A.A. General Education Academic Degree Plan

FIRST TERM		SECOND TERM		THIRD TERM		FOURTH TERM	
Course I.D. and Title	Credit Hours	Course I.D. and Title	Credit Hours	Course I.D. and Title	Credit Hours	Course I.D. and Title	Credit Hours
ENC1101* English Composition I	3	ENC1102* Writing About Texts	3	AMH2010*E U.S. History to 1877	3	PHI2010 E Philosophy in the Humanities	3
MGF1106 Topics in College Math	3	STA2023* Elementary Statistics	3	DEP2002 E Child and Adolescent Psychology	3	POS2041*C American Federal Government	3
ECO2013* Principles of Economics I	3	HUM2210 Humanities: Prehistory to Medieval	3	SYG2000* E Intro to Sociology	3	AMH2020*EC U.S. History from 1877 to Present	3
PSY1012* General Psychology	3	SPC2608* Fundamentals of Public Speaking	3	LIT2000* Literature in the Humanities	3	REL2300 E World Religions	3
LIS1001 E Introduction to College Research	3	BSC1005* Life in its Biological Environment	3	AST1002* Intro to Astronomy	3	AMH2092 E African-American History and Culture, African Origins to 1877	3
—	—	—	—	AST1002L Intro to Astronomy Lab	1	—	—
Total Hours	**15**	**Total Hours**	**15**	**Total Hours**	**16**	**Total Hours**	**15**

Total Credit Hours: 61

* Credit by exam available (CLEP, DSST, Excelsior)   E Notes an elective course
C Satisfactory completion of this course with a "C" or better fulfills the civic literacy graduation requirement.

Developing OER course LIS 1001: Intro to College Research

As the library itself starts to make progress towards utilizing and embracing OER, we have started offering a for-credit library instruction OER course. Our faculty librarians have developed LIS 1001: Introduction to College Research, which is marketed as an elective for students to take early in their course of study. This OER course provides an introduction to key concepts needed to understand the changing dynamics and ethical use of information, the critical evaluation of both traditional and converged media, and the responsibility of the individual in creating new information.

LIS 1001 provides students with concepts and skills to conduct research according to the Association of College and Research Libraries' (ACRL) Framework for Information Literacy for Higher Education (2019). Students apply critical thinking skills to identify the capabilities and constraints of information published through social media, websites, popular media, and academic media; describe the value of information in various contexts; design, refine, and execute a search strategy; formulate a research question; and engage in academic communication. This course touches on all the requirements for information literacy according to the American Library Association, and it prepares students to be effective citizens in our current culture.

Project 2: Faculty/Librarian Partnership for Course Development

Our faculty-librarian partnership focused on improving information literacy and grew out of a pre-established relationship between library and faculty. When new communication faculty, Dr. Mary Lee Cunill, first arrived at FSCJ several years ago, Sheri Brown, the faculty librarian at communication faculty Mary Lee's home campus, befriended her almost immediately. Sheri checked in on Mary Lee, inviting her to lunch, introducing her to other professors, and helping her get connected to and understand the inner workings of the college. Sheri's personal outreach, collegiality, and mentorship was a pivotal aspect to ongoing professional collaborations. As a scholar of interpersonal communication, Mary Lee feels the "personal touch" of hospitality from faculty librarians cannot be overstated. Librarians serve as bridge builders between faculty, students, and reference materials. The value of their partnership and participation in the creation of new knowledge and the development of information literacy in colleges cannot be overstated.

Having previously worked closely with our faculty librarians on multiple projects, including our annual Authors Series, where the school adopts a book related to a social cause and builds a year of learning engagement activities around the text, Sheri and an English professor initiated a faculty/librarian partnership called Books and the Big Screen. In this partnership, students read a text in a book club atmosphere with faculty and librarians and then watch the cinematic presentation of the text at the end of the semester. Research demonstrates the value of faculty-librarian collaboration (Lindstrom & Shonrock, 2006). When these collaborations succeed, they become highly anticipated and supported by administration. Successful partnerships lead to "yes" more often when proposing new ideas, so when Sheri mentioned to Mary Lee that a fellow librarian colleague, Tia Esposito, had a particularly strong interest in information literacy and that she would love to partner with a public speaking class to discuss this issue, Mary Lee was in!

Pedagogical Foundation and Ethics

In 2017, Mary Lee completed a class through the Harvard Graduate School of Education called Creating Cultures of Thinking. The course is part of the Project Zero initiative whose mission is "to understand and enhance learning, thinking and creativity for individuals and groups in the arts and other disciplines" (Cultures of Thinking, Harvard Graduate School of Education, 2019). This course defines "Cultures of Thinking" (CoT) as "places where a group's collective as well as individual thinking is valued, visible, and actively promoted as part of the regular, day-to-day experience of all group members." It draws on the research of Ron Ritchhart (2015), that has shown that "students recognize CoT classrooms as being more focused on thinking, learning, and understanding, and more likely to be collaborative in nature than those of teachers not in the project." A faculty-librarian driven course became the perfect fit between the *Culture of Thinking* curriculum experienced by faculty being marked by a passion for asking the "big questions" and the previously existing relationship with our faculty librarians, partnering to tackle the question of "how do we know what we know" from an Information Literacy perspective. Faculty and librarians worked together to help students through information literacy modules developed via LibGuides; customized information literacy instruction especially as it pertained to fake news; offered tours and orientations; and customized research guides through LibGuides and digital learning objects.

During her past four years at FSCJ, Mary Lee has partnered with librarian Sheri Brown to cover information literacy skills and introduce students to the Library Learning Commons, establishing relationships between students and librarians. It was important to Mary Lee that students, who often overlook librarians as they prioritize the ease of Google searches over human interactions, see librarians as one of their most valuable assets at the college.

Given the nature of a public speaking class, and that it is about sharing this information further, information literacy is invaluable. As a professor, Mary Lee has felt the ethical imperative to follow up on poorly sourced research papers and presentations, asking students where they found their information, and clarifying facts. The detrimental effects of false

and incorrect information being spread are never more evident than in the questions asked after a presentation that introduces "new" yet invalid information.

As professors, we can only hope that a student's introduction to a topic will be based upon valid information instead of incorrect material. This is a lofty and sometimes unrealistic goal, so instead, as a result of our professor/librarian partnership, we now focus on critical thinking and information literacy training. If we can't stop the false news, we will at least fight against society taking it at face value, one student at a time.

Another ethical challenge facing scholars is the inherent battle of their value being based upon publishing more so than teaching when applying for tenure and promotion. As the industry for paid information access shrinks, there are fewer resources to pay for research and publication. With this in mind, we must begin to value open resourced publications with the same authority that we provide for journal articles or books. Partnering with librarians to publish new OER, pulling from authenticated resources, is a highly effective manner to propagate this. As students get more exposure to research-based OER papers, they are encouraged to seek out the primary materials to gain greater understanding. Our hope is that by being exposed to the primary materials via open sourcing, students are provided with access to the course content that they need. We further hope that they might return to find the source material and delve more in depth with a better understanding of how to use the information that they find effectively.

Fighting Fake News through Information Literacy in SPC 2608: Public Speaking

All of this brings us to the project, a librarian/faculty collaboration in which we try to help students fight fake news through information literacy. According to the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC, 2018): "In order to succeed in college and today's information-based economy, students need to understand how information is created and delivered, that information has economic, educational, persuasive and intellectual value, that information must be critically evaluated; and that information must be used ethically."

In a culture in which individuals routinely accept, remix, and share unfiltered, unattributed, opinion-based information, it's critical for our students to understand, as both consumers and creators of information, how and why information is produced and delivered, and the importance of determining credibility. In 2018, our Public Speaking class worked closely with the librarians to apply this through discussing the NetFlix original documentary, *Fyre*, demonstrating the power of Instagram influencers. According to Zoe Kleinman, Technology reporter for BBC News, lawsuits continue to build against influencers (Kleinman, 2019), yet young adults remain the victim of these publicity schemes. Approaching information literacy from this angle strongly engaged current students, as it made the issue and effects of fake news easily accessible and understandable.

The class met librarian Tia Esposito for the first time when she provided an interactive presentation entitled, "This Just In: Fighting the War on Fake News with Media and Information Literacy." Rather than the overdone, "this is how you do academic research" approach, Tia took the approach of a persuasive speaker. A persuasive speaker's goal is to get her audience to think or behave differently. It isn't passive. Persuasive speaking done well is intended to have a life-altering, behavior-changing impact. Based on the students' comments on the presentation evaluation, Tia's presentation achieved this.

Instead of teaching how to access credible information via databases—which students perceive as overwhelming, harder than Google or Wikipedia, and time consuming—Tia demonstrated how information is being used to manipulate the way we think and perceive the world. Most vitally, she gave countless examples of "fake news" where information was purposefully distorted and promoted by varying media outlets with the intent of manipulating and mobilizing the uninformed populace to take action.

Tia formed a strong relationship with Jorge, the student mentioned earlier, and they met multiple times. He chose a specific and nuanced speech topic about a former African slave, Onesimus, who lived in the 1700s, who was pivotal in developing the concept of inoculation (Widmer, 2014). Embracing the idea of information literacy, Jorge educated his classmates on how information has been manipulated and owned by those in power throughout history. He

explained how, given that slaves had no humanity at that time, they were not credited with creation of this information. Here we are, over 300 years later, and Jorge gave Onesimus, an African slave, the humanity and credit he deserved. Onesimus who he may never have learned about without the guidance of our librarians and his ability to access these partnerships and materials via the OER class. Perhaps even more importantly, Jorge had previously submitted his DNA to Ancestry.com and discovered that his own heritage was from slavery. With pride, he shared his people's history and contributions. Teaching students information literacy allows them to correct misinformation. Jorge was able to clarify the historical record on vaccinations. He presented with pride that vaccinations came from the knowledge of his ancestors, as opposed to Edward Jenner, the British physician and scientist who is known as "the Father of Immunology" (Riedel, 2005).

One of the greatest successes that stemmed from this partnership is the ongoing relationship between the students, librarians, and professors. Though the course has ended, the students still email both faculty and librarians with links to discussions of information literacy, which are now all over the national news. They are thinking critically about the world around them and the news they receive, which was the purpose of the entire project.

Success and Future Projects

Faced with a social reality that may be influenced, in part, by fabricated information, it is important for students to be prepared to question the authority, validity, meaning, and ethical use of that information. This project on information literacy highlights the fact that many previously credible materials possess their own bias, and students should be trained in critical thinking if they are to push back on hegemonic practices.

Given the success we had with the Fake News presentation to our Public Speaking students, we broadened our audience and the three of us presented at our annual Faculty Colloquium on this topic. With such a positive reception by faculty and librarians, we are moving forward in Fall 2019 to partner with the Honors program to provide a co-taught SPC 2608: Introduction to Public Speaking course in partnership with the library's LIS 1001: Introduction to College Research course. Beyond this, we are currently proposing to partner with English faculty toward a vision that students could take all three of these courses simultaneously and spend one semester focused on information credibility, composition, and oral delivery. This would be an ideal approach, particularly for students majoring in the areas of communication, marketing, converged communication, and legal studies, given how information is currently collated and distributed.

Conclusion

On the topic of Open Educational Resources, there is a continuing challenge regarding the value of information in a capitalistic society. We know, as educators, that knowledge is power. However, as a capitalist system, we also understand that controlling access to information is a billion-dollar industry. We must continue to value information for its inherent worth while being careful not to devalue it societally by making it "free" in a society where "free" equals no worth.

We strongly believe that this project can serve as a model at other universities. From the chapter, we hope it is apparent how FSCJ embraced the OER model through Faculty/Librarian support and advocacy. Without question, challenges both faculty and librarians faced with regard to implementing these aforementioned projects included "raising awareness and acceptance of OER with faculty and administration, an understanding about what defines OER, and how to locate quality resources" (Shapiro). Librarians and faculty alike worked together to address these issues through projects such as those identified in this paper and a great many others.

Librarians were included in the course design process and implementation, as well as creating the supplemental materials such as the digital learning objects. Shannon Dew, the Director of Online Resources at FSCJ, had this to say

about the OER degree program and the way the college approached its implementation: "For any college thinking about starting an OER degree program, I would advise to find your supporters and build a core team with faculty, librarians, instructional designers, and students to look for opportunities to use open textbooks; offer training and coaching around OER adoption and development; designate an individual at your institution to coordinate the OER initiative."

The results of these projects are still being evaluated, but one thing is certain, FSCJ "now has more faculty engaged in the OER discussion and using open resources in classes" than ever before and we have several lead faculty and librarians who are serving as strong advocates to promote these types of projects. From the receipt of the grant until 2019 Summer, FSCJ has been able to save students $1,676,200 (Open Educational Resources, 2020). If you are interested in implementing any of these programs, courses, or projects at your college, please contact the authors directly.

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix

Full text description of Figure 1.

Sample A.A. General Education Academic Degree Plan

First Term

Course I.D. and Title	Credit Hours
ENG1101* English Composition I	3
MGF1106 Topics in College Math	3
ECO2013* Principles of Economics I	3
PSY1012* General Psychology	3
LIS1001[E] Introduction to College Research	3
Total Hours	15

Second Term

Course I.D. and Title	Credit Hours
ENG1102* Writing About Texts	3
STA2023* Elementary Statistics	3
HUM2210 Humanities: Prehistory to Medieval	3
SPC2608* Fundamentals of Public Speaking	3
BSC1005* Life in its Biological Environment	3
Total Hours	15

Third Term

Course I.D. and Title	Credit Hours
AMH2010*[E] U.S. History to 1877	3
DEP2002[E] Child and Adolescent Psychology	3
SYG2000*[E] Intro to Sociology	3
LIT2000* Literature in the Humanities	3
AST1002* Intro to Astronomy	3
AST1002L Intro to Astronomy Lab	1
Total Hours	16

Fourth Term

Course I.D. and Title	Credit Hours
PHI2010[E] Philosophy in the Humanities	3
POS2041*[C] American Federal Government	3
AMH2020*[EC] U.S. History from 1877 to Present	3
REL2300[E] World Religions	3
AMH2092[E] African-American History and Culture, African Origins to 1877	3
Total Hours	15

Total Credit Hours: 61

  * Credit by exam available (CLEP, DSST, Excelsior)

  [E] Notes an elective course

  [C] Satisfactory completion of this course with a "C" or better fulfills the civic literacy graduation requirement.

Mathematics Courses and the Ohio Open Ed Collaborative: Collaborative Course Content Building for Statewide Use

DANIEL DOTSON, ANNA DAVIS, AMANDA L. FOLK, SHANNA JAGGARS, MARCOS D. RIVERA, AND KAITY PRIETO

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Project Overview

Institutional System: Ohio Open Ed Collaborative

System Type: public, community college, undergraduate, postgraduate

Project Discipline: Mathematics

Project Outcome: OER courses

Tools Used: OER Commons, Ximera, LaTeX, Statewide Library Consortium

Resources Included in Chapter:

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1. See Appendix A for authors' roles.

- Team Roles and Responsibilities
- Team Workflow
- Sample Instructional Materials
- Illustrations

2020 Preface

With the cost of higher education increasingly on the minds of students and a rising amount of course time being spent in a virtual environment, initiatives to provide online course content at low or no cost to students are an important way to make higher education more affordable. The initiative described in this chapter is an example of how Ohio tackled this issue, providing access to course content for use across the state. The materials developed are fully available online and are provided at no additional cost to students. This chapter focuses on effort to develop materials for mathematics courses, but the Ohio Open Ed Collaborative included courses from multiple disciplines for the Ohio higher education community. With users beyond Ohio able to adapt most of the content as well, this initiative adds valuable content that enables course instructors around the world to adapt affordable online content for their classes.

–Daniel, Anna, Amanda, Shanna, Marcos, & Kaity

Introduction: Course Content and Affordability

Funded by a $1.3 million grant from the Ohio Department of Higher Education (ODHE), the Ohio Open Ed Collaborative (OOEC) is a multi-institutional initiative that seeks to make **high-impact courses** at two- and four-year institutions across the state more affordable through the curation and creation of high-quality, peer-reviewed learning materials that are aligned to Ohio's Transfer Assurance Guides (TAGs). This chapter focuses on several OOEC mathematics courses, including the processes of team member selection, project workflow, content selection/creation, review, and making course content available. The chapter ends with evaluations of the project thus far and recommendations for those wishing to begin a similar initiative.

Textbooks and other course materials represent a major cost for college students, particularly for community college students who are expected to budget an estimated $1,440 per year, or almost 40% of in-state tuition and fees, on course materials (College Board, 2018). While libraries have supported affordability of course content for some time via services such as course reserves, e-reserves, online journals, and more recently, ebooks and streaming media, free and **open educational resources (OER)** are becoming a strong focus of affordability initiatives.

In order to scale up OER offerings and adoption, institutions and states have begun to create large collaboratives, such as Florida's The Orange Grove, Open SUNY Textbooks, Affordable Learning Georgia, Open Oregon, and British Columbia's BCcampus OpenEd. Excellent overviews of OER and the affordability landscape are provided by Open Textbooks: The Current State of Play and College Textbook Affordability: Landscape, Evidence, and Policy Directions. In general, these affordability initiatives vary widely. Some are resource-focused; for example, the Open Textbook Library makes use of content reviewed by experts, which can be adopted in a variety of courses. Others are course-focused, such as Ohio State University's Affordable Learning Exchange (ALX), which supports instructors in creating or curating affordable content for specific courses. In Ohio, ALX and other institutional initiatives worked together to create a new collaborative that would stretch across the state to support 22 of Ohio's most highly-enrolled college courses.

Project Background

Ohio Institutions and TAGs

According to the Ohio Department of Higher Education (n.d.-b), Ohio is home to:

- 14 public universities
- 23 public community colleges
- 78 independent non-profit colleges
- Multiple for-profit colleges/universities (not targets or members of OOEC)

In fall 2017, the total enrollment for these institutions was 647,688 (Ohio Department of Higher Education, n.d.-a), with 77% of the enrollment coming from public institutions. A statewide textbook affordability initiative thus has the potential to have major impact.

ODHE coordinates and supports Ohio's higher education sector. Among other functions, ODHE coordinates the state's TAGs, which ensure that students enrolled in the same course (for example, Calculus I) at different Ohio institutions are taught according to the same learning objectives. These TAGs were available for all of the mathematics courses that will be discussed in this chapter, except Abstract Algebra (which adapted its learning objectives from Isaacs et al. [n.d.] via the [Mathematical Association of America](#)). These guidelines served as a content rubric and starting point for the mathematics teams to make sure their developed content covered all standard requirements.

Grant Background and ODHE

In 2017, ODHE released a request for proposals under its Innovation Grant Program and received three distinct proposals related to textbook affordability from three different higher education institutions: North Central State College (a two-year technical college that led a proposal from the larger Ohio Association of Community Colleges, or OACC), Ohio Dominican University (a private four-year liberal arts college), and The Ohio State University (led by the university's ALX team). Rather than fund each of the individual proposals, ODHE challenged the three groups to work collaboratively to support the curation of high-quality, peer-reviewed OER and other affordable learning materials through a $1.3 million grant. OOEC is the result of this collaboration.

Overview of OOEC and the Three Cohorts

OOEC consists of 18 community colleges and universities led by North Central State College, The Ohio State University, and Ohio Dominican University. A cross-institutional steering committee guides OOEC, including representatives from each of the lead partner institutions, as well as representatives from the Ohio Association of Community Colleges and the statewide library consortium, OhioLINK. In order to curate content for 22 courses, the steering committee divided the courses into three separate cohorts, with the first cohort of seven courses serving as a de facto pilot. For each course, the committee worked to recruit, manage, and compensate a "content team," which typically consisted of three to four community college and university faculty who were currently teaching the course, as well as a university librarian with expertise in the subject area.

Most of OOEC's 22 courses had high-volume annual enrollments across multiple institutions—that is, OOEC selected

them due to their potential for a large impact on affordability. However, given the presence of advanced math courses in one of the original grant proposals, OOEC selected three higher-level (and smaller-enrollment) math courses for inclusion.

Courses & Project Workflow

Course Selection

The OOEC steering committee examined mathematics courses for potential inclusion and selected ones with high frequency of offerings across the state and high enrollment at many institutions. The committee chose high-level mathematics courses based upon perceived needs, available expertise, and content opportunities. The courses were balanced across the cohorts as outlined in Table 1.

Table 1

Mathematics Courses and their Cohort

	Cohort 1 January – August 2018	Cohort 2 June – December 2018	Cohort 3 January – August 2019
High Enrollment[2]	–	Calculus I and II[3]	Precalculus College Algebra
Higher Level	Linear Algebra	Ordinary Differential Equations	Abstract Algebra

Assembling the Content Team

The OOEC steering committee recruited team members for each cohort with a call for volunteers via the OOEC website and direct emails. The application process involved justification for applying and letters of support from the applicant's department administration. The committee discussed and vetted the applications, with a goal to have a balance of institution types on each team to reflect Ohio's diverse higher education landscape. OOEC then notified the team members of their acceptance.

Each team had the following team members:

- *Content experts* were typically instructors who previously taught the course. The OOEC steering committee made an effort to have instructors from different institution types (size, public, private, community college, etc.). One (or two for larger teams) of these instructors served as team lead. Content experts also committed to teaching the course using the developed content, provided that adoption of such content did not go against departmental

2. An introductory statistics course was in Cohort 1, but is not covered in this chapter.
3. Usually taught as separate courses, these were combined into one working group. So technically, seven courses were created by six project teams.

policies.

- *Librarians* identified resources available for use for these courses, such as a detailed list of potential books. They also responded to needs for pedagogical information related to course concepts, requests for supplemental content (e.g., videos), answered basic copyright/fair use questions, and addressed other information use/resource needs.
- *Reviewers* were content experts (instructors who have taught the course) who vetted the created content and gave feedback. This role also gave peer-review credence to the course.

Team members were compensated in accordance with the role they performed on each content team. The baseline compensation for roles was as follows:

- Team lead: $2,000
- Content experts: $1,500
- Librarian: $1,000
- Reviewers: $500

Additional compensation of up to $3,000 per team member was available for special projects.

Examining the teams' 42 members (some on multiple teams) and their institutions, one can see the variety of institution types. There were 15 different institutions on the mathematics teams and 12 Carnegie Classification (Basic) levels. See Table 2 for team member breakdown of Ohio institution type and Appendix B for the full details of the mathematics team members.

Table 2

Mathematics Team Member Counts by Institution Type

Institution Type	# of Team Members
Nonprofit Independent	13
Public Community College	10
Public University	19

Team members were given additional support to make sure work was completed. Some major components of support were:

- **Copyright**: A librarian who specialized in copyright was available to answer copyright questions as needed, although the team librarian usually addressed basic copyright questions.
- **Meetings and logistics**: An OOEC project manager was assigned to each team to make sure the team was on track, serve as a liaison to the OOEC steering committee, and coordinate meetings.
- **Infrastructure**:
  - OhioLINK (the statewide academic library consortium) provided hosting assistance for the OOEC information and landing site, with content hosted by a branded **microsite** version at OER Commons. OhioLINK also provided ebook, journal article, and other proprietary scholarly content. OER Commons also served as a primary search tool to aid in the discovery of OER for use in the courses.
  - Ximera: Some of these courses made use of the **Ximera** platform. The developers of Ximera provided additional assistance and workshops to help team members develop the course. Ximera makes use of **LaTeX**.

LaTeX, used to ensure proper display of mathematical content, was a common need, and many OER mathematics texts (and other OER materials) provide LaTeX files so content can be easily edited in the manner needed.

Teams' Workflows

Workflows differed somewhat from course to course and improved as teams integrated lessons learned from previous cohorts. Generally, the workflow proceeded as outlined in Figure 1.

Figure 1

Team Workflow
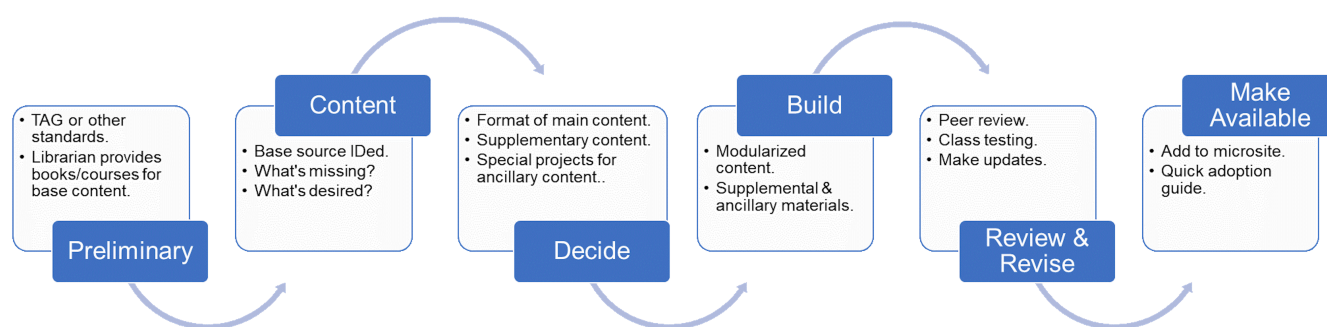
Note. Image description available in Appendix F.

While a lot of this work was done asynchronously, in-person meetings included a full-day kickoff workshop at the beginning of the cohort (to meet for the first time and begin work), regular virtual meetings (to discuss major issues and make decisions), and for some teams, a Ximera orientation workshop. See Figure 2 in Appendix C for a more in-depth workflow description.

Content Creation/Selection

Because the course content was required to be freely available for state or independent non-profit institutions in the state of Ohio, teams chose to use content from the following categories:

- **Freely available existing content**: Content that is free for anyone to use, often broadly called Open Educational Resources (OER). These materials tended to fall into one of these sub-categories:
  - **True OER**: Designed to be distributable and adapted to others' needs with few restrictions (e.g., CC BY or CC BY-NC licenses).
  - **Free, but with restrictions**: While not fitting some definitions of OER, these are often found on OER sites. They may fall under copyright or CC-ND licenses.
- **Originally produced content**: Teams could create their own original content or adapt it from other content that allowed them to do so.

Teams were also advised that free content is available to Ohio non-profit institutions through OhioLINK. The Linear Algebra team made this information available in their adoption guide, but no team chose to rely on OhioLINK resources for their course package. Thus, all of the mathematics course packages are freely available outside of the state of Ohio.

Items not meeting one of these criteria could not be used, e.g., traditional textbooks requiring student payment or **JSTOR** (not OhioLINK-licensed) content.

For the six mathematics courses, the first step was for the team to determine if they could use pre-existing, high-quality materials as a basis for the course content. Each team's librarian put together a list including books and some online courses from the above categories for the team. The information included:

- Title and link to item
- Author(s)/Editor(s)
- Source for the item (publisher, institution, etc.)
- Usage rights, such as:
  - Copyrighted and available via OhioLINK
  - Free online
    - **Creative Commons license** (each course had a wide range of license types in this category)
    - **GNU license** (usually used for "courses" rather than books, occurred only occasionally)
    - Free online, but fully copyrighted (occurred more times than expected)
- Special information:
  - Discrepancies in usage rights (In some cases, a web page may indicate usage rights different from a PDF.)
  - AIMS approval (American Institute of Mathematics maintains a list of textbooks it recommends for multiple mathematics courses.)

A more basic list was supplied in Cohort 1 that included linked titles and OER vs. OhioLINK access. Based on the questions and information needs from the team, the above information was provided to Cohorts 2 and 3 teams. In addition to whether they were open or OhioLINK accessible, the lists included whether items were AIMS approved and their more detailed license info (copyright, Creative Commons, GNU). With this information, the content experts vetted the items and chose what would serve as the basis of the course content. See Table 4, Appendix D, for the items selected and links to the courses on their microsite.

Any supplementary content (books, chapters, articles, videos, etc.) had to fall under the established access rules (OER or available via OhioLINK) for inclusion in the course. For example, teams excluded, although they would have been useful, JSTOR content suited for undergraduate mathematics and streaming videos that were local library access only.

Particular to the mathematics courses, teams desired that the sources serving as base content be modularized to specific topics within that course. For example, having modules for individual topics specified in the course's TAG rather than a chapter covering multiple TAG topics. Choosing titles with an open license allowing for derivatives (and thus modularization) was a critical need. Several teams took the step of breaking up content into very distinct **modules**. Courses with modularized content made sure to maintain appearance consistency. If placed on Ximera, additional functionality, such as machine-graded exercises and embedded **Desmos** interactives, could be inserted as well. Base content with full copyright or more restrictive licenses would not allow this adaptation.

If required information was missing from the base content, or if the base content was deemed to be less than optimal for achieving the TAG objectives, teams chose to create original content. The Linear Algebra team, for example, created most of the course content in an effort to introduce more interactivity. To achieve this, the team (1) agreed on specific notation conventions; (2) utilized the Ximera styling document created by the developers of Ximera; and (3) utilized an Overleaf template created by the team as a starting point for each module.

Teams that chose not to use Ximera instead used tools that they were already comfortable with, such as Word, Excel, and Desmos to create activities and worksheets. All teams used Google Drive for basic communication. When working on original content, the teams used GitHub and Overleaf to facilitate collaborative editing. Some of these tools required a learning curve, although it was not as significant as Ximera.

Ancillary Content

OOEC recognized that textbook adoption was not always about the book itself but was sometimes about the **ancillary materials** publishers offered with the text. Publishers offer supplements like problem sets, quizzes, tests, activities, and more to encourage instructor adoption. OER textbooks or ebooks available via libraries do not always include these materials. In response, these desires were met by the special projects portion of the OOEC cohorts. Teams would submit project ideas, and OOEC would examine these proposals to determine if what they added to the course was appropriate, was manageable, and provided value.

The mathematics teams, especially for the lower-level courses, felt it extremely important to make ancillary content available in their courses. Practice problems, interactive activities, problem sets, worksheets, and videos are ideal components for mathematical learning and testing, especially in an online environment. The teams decided what ancillary content fit the course's needs. The teams worked on such projects as the following:

- Compilation of vetted videos to supplement the content. For example, Precalculus and College Algebra both made use of Khan Academy videos via YouTube.
- Interactive content, such as machine-graded exercises in Ximera, Desmos, and **GeoGebra** activities that was integrated and embedded into the related content or offered as supplemental.
- Problem sets and worksheets that align to, but are not embedded within, the content text.
- Lab-like activities that guide students through data-gathering procedures, computations, and interpretation of results.

The teams hope that the ancillary content will encourage potential adopters to see the developed course content as active learning opportunities and also as containing the content that they like as add-ons to standard textbooks. See Appendix E for sample ancillary materials.

Making content available

Once the content was ready to be deployed, it was decided that an [OER Commons OOEC](#) [microsite](#) would serve as the conduit to course materials, even if the materials existed elsewhere. This microsite not only served as an easily linkable and central conduit to OOEC content, but also enabled easy discoverability via the heavily-used OER Commons site, which focuses solely on affordable course content. It also saved OOEC from having to create its own infrastructure since there was a quality one already available. Some courses could have all their content on the site, while others would have an index that led elsewhere. For example, [Linear Algebra](#) has an index and other information listed on the site, but the bulk of the content is on the Ximera platform.

The Linear Algebra, Calculus I & II, Ordinary Differential Equations, and Precalculus teams used [Ximera](#). This platform, available to mathematicians at institutions beyond Ohio State, uses LaTeX to allow for the display of mathematical content. It provides additional options, such as machine-graded exercises and interactive elements, not available on the microsite or many other platforms.

The content could then be used in whole or part by anyone wishing to use it. A "Quick Adoption Guide" is provided in most cases to assist instructors with adopting the content. The teams were required to use Creative Commons license options for content, as any original content allowed. That way, people are more likely to adopt content since they can adapt it to their own needs.

Program Evaluation

A multiyear mixed-methods evaluation is a significant feature of the OOEC initiative. Individual interviews were the centerpiece of the evaluation, exploring the experiences of OOEC team members, as well as the perception of OOEC materials by external instructors who were not involved in the OOEC teams. The evaluation's focus is not on the quality of materials but rather on understanding the strengths and challenges of the collaborative statewide approach. Interviews were designed to investigate why team members were interested in participating as well as the curation and development process. At the time of writing, data collection and analysis are in progress. However, the OOEC evaluation team has already conducted almost 40 interviews; 12 interviewees participated in these mathematics courses. Preliminary themes emerged related to the opportunities and challenges of this unique project, some of which are overarching and others that are specific to the mathematics courses.

Preliminary Emergent Themes

Although the OOEC steering committee and participants recognized there would be many obstacles to broad adoption, particularly by instructors who did not participate in OOEC, adoption among participants and their institutional colleagues was slower than anticipated. Generally, participants reported being proud of what they helped to create, but the timing of project completion (i.e., right before a new semester began) or departmental textbook policies often delayed adoption by a semester or two.

Publishers' efforts to reduce the price of textbooks, particularly digital textbooks, also influenced participant adoption. At roughly the same time OOEC was beginning its work, OhioLINK announced that they had successfully negotiated statewide bulk-discount agreements with several major textbook publishers (although individual instructors and institutions had also negotiated deeply discounted digital textbooks and ancillary materials prior to this). While OhioLINK's successful negotiation was a victory for the state of Ohio, it did present some unanticipated challenges for the OOEC initiative. Even for instructors who felt positively about the OOEC final product(s) they helped to create, many

noted that their traditional commercial textbooks were now much more affordable for students under the bulk-discount negotiation. Instructors understood the amount of work involved with switching to a new textbook, and if they were already content with their bulk-discount textbook, the effort to adopt OOEC content did not necessarily seem to be worth the modest savings (often $30 or less) over the bulk-discount price.

Because this project was unique and, to a certain extent, experimental, OOEC participants were occasionally uncertain about what they were being asked to develop. For example, one of the mathematics participants initially thought their content team was going to create a new textbook and was surprised to learn that an acceptable OER textbook already existed and the team would be creating supplementary or ancillary materials to support that textbook's adoption. With each subsequent cohort, the project management team had a better understanding of the various difficulties that teams may face and could better anticipate needs and improve communication. Several instructors who participated in multiple cohorts remarked on these improvements in their interviews. Although a couple of the content teams did report some difficulty with team dynamics, overall the teams reported working well together. Teams came to a shared understanding of their purpose and product, as well as delegating work based on interests and expertise. Regular meetings with the project manager(s) supported the content teams' ability to work well together and address any issues that were starting to bubble up.

Technology in particular stood out as a common theme among the mathematics content teams. Some teams used Ximera to create instructional content and/or ancillary materials (activities, problems, etc.). While Ximera had developed consistent processes for feedback and product improvement, the learning curve was somewhat steep for some content team members. In addition, some non-Ohio State University adopters reported that Ximera and their local learning technologies, such as the course management system, were not interoperable. In some cases, adopters' institutions could implement potential solutions to these issues, but IT colleagues were not always willing to investigate or execute these solutions. While Ximera-related issues did not necessarily prevent adoption of OOEC-created materials, they did create extra work for these instructors. Those wishing to promote Ximera content needed to find solutions to ease adoptions by colleagues less familiar with the platform.

Lessons Learned

Authors' Recommendations

What recommendations do the authors have from their experience? If someone wants to replicate such a project, especially at a multi-institution level, the following are key components to consider:

Institutions

- Ideally, get multiple institution types and sizes involved. There will be better buy-in if the representation is more diverse.
- Working through a library consortium is one possible path.

Team Members

- Consider team members for other roles. Content experts who developed course materials on one team can serve as leads or reviewers on another team.

- Use librarians for their expertise in finding potential content options, pedagogical materials, and supplemental or ancillary content (like videos, readings, etc.). They can also assist with copyright questions.
- The application process helped to gather those interested in the projects. Encourage people doing similar work at their institution to apply. OOEC had many members on more than one team.
- One major lesson was to have all team members come on board from the beginning so there is less need to "catch up" or revisit anything.

Content types

- When examining the openly available items for potential inclusion as course content, the types of licenses varied. Many had various Creative Commons licenses, some had GNU licenses, and a few were fully copyrighted. The authors thus strongly encourage examining usage rights closely as the open market varies quite widely.
- Consider available library resources (e.g., ebooks, journals, streaming media). If multiple institutions are working together, this is where a consortium is a valuable ally.
- If wanting to adapt an OOEC course at another institution, many courses are mostly, if not entirely, OER content that can be modified. Any sources used from OhioLINK are from a major publisher that can often be provided locally or substituted with similar content. All of the mathematics course packages detailed in this chapter are freely available outside of the state of Ohio.

Don't forget the ancillary stuff

- This is the content that gets many textbooks adopted. Question banks, practice problems, activities, etc. will all get people more interested in adopting.
- Strongly consider making these a part of similar projects.

Make it active

- The teams sought to come up with interactive content. They did more than just share an affordable book title and call it done.
- Content containing more than just readings will further attract people to adopt.

Share ideas

- Idea sharing was a significant part of the project. All team members, not just the content experts, should offer ideas and feedback throughout the course development.
- Consider issues beyond content, such as pedagogy, accessibility, and technology.

Expect big ideas

- Expect that people will have some rather big ideas about the content or ancillary materials.
- Team members experienced with big projects can help vet these and can help make them more achievable.

Expect time issues

- The semester will get in the way. Expect pain points in a typical semester to take you away from working on such a project.
- There will likely be delays. Try to make the schedule flexible so that there is room for extensions.

Test it out

- If you are teaching the course you are working on, try out some of the content as it is developed.
- Several teams had members try out content in their own courses. One team had a student test activities.

Conclusion

The authors' experiences with the OOEC project were extremely valuable. The process of creating content for these mathematics courses, in addition to the other courses, will hopefully result in adoption at multiple institutions across Ohio, and we hope to see the value of this work spread as instructors begin adopting content across the state and beyond. While some institutions and even entire states are working on their own affordability projects, others are just beginning or are only thinking about it. The authors encourage others to join this valuable movement.

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix A: Authors' Roles

The authors' roles were as follows:

Daniel Dotson

- Associate Professor, The Ohio State University, dotson.77@osu.edu
- Librarian for all of the mathematics courses covered in this chapter. Has a mathematics background, in addition to librarianship, which helped but was not required.
- Identified appropriate base content (books/courses free online or available via the statewide OhioLINK consortium) for potential use in the course and shared for further vetting by team members.
- Found requested supplementary materials (videos, open datasets, etc.) and pedagogical information sources.
- Addressed basic usage rights.
- Provided other recommendations/feedback.

Anna Davis

- Associate Professor, Ohio Dominican University, davisa@ohiodominican.edu

- Content expert and team lead for three upper-level courses: Ensured curated and created content was appropriate, of good quality, and within the scope of the project.
- Project manager for one course: Ensured the course project moved forward in a timely manner and met its required goals.
- Member of the OOEC Grant Steering Committee.

Shanna Jaggars

- Assistant Vice Provost, The Ohio State University, jaggars.2@osu.edu
- Primary Investigator, Evaluation of the OOEC collaborative projects.

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- Evaluation of the OOEC collaborative projects.

Appendix B: The Teams' Members

Table 3: Team Members & Institutional Information

		Person	Role	Institution	Type	Carnegie Classification (Basic)[4]
Cohort 1	Linear Algebra	Anna Davis	Team Lead	Ohio Dominican University	Nonprofit Independent	Master's Colleges & Universities: Larger Programs
		Paul Bender	Content Contributor	Ohio Dominican University	Nonprofit Independent	Master's Colleges & Universities: Larger Programs
		Rosemarie Emanuele	Content Contributor	Ursuline College	Nonprofit Independent	Master's Colleges & Universities: Medium Programs
		Paul Zachlin	Content Contributor	Lakeland Community College	Public Community College	Associate's Colleges: High Transfer-High Nontraditional
		Daniel Dotson	Librarian	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Jim Fowler	Reviewer	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Jim Cottrill	Reviewer	Ohio Dominican University	Nonprofit Independent	Master's Colleges & Universities: Larger Programs
Cohort 2	Calculus I & II	Jim Fowler	Team Lead	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Rita Ralph	Team Lead	Columbus State Community College	Public Community College	Associate's Colleges: Mixed Transfer/Career & Technical-High Nontraditional
		Nela Lakos	Content Contributor	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Bart Snapp	Content Contributor	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		James Talamo	Content Contributor	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Xiang Yan	Content Contributor	Edison State Community College	Public Community College	Associate's Colleges: Mixed Transfer/Career & Technical-High Nontraditional
		Daniel Dotson	Librarian	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Thomas Needham	Reviewer	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Carl Stitz	Reviewer	Lakeland Community College	Public Community College	Associate's Colleges: High Transfer-High Nontraditional
	Ordinary Differential Equations	Anna Davis	Team Lead	Ohio Dominican University	Nonprofit Independent	Master's Colleges & Universities: Larger Programs

4. See "Institutional Lookup."

		Justin Greenly	Content Contributor	Franciscan University of Steubenville	Nonprofit Independent	Master's Colleges & Universities: Medium Programs
		L. Felipe Martins	Content Contributor	Cleveland State University	Public University	Doctoral Universities: High Research Activity
		Paul Zachlin	Content Contributor	Lakeland Community College	Public Community College	Associate's Colleges: High Transfer-High Nontraditional
		Daniel Dotson	Librarian	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Emi Arima	Reviewer	Columbus State Community College	Public Community College	Associate's Colleges: Mixed Transfer/Career & Technical-High Nontraditional
Cohort 3	Abstract Algebra	Anna Davis	Team Lead	Ohio Dominican University	Nonprofit Independent	Master's Colleges & Universities: Larger Programs
		Matt Davis	Content Contributor	Muskingum University	Nonprofit Independent	Master's Colleges & Universities: Small Programs
		Robert Kelvey	Content Contributor	College of Wooster	Nonprofit Independent	Baccalaureate Colleges: Arts & Sciences Focus
		Daniel Dotson	Librarian	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Jim Cottrill	Reviewer	Ohio Dominican University	Nonprofit Independent	Master's Colleges & Universities: Larger Programs
		Bart Snapp	Reviewer	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
	College Algebra	Nicholas Shay	Team Lead	Central Ohio Technical College	Public Community College	Associate's Colleges: High Career & Technical-High Nontraditional
		Rachida Aboughazi	Content Contributor	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Evelyn Kirschner	Content Contributor	Columbus State Community College	Public Community College	Associate's Colleges: Mixed Transfer/Career & Technical-High Nontraditional
		David Kish	Content Contributor	Ohio Dominican University	Nonprofit Independent	Master's Colleges & Universities: Larger Programs
		Daniel Dotson	Librarian	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Fauna Donahue	Reviewer	University of Rio Grande	Nonprofit Independent	Baccalaureate/Associate's Colleges: Mixed Baccalaureate/Associate's
		Jared Stadden	Reviewer	Kent State University Geauga	Public University	Baccalaureate/Associate's Colleges: Associate's Dominant

		Kameswarrao Casukhela	Team Lead	The Ohio State University Lima	Public University	Baccalaureate/Associate's Colleges: Mixed Baccalaureate/Associate's
		Luiz Felipe Martins	Content Contributor	Cleveland State University	Public University	Doctoral Universities: High Research Activity
		Ieda Rodrigues	Content Contributor	Cleveland State University	Public University	Doctoral Universities: High Research Activity
	Precalculus	Teri Thomas	Content Contributor	Stark State College	Public Community College	Associate's Colleges: High Career & Technical-Mixed Traditional/Nontraditional
		Daniel Dotson	Librarian	The Ohio State University	Public University	Doctoral Universities: Very High Research Activity
		Alice Taylor	Reviewer	University of Rio Grande	Nonprofit Independent	Baccalaureate/Associate's Colleges: Mixed Baccalaureate/Associate's
		Rita Ralph	Reviewer	Columbus State Community College	Public Community College	Associate's Colleges: Mixed Transfer/Career & Technical-High Nontraditional

Appendix C: Team Workflows

Figure 2

In-Depth Team Workflows

1 What source(s) works as basis for course content?	→	Librarian curated a list of OER books/courses and OhioLINK-owned unlimited user ebooks as potential candidates. Content experts vetted choices and settled on appropriate choice.
2 How should the main course content be presented?	→	Discussions as to how to present the main content occurred. Options included: • Use the chosen content as is. • Adapt the content in some way. For example, modularize into distinct topics. • Use the content as a basis to place on a learning platform (Example: The Ohio State University's Ximera platform).
3 What's missing?	→	Discussion about what else is needed – does the chosen content lack something? What can make the course better? For example: • Something deemed required by instructors, especially if a TAG requirement. • Something needing further details. • Something that is needed to enhance the content, such as activities, videos, assignments. • Something that would be "good to have" topic-wise, but not a requirement.
4 Build content	→	Based upon the previous decisions, required content would be built. • Developing the main content for the course was the major project for the team. • Anything else deemed required was developed. • Readily available existing content, such as videos, could be integrated at this point.
5 Special projects	→	Based upon the previous decisions, extra content proposed as special projects. These were vetted and approved. Examples: • Interactive activities. • Problem sets. • Assignments. Note: In some cases, these may have been incorporated into the content flow rather than separate.
6 Review	→	Reviewers gave feedback on the entire course content. Sometimes this happened iteratively as content was developed. This also gave a form of quality check and peer review, adding credence to the developed content.
7 Revise	→	Reviewer feedback is used to make changes to improve the content.
8 Make available	→	The course content, including any special projects, was made available via the Microsite (or indexed, if content lived elsewhere). It could then be adopted/adapted by any instructor of the course across Ohio or beyond.

Appendix D: Courses and Base Content

Table 4

Selection of Base Content

Cohort	Course	Selection for Basis of Course Content
1	Linear Algebra	*Linear Algebra with Applications* W. Keith Nicholson https://lyryx.com/linear-algebra-applications/ License: CC BY *A First Course in Linear Algebra* Ken Kuttler https://lyryx.com/first-course-linear-algebra/ License: CC BY
2	Calculus I Calculus II	Ximera https://ximera.osu.edu The Ohio State University Ximera Team License: CC BY-NC-SA (Ximera calculus derived from Community Calculus, License: CC BY-NC-SA) *Note that this platform already had calculus content on it developed for The Ohio State University. It was decided to continue with the content and platform.*
2	Ordinary Differential Equations	*Elementary Differential Equations with Boundary Value Problems* William F. Trench https://digitalcommons.trinity.edu/mono/9/ License: CC BY-NC-SA
3	College Algebra	*College Algebra* Jay Abramson https://openstax.org/details/books/college-algebra License: CC BY
3	Precalculus	*Precalculus* Carl Stitz and Jeff Zeager http://www.stitz-zeager.com License: CC BY-NC-SA
3	Abstract Algebra	*Abstract Algebra: Theory and Applications* Thomas W. Judson http://abstract.ups.edu License: GNU Free Documentation License

Appendix E: Sample Mathematics Instructional & Ancillary Materials

Figure 3a

XIMERA Example

As before, we will map vectors of V and W to their coordinate vectors. Where are the coordinate vectors located?

(a) $[\mathbf{v}_1]_{\mathcal{B}}$ and $[\mathbf{v}_2]_{\mathcal{B}}$ are elements of ▢ — ?

(b) $[\mathbf{w}_1]_{\mathcal{C}}$ and $[\mathbf{w}_2]_{\mathcal{C}}$ are elements of ▢ — ?

Now we find the coordinate vectors.

(a)

$$[\mathbf{v}_1]_{\mathcal{B}} = \begin{bmatrix} \square \ ? \\ \square \ ? \end{bmatrix} \quad \text{and} \quad [\mathbf{v}_2]_{\mathcal{B}} = \begin{bmatrix} \square \ ? \\ \square \ ? \end{bmatrix}$$
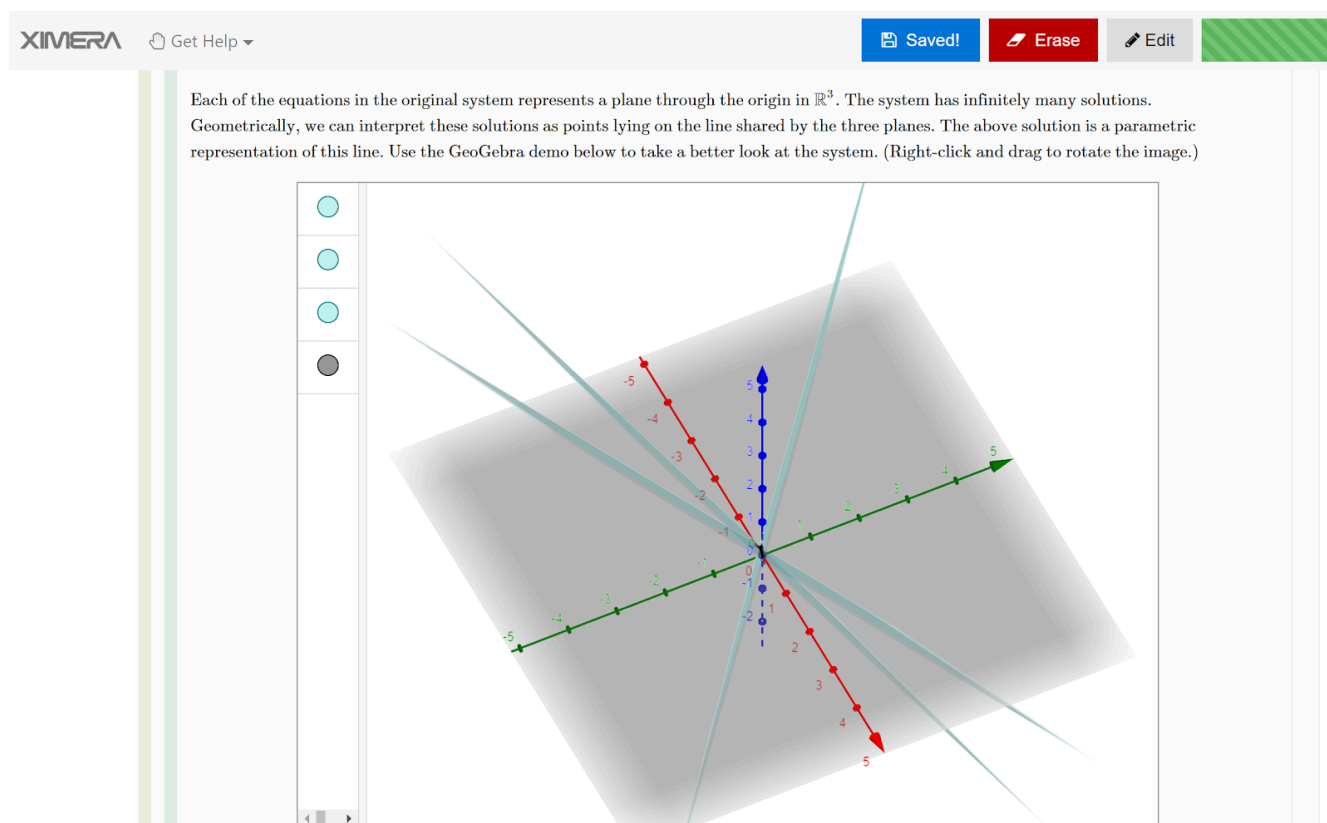
(b)

$$[T(\mathbf{v}_1)]_{\mathcal{C}} = \begin{bmatrix} \square \ ? \\ \square \ ? \end{bmatrix} \quad \text{and} \quad [T(\mathbf{v}_2)]_{\mathcal{C}} = \begin{bmatrix} \square \ ? \\ \square \ ? \end{bmatrix}$$

Note. Machine-graded questions include multiple choice and free-response options, among others. (*Linear Algebra learning modules*)

Figure 3b

GeoGebra Example

Each of the equations in the original system represents a plane through the origin in $\mathbb{R}^3$. The system has infinitely many solutions. Geometrically, we can interpret these solutions as points lying on the line shared by the three planes. The above solution is a parametric representation of this line. Use the GeoGebra demo below to take a better look at the system. (Right-click and drag to rotate the image.)

Note. Ximera allows content creators to include interactive GeoGebra activities directly into content modules. (*Linear Algebra learning modules*)

Figure 4a

Desmos Example

There are two different points on the curve with the x–coordinate $x = \frac{\sqrt{2}}{2}$.

The advantage of the expression for $\frac{dy}{dx}$ that we obtained above is that it can be used for computation of the slope of the tangent line at each of these two points, and at any other point on the curve, where defined.

So, for the second part of the problem, we simply plug $x = \frac{\sqrt{2}}{2}$ and $y = \frac{\sqrt{2}}{2}$ into the expression above, hence the slope of the tangent line at this point is [?]. For the third part of the problem, we simply plug $x = \frac{\sqrt{2}}{2}$ and $y = -\frac{\sqrt{2}}{2}$ into the expression above, hence the slope of the tangent line at this point is [?].

We can confirm our results by looking at the graph of the curve and our tangent line:

Note. Embedded Desmos demonstrations add interactivity to Calculus I materials. (*Mooculus Calculus I: Implicit Differentiation*)

Figure 4b

XIMERA Input Example

Theorem. (Chain Rule) If f and g are differentiable, then

$$\frac{d}{dx} f(g(x)) = f'(g(x))g'(x).$$

It will take a bit of practice to make the use of the chain rule come naturally, it is more complicated than the earlier differentiation rules we have seen. Let's return to our motivating example.

Example. Compute:

$$\frac{d}{dx} \sin(1 + 2x)$$

Explanation. Set $f(x) = \sin(x)$ and $g(x) = 1 + 2x$, now

$$f'(x) = \boxed{\cos x} \; ✔ \qquad \text{and} \qquad g'(x) = \boxed{2} \; ✔.$$

Hence

$$\frac{d}{dx}\sin(1+2x) = \frac{d}{dx} f(g(x))$$
$$= f'(g(x))g'(x)$$
$$= \cos(\boxed{}\,?\,) \cdot \boxed{}\,?$$
$$= 2\cos(1 + 2x).$$

Note. Ximera supports symbolic as well as numeric input. Students enjoy the instant feedback. ([Mooculus Calculus I: Chain Rule](#))

Figure 5a

Ancillary Material Example

Every section of the **Open STAX** text is accompanied by a guide to free resources such as **Desmos activities** and **videos**.
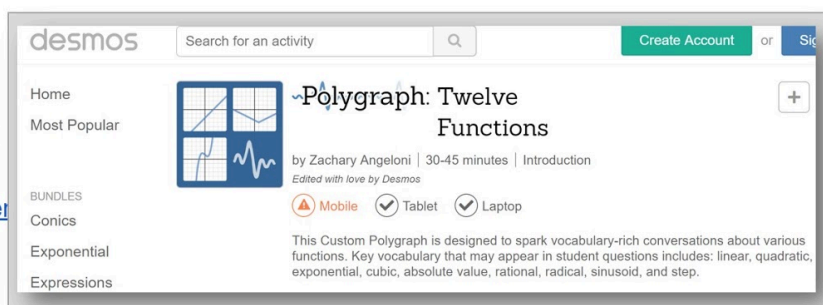
3.1: Functions and Function Notation

Functions Bundle: ([https://teacher](#)
- Graphing Stories
- Function Carnival, Part 2
- Commuting Times
- Card Sort: Functions

Polygraph: Twelve Functions
([https://teacher.desmos.com/polygraph/custom/560c53f631e47ee40c824ec5](#))

desmos — Search for an activity — Create Account or Sig

Home
Most Popular

~Polygraph: Twelve Functions
by Zachary Angeloni | 30-45 minutes | Introduction
Edited with love by Desmos

⚠ Mobile ✔ Tablet ✔ Laptop

This Custom Polygraph is designed to spark vocabulary-rich conversations about various functions. Key vocabulary that may appear in student questions includes: linear, quadratic, exponential, cubic, absolute value, rational, radical, sinusoid, and step.

BUNDLES
Conics
Exponential
Expressions

Note. Ancillary materials created by the College Algebra team include compilations of Desmos activities and worksheets to accompany every section of the OpenStax text.

Figure 5b

Audio/Visual Ancillary Material Example

Worksheets contain links to relevant media.

> **Extend / Enhance**
>
> 13. Listen to or read the following story from NPR (click on the mouse icon). Then answer the following questions.
>
>   A. How is algebra different from arithmetic?
>
>   B. Have you ever used algebra in your everyday life? If not, how do you think you will use it someday?

NPR: What do we need Algebra for?

Note. Ancillary materials may include audio or visual options, such as this College Algebra activity based on an NPR conversation with mathematician Keith Devlin.

Appendix F

Figure 1 Long Description

[Figure 1: Team Workflow](#)

- Preliminary
  - TAG or other standards.
  - Librarian provides books/courses for base content.
- Content
  - Base source IDed.
  - What's missing?
  - What's desired?
- Decide
  - Format of main content.
  - Supplementary content.

- ◦ Special projects for ancillary content.
- Build
  - ◦ Modularized content.
  - ◦ Supplemental & ancillary materials.
- Review & Revise
  - ◦ Peer review.
  - ◦ Class testing.
  - ◦ Make updates.
- Make Available
  - ◦ Add to microsite.
  - ◦ Quick adoption guide.

OPEN PEDAGOGY AS OPEN STUDENT PROJECTS

Library Support for Scaffolding OER-enabled Pedagogy in a General Education Science Course

LINDSEY GUMB AND HEATHER MICELI

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Project Overview

Institution: [Roger Williams University](#)

Institution Type: private, liberal arts, undergraduate, postgraduate

Project Discipline: General Education Science

Project Outcome: student-created websites

Tools Used: Google Drive, Google Sites

Introduction

This chapter describes the collaboration between Dr. Heather Miceli, Adjunct Professor of CORE 101: Scientific Investigations, and Lindsey Gumb, Scholarly Communications Librarian & Assistant Professor at Roger Williams University (RWU) in which **OER-enabled pedagogy** has been incorporated into a general education science course for non-science majors. The overarching goal of this collaboration has been to replace the course's static and 'disposable' final paper and poster presentations with **Google Sites** that will serve as learning objects developed by non-science majors, for non-science majors. Students voluntarily opt to openly-license their Sites, which permits each subsequent semester's cohort of students in CORE 101 to contribute to the expansion of this scholarship, dependent on their own

relevant areas of interest. As a faculty member and librarian working together to support students in the creation of OER and participation in OER-enabled pedagogy, the pair has found it is necessary to scaffold the very concepts that allow for OER to exist and hope that those just starting out in a similar project can learn from this experience. In addition to highlighting challenges and opportunities pertaining to student OER creation, the authors are excited to share and weave in a parallel narrative that depicts an adjunct's entrance into a community of practice through the library's OER Faculty Fellowship program: an opportunity that has been traditionally out of reach for this under-recognized and under-supported faculty population.

RWU is a mid-sized, private teaching institution located in Bristol, Rhode Island. All RWU undergraduate students participate in the five-course Interdisciplinary Core that composes the school's Core Curriculum, which is built upon learning outcomes from the traditional liberal arts ("Five-Course Interdisciplinary Core," 2018). While these five courses do vary in topic, theme, method and approach, they all seek to help students address the three Core questions that construct this shared foundation of their RWU education: Who am I? What can I know? And based on what I know, how should I act? CORE 101 is taught by both full-time and part-time science faculty at RWU, all of whom, regardless of rank, are encouraged to bring their own experience, passion, and expertise to their sections by building a curriculum around these two broad learning objectives:

1. Investigate questions of societal and personal relevance using scientific knowledge.
2. Describe and actively engage in the scientific process by asking questions, gathering data and drawing evidence-based conclusions.

Heather has been teaching this course regularly since 2014 and focuses her sections around controversial topics where science and society intersect, such as Climate Change, Energy Sources, Vaccines, and Evolution. The vast majority of students enrolled in CORE 101 are non-science majors, because declared science majors are able to opt out of this sequence of the Core Curriculum. Heather has always been passionate about bringing non-majors into these important societal conversations, and after being awarded an OER Faculty Fellowship in 2017 supported by the University Libraries and the Center for Scholarship, Assessment, Learning, Teaching & Technology (CSALT[2]) at RWU, she started seeking alternate ways to engage and empower her students. During her Fellowship she organically developed a powerful, collaborative partnership with Lindsey that has continued to redefine the way she thinks about the library as a curricular partner. For Lindsey, this collaboration has helped her reconsider how her library might redefine and provide information literacy support beyond the traditional **one-shot instruction**.

With support from the library and CSALT[2] Lindsey has been leading the OER Faculty Fellowship program at RWU since spring 2016, which is one of the few paid professional development opportunities on campus that is open to adjunct participation. Faculty participants receive tiered mini-grants to swap out traditional, commercial textbooks for the adoption or creation of OER with returning, advanced Fellows typically focusing on assessment and open pedagogical practices. As an independent teaching institution, RWU's OER awareness and interest has shown a slow but steady increase since the inception of the Fellows program with the majority of participants expressing curiosity around how the associated permissions of openly licensed content can create pathways for innovative teaching and learning. In an effort to support this area of faculty interest, the library with financial support from the Associate Provost, invited Dr. Rajiv Jhangiani to campus in June 2017 to deliver a keynote on OER and open pedagogy. During Dr. Jhangiani's talk he highlighted the idea of **renewable assignments**, built off of Wiley's (2013) concept of the disposable assignment, where students not only become content creators but in doing so are able to actively reclaim agency of their learning. As an audience participant, Heather walked away from Jhangiani's keynote inspired to re-examine her CORE 101 semester-long group projects, where she asks students to select a course-related science topic of interest to research and present. In the past, each group would submit a 10–12-page research paper and then prepare a poster to present their work during the last class meeting. While this final class gathering was often the highlight of the course for both Heather and her students, it also bothered her that nearly all of the students threw away their posters immediately, despite the amount of time and effort invested. Jhangiani's keynote got her thinking: "What would a renewable assignment look like in my CORE 101 class and what support would it require?"

Transitioning to Renewable Assignments

That July, Heather leveraged her OER Fellowship and Lindsey's support to explore some practical options to transform her CORE 101 final assignment into a more dynamic, renewable format that would allow her students to assume increased agency in both their learning and their contributions as scholars. She aimed to keep the assignment's structure in place, because student feedback from previous years showed that they genuinely enjoyed the poster presentations and that learning was taking place: there just had to be a better way to preserve and share this scholarship. After exploring some options together, the pair settled on using Google Sites as a platform for students to create renewable websites that would serve as substitutes for the handmade posters from previous semesters. Having a digital version of the students' work would provide better opportunities for access and preservation, open up new opportunities to enable the [5R permissions of Open](#) (retain, reuse, revise, remix, redistribute),[1] and allow the Sites to be living, collaborative vehicles for student scholarship intended to serve as learning objects for future CORE 101 students.

This was a turning point for Heather. She was about to set out on a brand new pedagogical path for CORE 101 that would in essence require her to re-invent her students' roles from content consumers to content creators and also demonstrate the confidence that they would succeed under her guidance (O'Shea, et al., 2011). Shifting the learning environment to be more centered on the collaboration that occurs with the development of student-generated learning objects would redefine the teacher/student relationship in Heather's course. Heather and Lindsey realized they would need to be more focused on facilitating this process rather than directing it (O'Shea et al., 2011). As the instructor ultimately in charge of their grades, Heather was upfront with her students as she introduced the project, explaining that this would be a completely new approach that would require a lot of communication and trust. The students were being asked to participate in a pedagogical activity that they had likely never tried before and which could potentially elicit fear, uncertainty, and anxiety (Wiley, 2013). She made it clear that student work would not be penalized for shortcomings in the project's logistics, rather, they all would be partners in figuring out what worked, what didn't, and how to make the project more successful for the next cohort. In order to be successful, Heather and Lindsey committed to putting students at the center of this knowledge-making participatory pedagogy. They acknowledged their responsibility to include student voices, and to be open and transparent about each step in the process (Askins, 2008).

Scaffolding 'Open' Concepts

Participating in the creation of renewable Google Sites requires students to develop and exercise new skills to help them understand some of the foundational topics that enable legal and ethical OER creation such as intellectual property, copyright and fair use, open licenses, and author's rights, or as Lindsey and Heather refer to them in this collaboration, **open concepts**. As instructors, the pair has recognized over the span of this collaboration just how important it is to provide sufficient scaffolded instruction and support for these open concept skillsets (Jhangiani, 2017) in order to educate, protect, and empower students to be responsible and consenting open-scholars. OER-enabled pedagogy is still relatively new to both partners at this point, and while Heather is confident in trying new pedagogical approaches and has participated in the OER Faculty Fellowship, she still lacks the confidence to be an authority on these foundational open concepts for her students. Understanding this limitation has been a refreshing reminder for the pair of why their collaboration really is essential, because Lindsey's skill sets as Scholarly Communications Librarian naturally fill this gap.

1. In 2007 David Wiley shared his 4 R's of Open Content (revise, rework, remix, and redistribute), adding the 5th R (retain) in 2014. Openly-licensed content enables and permits the participation in these 5 activities, where copyrighted content would not.

Engaging students in an OER-enabled pedagogy project often requires a true partnership to offer the most authentic level of support.

Intellectual Property, Copyright and Fair Use, & Open Licenses

When this project was first launched in Fall 2017, the authors realized (far too late) at the end of the semester that the majority of student projects were littered with copyrighted images and lacked attributions. Lindsey had only delivered a traditional one-shot instruction session on finding and evaluating research for their Sites, but she and Heather knew that going forward it would be essential to introduce these open concepts and skills at the very beginning of the semester. In hindsight, this gap in student awareness and knowledge is not surprising considering that a majority of college students are not even aware that they own their intellectual property (Muriel-Torrado & Fernandez-Molina, 2015). Further, faculty rarely have time to thoroughly address copyright issues that students may be grappling with both as consumers and creators of information (Rodriguez, et al., 2014). Even if time isn't the issue, as cited in Gumb (2019), faculty and even many librarians are often unaware of basic copyright concepts and thus uncomfortable helping students navigate through the intricacies and nuances of intellectual property due to lack of training.

When educators ask their students to engage in projects that entail the creation of public-facing learning objects (such as their Google Sites), it becomes a little more pressing to ensure that they are familiar with the basics of how intellectual property, copyright and fair use, and open licenses function (Rodriquez, et al., 2014). Guiding students through the delicate balance of sharing and protecting their own (and others') intellectual property is a huge step towards empowering their rights as authors, and it is a skillset that extends beyond the classroom and into their personal lives and future workplaces (Rodriquez, et al., 2014). Prompting students to consider how they expect their own intellectual property rights to be respected with examples that are relevant to their own social media networks makes it much easier to enter into a dialogue about how and why they need to be cognizant of using copyrighted material for their own projects.

During the next semester that Heather taught this course, Lindsey delivered a hands-on workshop geared towards contextualizing intellectual property rights to address the previous semester's issue with students not providing proper citation and attributions in their scholarship. To reinforce these newly acquired skills, Heather incorporated follow up in-class activities that required her students to recall knowledge and apply strategies that were covered in the workshop. This approach has been effective in increasing student learning and understanding of copyright and open-licensing by affording opportunities for practice, feedback, reflection, and additional practice (Wiley, 2019). Too often is the case that librarians are seen as service-providers through the one-shot library instruction model and not as true partners in the learning process with faculty and students (Bowles-Terry & Donovan, 2016). Heather's willingness to incorporate these follow up activities not only benefits student learning but also indirectly creates opportunities for Lindsey to connect with them after the workshop through email and office hours, which academic librarians everywhere will confirm can be challenging outside of the one-shot session (Ippoliti, 2018). Something that has proven to be a vital component in their collaboration is that Lindsey is not merely a guest lecturer nor a reactive problem solver: she is an equal, which has allowed her to re-evaluate her own teaching identity as a librarian and her role in the student learning process (Bowles-Terry & Donovan, 2016).

Open Scholarship & Author's Rights

Many students enter general education science courses with high levels of **science anxiety** (Mallow, 2006) and low confidence. One of the consequences of science anxiety that the authors saw in the first cohort was that they viewed themselves more as consumers of scholarship and less so as creators (Mallow, 2006). Having learned many lessons

during that initial semester, Heather and Lindsey felt it necessary to start deconstructing this fallacy and to empower CORE 101 students to see themselves as contributors to the scholarly conversation. Ippoliti (2018) emphasizes that librarians can be essential in helping students "... develop the confidence necessary to apply towards future endeavors across classes or perhaps even in their daily lives as consumers and creators of information" (p.10). Heather now invites Lindsey to spend a portion of another class period engaging their students in a dialogue about what it means to contribute to the scholarly conversation, and how to start to shift their own identities as participants in the knowledge creation process. The Association of College & Research Libraries (ACRL) Framework for Information Literacy for Higher Education has several frames that can be especially helpful when introducing students to an OER-enabled pedagogy project like ours, but _Information Creation as a Process_, _Authority is Constructed and Contextual_, _Scholarship as Conversation_, and _Information has Value_ stand out as being especially relevant for this project. These particular frames provide a pathway for entering into an honest dialogue with students about the associated responsibility and risk one undertakes when contributing to public-facing authored works, the excitement and empowerment that comes with contributing to the **Knowledge Commons**, and the awareness that knowledge creation is an iterative process.

Academic librarians are accustomed to helping faculty negotiate their author's rights, and Lindsey would argue that they should also be granting the same respect and investing the same effort consulting with students as they engage them in OER-enabled pedagogy. With this notion in mind, Lindsey and Heather led the second cohort of students through a discussion about how their Google Sites would be licensed, including the idea that once a Creative Commons license was selected, applied, and published, it was irrevocable. Having a better grasp on the Creative Commons license options, the class settled on publishing and licensing their work under a CC-BY-NC-SA license so that students in subsequent sections of Heather's CORE 101 would have the ability to expand and improve upon the content. The NC[2] designation was chosen by the students because they were concerned that someone could take their work and profit off of it. The authors understood that there is a bit of controversy in the Open Education community regarding the limitations associated with the NC designation, but they also felt strongly that their students' concerns needed to be recognized and respected as is mirrored in chapter 12 of Elizabeth Mays' edited book A _Guide to Making Open Textbooks with Students_. As academic libraries continue to progress towards open access publishing, leaving students out of these kinds of conversations that center around making scholarship more accessible would be counteractive, unfair, and perhaps even unethical. Integrating these open concepts into students' education and everyday awareness is essential to their success as future contributors and advocates of open scholarship, however, ensuring their agency in participating in such activities is paramount.

The Project in its Current Form

As has been mentioned, the first instance of this project in the fall of 2017 involved the student groups creating the original Sites, however, because Heather and Lindsey were still figuring out the logistics of OER-enabled pedagogy in practice, they hadn't put in place the proper scaffolding to ensure students would be successful. Students now identify science topics that are of interest to them during the first week of the course, spanning from Climate Change, to DNA, to Artificial Intelligence and more. Their first assignment is to review their adopted Site as it currently exists to determine what content is necessary to further its development. For example, last semester the DNA Site already contained information about CRISPR and DNA fingerprinting, so this semester's students have decided to add a section on Cloning. During her first library session with the students, Lindsey piggybacks off of this assignment from Heather and uses it as a launchpad to help students understand that information creation is a process (ACRL Framework, 2015). In order to improve upon the work, students first critically evaluate what has already been started. From there, the students complete a development plan and set their goals for what they wish to accomplish during the semester—this document

2. Creative Commons license component that signifies "Non-Commercial."

is referred back to at the end of the semester to help determine the grade on the project. Students then spend a few weeks collaboratively drafting new content using Google Docs, where their rough drafts are reviewed by other students and Heather. Lindsey leads the students through the open concepts workshop towards the middle of the semester, and the final few weeks of the course are spent moving the content from Google Docs into Google Sites and incorporating any necessary images and media to help illustrate their content area. Lindsey sits in on most "group working days," not actively leading a lesson but rather consulting with each group to lend support on citations, attributions, fair use assessments and locating relevant openly-licensed media for their Sites. The course ends with a public presentation of the student work, open to former students (and authors!) and members of the university community.

Collaboration, Community of Practice & Pedagogical Risks

While this collaboration undoubtedly increased the level of support Heather's students received in participating in an OER-enabled project, she herself also experienced an unexpected parallel benefit. Her status as an adjunct had limited her opportunities to develop a true sense of community on campus prior to her participation in the OER Faculty Fellows program. It is typical for adjuncts to feel isolated from their campus communities (Bell, 2000) and they often lack the opportunity to interact, share their experiences, and be exposed to and embrace current pedagogical advances within their program or institution (Lydon & King, 2009). Like many universities in the United States, RWU relies significantly on part-time, adjunct faculty. As of Fall 2019, IPEDS[3] data reported 209 full-time faculty and 314 adjuncts employed. While she had become somewhat more familiar with the individuals in the instructional technology department, Heather really only knew people within her own department. Participation in the OER Faculty Fellows program introduced Heather to people on campus that she may not have met otherwise, including Lindsey, who was essential in introducing Heather to the breadth of library resources available to her and her students. As an OER Faculty Fellow, Heather was also able to meet faculty from a variety of departments, all working on OER projects in their own courses. One of these individuals, an architecture professor, was attempting a similar renewable, website-based project for his Architectural Structures courses. Heather was able to collaborate and reflect with this faculty member on their similar projects. Research has shown that colleague-to-colleague interaction is an important form of professional development for faculty (Bouwma-Gearheart, 2012; Weimer & Lenze, 1991), and may be one of the most important forms of professional development for adjunct faculty (Miceli, 2018).

Heather has also been introduced to members of the administration, who have supported her throughout the project, which she feels is possibly one of the most important outcomes of this collaboration. Adjuncts traditionally don't take risks when they are teaching for a variety of reasons (Baldwin & Wawrzynski, 2011; Leslie & Gappa, 2002; Schuetz, 2002; Umbach, 2007). Adjuncts may lack sufficient time to conceptualize, plan, and implement a project because they are teaching more courses than a typical full-load at multiple institutions (Ethan & Seidel, 2013; Mueller et al., 2013). Adjuncts often perceive danger in taking risks in the classroom because if there are negative outcomes, their job may be at stake (Burk, 2000; Meixner et al., 2010). Lastly, the costs may outweigh the benefits of revamping pedagogy due to the amount of time it takes versus the rates adjuncts are paid per course. According to the American Association of University Professors (2019), the average part-time salary per course section nationwide is around $4,000, but there are many institutions that report paying $2,500 or less per course. Because Heather had participated in the OER Fellows Program for a couple of years, she was known to the Associate Provost (the program sponsor) and her dean. This has given her

3. IPEDS (Integrated Postsecondary Education Data System) is a system of interrelated surveys conducted annually by the National Center for Educational Statistics. Participation in surveys is mandatory for all institutions that participate in any federal financial assistance programs authorized by Title IV of the Higher Education Act of 1965, as amended.

more confidence in taking some pedagogical risks that has made her OER-enabled pedagogy project more successful in the course. The first major pedagogical change she made was to remove exams from her course and increase the amount of in-class time spent on the OER-enabled pedagogy project. Another change she has made is to move away from her traditional points-based grading system towards more of an "ungrading" approach (Stommel, 2017, 2018). Rather than giving points for turned in assignments, Heather now gives extensive feedback on writing without giving grades until the very end of the course. Both of these changes have resulted in positive feedback from the students, as removing exams reduced their anxiety in a non-majors course, and giving more feedback and less point-based grades allows students to focus more on developing their work rather than just trying to "get the grade." This mimics results others have reported anecdotally (Flaherty, 2019) and as reviewed in the literature by Schinske and Tanner (2014). As Jhangiani (2017) states, "... adopting open pedagogy is simultaneously liberating and terrifying...both successes and failures with the assignment are much more public. But while this opens the instructor to more criticism, it is also an opportunity to share, collaborate, and receive constructive feedback." Heather would never have had the confidence to try these progressive changes to her pedagogy without the support of other faculty and the administration throughout her OER Faculty Fellowship.

Challenges & Opportunities

Technology & publishing platforms: Looking ahead

Heather and Lindsey chose Google Sites as a publishing platform for these OER-enabled projects for a variety of reasons: RWU students already had access to G Suite for Education and it seemed fairly user-friendly, while also offering **responsive web design**. Further, the sites would display well on large, touch screen monitors (a necessity for Heather's traditional end of semester class "poster" session). They wanted more of a website aesthetic and navigation rather than having the students compile their work in textbook format.

While there have been numerous benefits to using Google Sites within the confines of their individual classroom, they acknowledge that Google Sites may not be the best platform for sharing their content with others wishing to expand upon or revise it. As it stands, Heather is the "owner" of all of the different content sites. Each semester she adds students as editors without publishing permissions. She publishes the new content at the end of each semester, making the students' scholarship live. With this system in place, students do not have access to make revisions to the final version once it is published. A copy of each website is archived on the project's homepage to both illustrate the evolution and to retain a **copy of record**. Plans are in place to explore more formally indexing the Sites in OER repositories.

Another concern is that while the Sites are available for reading by the public, there is no easily accessible mechanism by which they can be downloaded by someone else to revise, remix, or redistribute, in keeping with the 5R permissions of OER. Currently, emailing Heather and requesting access to make a local copy is the only option, so efforts are under way to investigate both alternate platforms as well as how Google Sites might better function in an open environment with collaborative and interactive tools like **Hypothesis** and **H5P**. As they invest time engaging their students in a dialogue centered on being contributors to open scholarship, Lindsey and Heather are mindful that using a platform that allows for the full range of the 5Rs is central to this project's success.

Prioritizing student privacy and consent

At the end of the first semester of this project (Fall 2017) and as a direct result of the lack of scaffolding of open concepts,

it was realized that the first cohort's websites could not be published beyond the RWU intranet for two significant reasons:

1. Ethically, the students had not been adequately prepared in terms of the potential associated risks that come with authoring public-facing content on the Internet, including a discussion about student privacy that encompasses **cyberbullying** and **trolling**.
2. Legally, these students had not granted permission for their work to be published, and at Roger Williams University, students own their intellectual property: to publish without permission would be a breach of copyright (University Copyright Policy, 2017).

To address this issue, the pair now dedicates a class session toward the middle of the semester that focuses on open concepts, and a consent form is distributed to fully inform students of their choice in contributing their names to a website that will be accessible on the open web. Students are assigned a quick [reading](#) (Bakaitis, 2019) about the risks of authorship online and are required to sign an [authorship agreement](#) with the express condition that they may remove or replace their name with a pseudonym at any point in the future. While they can be flexible by removing names and substituting with pseudonyms to ensure that student privacy is respected, Heather and Lindsey explain that due to the collaborative, renewable, and long-term goals of this project and OER-enabled pedagogy in general, their group contributions will be included in the final Site. To date, they haven't had any situations arise where students have expressed discomfort in participating in this project. However, if in the future a student does express any concerns, Heather has pledged to work with the student to develop an option for an alternative way to contribute. Granting students choice and agency in contributing their names online and ensuring that they truly understand their rights as authors from the outset of an OER-enabled pedagogy project is essential (Mays, 2017), but navigating this process from a logistical standpoint has been admittedly a learning process for both Heather and Lindsey in the nascent stages. It remains to be a work in progress, with continuous, honest discussion and reflection from all sides. In addition to the steps Lindsey and Heather have taken thus far, here are some additional ways to respect federally mandated student privacy rights under The Family Educational Rights and Privacy Act of 1974 (FERPA), as suggested by Steel Wagstaff in Mays' (2017) *A Guide to Making Open Textbooks with Students*:

1. Get FERPA waivers from the students.
2. Make the open resource and credit the students who contributed, but without identifying that they were part of a specific course.
3. Allow students to use pseudonyms when building the open resource.
4. All of the above.

Reframing the narrative of student scholarship

An unexpected bump in the road that Lindsey and Heather encountered while sharing this project in a group setting with their faculty peers was a vocalized resistance to the notion of empowering non-major science students to be creators of public-facing knowledge. Questions were asked: "Do you publish the D work?" "Are you taking into consideration the university's reputation when publishing student work that is less than A?" Introducing and sharing OER-enabled pedagogy projects with colleagues may evoke similar questions and concerns, but these moments are also opportunities to dispel the myth that our students are not capable of being responsible contributors to the Knowledge Commons and part of the scholarly conversation. Not only do Heather and Lindsey personally believe their students are capable, but research shows that how educators perceive their students' intelligence and potential plays a significant role in their perception of their own intelligence (Dweck, 2006), especially for women and racial and ethnic minorities in science and math fields (Dee & Gershenson, 2017). "Imperfect work" that is openly-licensed can be reviewed and

revised by future students. In fact, helping students understand that information creation is an iterative process (ACRL Framework, 2015) is essential in helping them explore and navigate the scholarly universe. OER-enabled pedagogy organically presents students with opportunities to participate in and appreciate the revision process that renewable assignments such as this project encourages. "Imperfect work" in this case still helps students find their voice in a project of their own design and interests in a course that otherwise often ends up being a burden for many of them to complete due to science anxiety. These conversations between the library and the teaching faculty can be extremely useful in leveraging when embarking on a project similar to this one. In addition to learning the course content knowledge, students engaging in an OER-enabled pedagogy project supported by a librarian participate in conversations that help them "understand the increasingly social nature of the information ecosystem where authorities actively connect with one another and [that] sources develop over time" ("Authority is Constructed and Contextual, Knowledge Practice, ACRL Framework," 2015).

Assessment

One of the largest challenges facing OER-enabled student scholarship is the need to move beyond assessing student attitudes and perceptions and towards the assessment of their learning. Currently, the extent of assessing this project has been limited to informally collecting student feedback on how well they liked/disliked the project as a whole and the idea that their work will be public facing with an open license that will allow for adaptations of a non-commercial nature. These informal assessments have been collected merely to inform the authors' practice and, as such, have not been collected under conditions by which they can ethically share them at this time. However, the majority of responses from students have been positive.

Both partners have different sets of outcomes they wish to assess in the coming few semesters. Lindsey is interested in the assessment of learning outcomes specific to student knowledge of copyright and open licenses and will be revising and administering a pre/post survey based off of Muriel-Torrado and Fernandez-Molina's (2015) to determine if this project advances student understanding of the foundational concepts that enable ethical and legal OER creation. Heather is interested in assessing student learning with respect to the course-specific outcomes (listed previously). Because CORE 101 is a general education course, RWU already has a formal assessment rubric used to assess the outcomes of students enrolled in the course. Heather has decided to create a similar set of assessment prompts to serve as a pre-test to compare student progress through the semester to the artifacts they will create at the end of the course. The pair has received IRB approval to collect and use student reflection data to investigate how OER-enabled pedagogy can affect science anxiety and confidence among these non-majors. They plan to include questions such as "Do I have the right to author science content for other students?" which will measure the change in their confidence and anxiety through their participation in this OER-enabled project.

Sustainability

While this project has been wildly successful in many regards, Heather and Lindsey would be remiss if they didn't disclose how much time a collaboration like theirs requires in order to best serve their students. They spend a lot of time outside of class talking through logistics and analyzing student feedback as well as their own observations to make improvements. At the end of every semester they do a lot of reflecting together and always have a laundry list of actions steps to take in order to do it better next time around. Considerations of sustainability certainly come into play here, and they hope that by being transparent in sharing their experiences it will help others in planning for the future of these collaborations at the outset.

Like many academic librarians, Lindsey's duties extend far beyond providing information literacy and library

instruction, and participating in more than one collaboration of this kind would be unrealistic given the hours spent working on this outside of class. It is also worthwhile to note that the bulk of this project has progressed during a time of financial austerity at RWU as it begins to navigate an impending enrollment crisis in its region (New England). Nathan Grawe's 2018 book *Demographics and the Demand for Higher Education* shares that starting in 2025 and onward there will be a -25% net decline in enrollments at four-year institutions in New England, the start of which can already be felt. There hasn't been an instruction librarian at RWU for two years (a frozen position after a retirement) and Lindsey has been taking on extra classes, liaison duties, and committee responsibilities along with her colleagues to help fill the void. As academic librarians continue to explore how they can leverage their information literacy expertise to support OER-enabled pedagogy, it will be essential to keep the larger higher education landscape in mind so they can offer realistic collaborative expectations for faculty partners.

Similarly, Heather is not only an adjunct at RWU, but also works as an adjunct for another private university in Rhode Island. As a result, her time is managed very carefully between the two institutions. To ensure the success of this OER-enabled pedagogy project, other pedagogical changes have been made, which has increased the time commitment for this course. For example, students are assessed in the course using an ungrading format, which requires more time from Heather so she can provide more in-depth feedback than traditional grading structures. Additionally, a lot of extra effort is involved, including collaborative meetings, sharing the work with her university and the open education community through informal talks and conference presentations, and even the writing of this book chapter, all of which has all been unpaid labor that Heather, as an adjunct, has dedicated to the success of this project.

While it has been challenging at times trying to balance their other responsibilities with this collaboration, Heather and Lindsey have both seen firsthand the pathways that OER-enabled pedagogy creates for student engagement with information literacy concepts. Additionally, it is inspiring as educators to witness non-science majors conceptualize that their authored work will have value beyond the confines of their classroom and that their contributions can be built upon and used in other learning environments. They can also see the impact a course of this pedagogical nature has on student attitudes towards science in general; they are much more engaged when discussing science topics with their peers than in previous semesters without OER-enabled pedagogy. Students get excited in this course, and this alone makes the time commitment worthwhile.

Conclusion

Collaborations between teaching faculty and librarians in OER-enabled pedagogy have the potential to help students find their own voices and gain confidence as they participate in scholarly conversations and contribute to the Knowledge Commons. As a result of experiencing firsthand the particular support needs of an OER-enabled pedagogy project, this collaboration has revealed a unique overlay of their respective expertise in pedagogy, copyright, OER, and information literacy. Lindsey and Heather have been able to leverage each other's knowledge and confidence in these respective areas in order to cultivate a far more authentic learning experience for their students. In turn, their collaboration has brought Heather into a community of practice to which, as an adjunct working at two separate institutions, she has never before been privy. As they reflect on the end of yet another semester of this empowering project, they are inspired and excited to see how its logistics evolve, how their students increasingly embrace themselves as scholars, and what this all means for adjunct leadership in OER-enabled pedagogy. All of their ancillary materials (CC-BY) associated with this living project (lesson plans, handouts, assessments, and forms) can be found in this [Google Drive Folder](#) and all of the current websites can be found on the [project's homepage](#).

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Sharing the End of the World: Students' Perceptions of Their Self-Efficacy in the Creation of Open Access Digital Learning Objects

SARAH HUTTON, LISA DI VALENTINO, AND PAUL MUSGRAVE

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Project Overview

Institution: University of Massachusetts Amherst

Institution Type: public, research, land-grant, undergraduate, post-graduate

Project Discipline: Political Science

Project Outcome: student-created podcasts; research study

Tools Used: Audacity, LibGuides, Institutional Repository

Resources Included in Chapter:

- Suggested resource list
- Survey Instrument

2020 Preface

The course that this chapter is based on took place in 2018, well before the COVID-19 pandemic that occurred at the time of publication. The University of Massachusetts, along with other schools, closed its campus beginning in the Spring semester of 2020 and moved to online instruction and library services. While many of the library's materials are available online, and services such as HathiTrust and the Internet Archive National Emergency Library provided digital versions of a wide range of print materials, there remained a huge gap in what students and faculty could access in the "new normal" of virtual education. More than ever, the need for open educational resources has become pressing. There is an opportunity, then, to engage students in the creation of open digital learning objects, such as digital textbooks, videos, podcasts, or study guides.

This chapter describes a case study of a course in which students were assigned the creation of podcasts about various topics related to Massachusetts history, which were to be made openly available on the Internet via the UMass Amherst institutional repository. This course is to be offered again in the Fall 2020 semester, only this time, it will be taught completely online. Further study is planned to investigate what is required to move a course like this to a virtual space (for example, how students will collaborate and how they will record and edit the podcast with limited or no access to the university's physical technology), and how virtual education might impact students' perceptions of their work and of their own abilities.

–Sarah, Lisa, & Paul

The End of the World (and the Start of a New Collaboration with the Honors College)

A public R1 doctoral university located in Western Massachusetts, the University of Massachusetts Amherst serves an undergraduate population of over 23,500. Around 3,700 of these students are part of our [Commonwealth Honors College](). Spanning the third and fourth years, the honors program includes two tracks, multidisciplinary and departmental, each with an honors thesis or capstone project. Honors faculty come from every discipline at the university. With the mission to create curriculum for the engagement of honors students in broad inquiry and the creation of new knowledge, instructors are able to design intensive and creative courses. Paul Musgrave, Assistant Professor of Political Science, is one of these faculty members, one who shares a joint appointment between his home department and the Honors College.

As the library liaison to the Honors College, Sarah Hutton, Head of Student Success and Engagement in the University Libraries, provides instructional and research support to honors faculty and students, and sits on the Faculty Senate Commonwealth Honors College Council (CHCC). This council advises the Honors College Dean on all academic matters relating to the administration of the college, and includes subcommittees that focus on specialized topics. Hutton additionally serves on the subcommittee dedicated to program approvals. As in other colleges at the university, every new course goes through an approval process, wherein a panel of reviewers reads through a proposed syllabus, along with plans for course management and materials. This subcommittee then works with each individual faculty member to make any necessary changes prior to final approval. While reviewing a batch of courses in Spring 2018, Hutton noticed a particularly interesting course, Politics of the End of the World, proposed by Paul Musgrave.

The course emerged from a long-developing research interest: theorizing the importance of apocalyptic recognition and denial to political life. While some bureaucratic and political systems aimed to make the apocalypse a possibility (as with Cold War-era nuclear weapons development), other end-of-the-world scenarios (such as climate change) have routinely failed to evince any effective large-scale political actions. Turning the end-of-the-world concept into a practicable course, however, proved challenging–how could an instructor ask undergraduates to research events that were so big, complex, and difficult to categorize?

As part of a separate yearlong workshop, Musgrave had also developed an idea for a different course based around

producing a podcast series. Adapting the podcast series idea from that course, he solved the problem conceptually: a podcast could more easily function as a group project, which would allow for cooperation and division of labor, helping students grapple with the somewhat nebulous and undirected nature of research. Working in four groups, the students would create four 20- to 25-minute podcast episodes. These episodes would describe how Massachusetts society reacted to the possibility of, or the belief in, the end of the world across different scenarios and time periods.

The part of Musgrave's proposed course that caught Hutton's attention during the review was the final project assignment: "Your final project will involve you working in teams to develop an episode of a podcast series about the End of the World, and it will be released to the public" (Mugrave, 2018).

This podcast assignment clearly aligned with several of the Libraries' strategic objectives and activities,[1] which presented an opportunity for deeper collaboration. Following a committee course review session with Professor Musgrave, Hutton scheduled a meeting between Musgrave, herself, and Public Policy and Law Librarian, Lisa Di Valentino. In addition to serving as library liaison to Political Science, Legal Studies, Public Policy and Administration, and Government Publications, Di Valentino specializes in copyright, intellectual property, fair use and user-generated content (UGC). With Musgrave, Hutton, and Di Valentino working together on this course, opportunities arose to explore new directions.

From the start, the course was structured to incorporate multiple elements in collaboration with the Libraries, starting with media production workshops and support sessions (e.g. recording using Audacity) for the students in the Libraries' Digital Media Lab (DML).[2] We then facilitated consultation between Musgrave and our Scholarly Communications group for content-hosting in the institutional repository.[3] Most importantly, Di Valentino worked with Musgrave to provide one instructional session (75 minute class) for these students covering open access and Creative Commons licensing, all within the context of their discipline, political science.[4]

This collaboration, structured around a specific course, offered an opportunity to communicate the Libraries' rich set of resources and services to both Musgrave and his students, neither of whom had much awareness of the DML, though course collaborations are a well-established practice in the DML. One of the missing pieces of course collaborations, which may lend to a lack of awareness by faculty, is the preservation of student scholarship and projects following the completion of the course. During initial conversations, Hutton and Di Valentino learned that Musgrave intended to use these openly published podcasts as learning objects for future iterations of the course. While students were aware of and had consented to having their work published openly online, it was not yet clear how deep the conceptual and ethical understanding of issues surrounding the use of open content was amongst students. In addition to seeing an opportunity for collaboration in supporting the instructor and students through the successful delivery and completion of this class, we saw an opportunity to take a closer look at how the creative production of learning objects shared in the public domain impacted students' perception of how well they had learned the course content.

Our hypothesis was that students would be more motivated to learn with a course structured around the open

1. Digital student scholarship, supported by [Digital Media Lab](#) (DML); advocacy for open access publishing, Creative Commons licensing, and teaching students about the importance of understanding their role in the global scholarship landscape ("[Managing Your Data](#)"); specialization in public policy, government and legal studies, where instruction regarding attribution licensing and open scholarship could be tailored to the discipline of the course ("[Public Policy and Administration](#)").
2. In addition to supporting audio capture and production, the DML provides spaces, equipment and staff to accommodate video production, 3D modeling and fabrication, and the development of VR/AR/Immersive Technologies.
3. UMass Amherst Libraries, [Scholarly Communication](#).
4. UMass Amherst LibGuides, [Lisa Di Valentino](#).

publication of their research. Motivation plays a critical role in student learning, engagement, and achievement. Studies have unequivocally shown connections between how actively engaged students are in the curriculum and student ability to attain academic goals (Caruth 2018; Fredin et al., 2015). By conducting a study which could connect open pedagogy with student success via motivational theory, for example, Self-Determination Theory (SDT), and self-efficacy, our hope was to generate compelling evidence for other institutions to move forward with open pedagogy initiatives.

Open Pedagogy Opportunities Explored in the Literature

For this study, Hutton, Musgrave, and Di Valentino were more interested in the students' personal view of the assignment itself. In particular, they were interested in how students evaluate their own ability to research and present information to the public, and how that self-perception and confidence impacted their work process. Some of the literature did address these considerations, in perhaps one or two questions, but in no case that we found were they the main focus of the study (Bravo & Young, 2011; Lin & Kelsey, 2009). In most of the literature on student confidence and motivation, the end product of the assignment was to be used by peers or junior students, or marked by the instructor, and not necessarily seen by the general public (Ertmer et al., 2011; Gehringer, 2011; Hemmi et al., 2009; Herman, 2012; Neumann & Hood, 2009; Croft et al., 2013). The literature in this area has predominantly focused on the quality of the end product as judged by the instructor, whether the students gained a better understanding of the subject, or broader discussions of the role of higher education. There are, to date, no studies focused on students' perceptions of the process and confidence in their own abilities.

Since researchers Musgrave, Hutton, and Di Valentino share an interest in evidence-based course design, they looked at the literature to find similar studies having to do with the design of course assignments where students' work would be made publicly available. The concept of students as active producers of content is not new (Neary & Winn, 2009), but digital learning and the internet offer new opportunities to embed this concept into course design. The literature surveyed generally fell into two categories: Wikipedia-related and non-Wikipedia-related (which may include use of other wiki platforms that are not publicly visible). Wikipedia is a popular tool for assignments which ask students to create content online; it is ubiquitous, fairly easy to use (with some training), and users can get help from seasoned editors. Wikipedia itself encourages classroom involvement, offering workshops and guidance for using the site in teaching ("About Us," 2015). In a number of studies about Wikipedia, courses included an assignment to research and create a Wikipedia article (or to improve one) either individually or as a group (Bravo & Young, 2011; Chiang et al., 2012; Dawe & Robinson, 2017; Pollard, 2008; Simmons, 2013; Soler-Adillon et al., 2018; Sweeney, 2012; Witzleb, 2009). However, these studies focused on information literacy outcomes, rather than student motivation and perception of their own abilities and of the final product.

There are methods beyond using Wikipedia in which student assignments can contribute to the knowledge commons. Other studies have positioned learners as knowledge creators by having students produce screencasts for their peers explaining complex mathematical concepts (Croft et al., 2013), creating computer coding exercises for students in other countries (Denny et al., 2012), creating teaching resources such as quizzes and videos for first-year biology students (Hubbard et al., 2017), authoring open access textbooks in chemical engineering (Galarza et al., 2017), or using non-Wikipedia wikis and other Web 2.0 technologies to produce hands-on learning tools (DiPietro et al., 2010; Ertmer et al., 2011; Gehringer, 2011; Hemmi et al., 2009; Lin & Kelsey, 2009; Matthew et al., 2009; Neumann & Hood, 2009).

Student motivation was addressed in detail in only one study, in which students wrote Wikipedia articles on topics of regional significance (Vetter, 2014). Here, the students reported greater or equal motivation when working on Wikipedia articles than they did in traditional assignments. The most frequently reported reason behind the increased motivation was that their work would be read by the public (Vetter, 2014). Another study assessed students' self-reported capability in finding, evaluating, and referencing information both before and after they created a Wikipedia article; the results demonstrated an increase in students' self-rating (Dawe & Robinson, 2017). Other works described student collaboration with university researchers and faculty academics to produce publishable content (Mays, 2017).

Where student motivation was addressed, the answers from the literature were generally positive; however, it was not the focus of the studies (Bravo & Young, 2011; Ertmer et al., 2011; Hemmi et al., 2009; Lin & Kelsey, 2009; Matthew et al., 2009; Neumann & Hood, 2009; Pollard, 2008; Simmons, 2013; Vetter, 2014). The relative lack of in-depth research regarding student perceptions and confidence in their work led the authors to focus their inquiry into Musgrave's course on how making students' final projects openly available to the public might impact student motivation.

An Opportunity to Fill a Gap: Developing the Study

In developing the End of the World course, there was an opportunity for a case study of the inaugural class cohort, who were generally unfamiliar with copyright and Creative Commons. The researchers were interested in any effect on students' motivation and sense of self-efficacy, as well as their confidence in their own understanding of the subject matter, when creating products that are meant to be globally publicly available.

As the instructor, Musgrave's role was to design and run the class, in consultation with Hutton and Di Valentino. This included authoring a syllabus, crafting the assignment, and finding ways to keep students motivated and engaged. The syllabus included classes and readings devoted to theoretical issues (what is the end of the world, how can we know and measure how an end of the world affects people and societies), as well as sessions devoted to substantive and practical concerns. The substantive issues involved surveying other ends of the world, both in reality (using historical examples, like accounts of plagues and cultural shifts) and in fiction (such as *Children of Men* and *The Handmaid's Tale*). The practical sessions included helping students learn how to appreciate and produce podcasts–breaking up a story into different beats, challenging them to put together interviews, learning how to pitch and revise stories.

Di Valentino's role was to develop an instruction session to educate the students in researching government policy and Massachusetts history using the library's subscribed and open access resources. Part of this 75-minute session involved a demonstration of how to locate Creative Commons-licensed and public domain audio materials and music using the CC website and other sites such as Internet Archive, Freesound, and Jamendo. Instructional materials from this session, including links to audio sites, information on copyright, and public domain, were collected in a library guide made available to students during and after the course, as well as to the public under a CC-BY license.[5]

In addition, Di Valetino familiarized the students with the basics of copyright policy and law, and with the objectives, history, and use of Creative Commons licenses. Hutton's role was to work with Di Valentino and Musgrave to craft the study. With experience in quantitative and qualitative research in higher education, Hutton was well-positioned to lead the development of a survey which could be administered during the class. She authored a question set in collaboration with Musgrave and Di Valentino, including a self-efficacy scale derived from the CATME 5.0 and a section of qualitative questions focusing specifically on the impact of course design on learning.

Partnerships are Crucial

The librarian-faculty partnership was integral to the project. A routine review of proposed new course syllabi put Musgrave in touch with Hutton. This connection solved a number of logistical problems to which he had not yet worked out the solutions. Like many faculty members, Musgrave did not know the variety of non-research services the library provided to students or faculty. The extent of the Digital Media Lab's services and equipment, for instance, would prove essential to having the students actually produce the podcasts. Similarly, involving different elements of the more

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5. UMass Amherst Libraries, POLISCI 390WH: The Politics of the End of the World.

traditional services of the library, including a music and copyright librarian, and the subject-matter expert librarian Di Valentino, enabled the course and students to benefit from a much deeper and broader array of expertise.

Study Overview: Methodology and Ethical Concerns

The survey was 27 questions in length.[6] The first ten questions were related to the students' receptiveness to new expressions of scholarship, including how outgoing or anxious they might consider themselves to be. Questions 11-13 were related to course goals and content adoption, including how closely a student's own goals were aligned with what their anticipated grade might be. Questions 14-23 were self-efficacy questions tailored specifically to fundamental, intermediate, and ultimate outcomes of the course as defined by the instructor. The final three questions were "designed to have you [the student] thinking about how your assignment being made accessible on the open web (Open Access/Open Educational Resources) has impacted your research process." To ensure a higher response rate (20 of the 23 students participated in the survey), the survey was administered in person, in print, on the final day of class in December 2018. Collected responses were de-identified and compiled by Hutton, who then analyzed the data in NVivo, using basic frequencies for scaling and percentages with quantitative data, and Glaser & Strauss' constant comparative method for all qualitative data.

While there were a few ethical considerations involved in this study, they did not include the usual worries when students are asked by their instructor to participate. To reduce any sense of pressure, the survey was administered by Hutton, whom the students had not yet met during the course; in addition, the students were assured that they were not required to take the survey, that their responses would not be identifiable, and that their answers would not be looked at until after the final grades were submitted. At the beginning of the course, the students had been made aware that they could decline to make their podcasts public, and, as the copyright holders, they retain the right to license or not license their work under the Creative Commons program, or to have their work used by future iterations of the course.

Promising Results

The results of the study were encouraging. When students were asked to rate their confidence level as a percentage out of 100%, on average, students reported a median confidence level of 79.11% across all categories of fundamental, intermediate, and ultimate outcomes. While a median of 79.11 confidence level was the average across all categories–it was noted that this confidence did drop as the outcomes became more complex. Confidence in the fundamental skill categories, such as the ability to "summarize written and audio visual texts" had a reported median of 83.45 confidence and "describe social scientific theories accurately" had a reported mean of 73.25 confidence, whereas the students were more doubtful of themselves when it came to the more complex ability to 'Develop new explanations to account for general patterns of social and political behavior' with a reported median of 72.25 confidence.

One of the nice surprises in the ultimate outcomes category was the response to question 23, where students were asked to 'rate [their] degree of confidence/ability to solve the provided problems by recording a number from 0 to 100', for the task of "Interact[ing] with peers and others in self-regulating, goal-oriented teams," which reported at a median of 87.75 rating of confidence from students. This was noteworthy because so many of us hear from students about how much they hate working in teams or groups. This response is encouraging not only for this course, but is also in alignment with the University's imperative to encourage teamwork and group learning. However, as with many of

6. Link to Survey Instrument: [Student Perception of Self-Efficacy in Student Creation of Multimedia Open Educational Resources](#).

the multiple method studies we conduct, the richest findings are in the qualitative data. The overarching themes pulled from QDA done within NVivo were student emphasis on the quality of their research, the necessity to understand their topic(s) in greater depth to present to a broad audience, and the development of an understanding of Creative Commons licensing – many of them had never heard of it before. This was incredibly encouraging, since it indicated that the open pedagogical model of the course motivated the students to think more deeply about the quality of their work and how it would be communicated to a global audience. The fact that many students had not thought much about their own rights as publishers helped pave the way in their understanding of their role as scholars. Given that this was the pilot offering of the course, there was no pre-data to use for comparative analysis. For subsequent courses, the intent is to offer a pre- and post-course survey, including member checking (in-depth interviews).

Successes and Challenges Within the Course

When it came to the students completing the final assignments, a significant challenge, according to Musgrave, was finding appropriate audio resources using open access and Creative Commons licensed databases. The students were not always able to find the music they wanted, either because it did not exist or the search function of the database was not sufficient, or metadata was lacking. While there is a great deal of CC content available, students had difficulty locating appropriate variety for their podcasts. For general intro and outro music, the class eventually turned to commercial vendors, finding them easier to use, with superior metadata and more content than the open access alternatives.

Another challenge was deciding which Creative Commons license to employ. Musgrave had stated that he does not prefer the Share-Alike license, which is used by some prominent organizations such as Wikimedia and UNESCO. There was concern that Share-Alike binds producers in what they could do with a finished product. For producing podcasts, having CC-BY was preferable to CC-BY-SA; in the end, the class agreed on CC-BY-ND. The inclusion of the NoDerivatives (ND) component of the license would ensure that student work could be copied, displayed and distributed only in its original form; if the student work was to be modified in any way prior to distribution, permission would need to be obtained from the content creator. This provision of embargo for future derivative works helped the students feel more confident about putting their projects 'out on display' on the internet, and took away the worry that unknown by-products could be created, misrepresenting their original intent.

Conclusion

It is clear to the researchers that this course structure resulted in improved learning outcomes; the final student projects were outstanding, with high production quality and clearly articulated, deep understanding of course content. Final project topics explored the demise of the "Praying Indians" (Christianized Natives) during the seventeenth century; the disappointment and renewal of the Millerites (a religious sect) who prophesied the end of the world in the 1840s; the physical and social changes wrought by the Cold War and the build-up of nuclear weapons infrastructure during the 20th century; and how one coastal Massachusetts town is (mostly not) responding to global climate change.[7]

As it was the first time these researchers had done such a study, there were lessons to be learned about the methods and how the class could be run in the future. For example, the next time a study like this is conducted, increased member-checking opportunities should be built into the study itself as an option respondents can check after the survey. Member-checking, also often known as respondent validation, provides a qualitative researcher with

7. [Final Examination](#).

the opportunity to return to respondents after a survey or interview and ask follow-up questions to clarify topics or concepts that may remain unclear. However, asking respondents to identify themselves to be contacted has privacy implications, and the request would have to be made separately so as not to be connected to the respondents' answers.

The study has potential to be broadened using a mixed-methods sequential explanatory design, in which results from the collection and analysis of quantitative data would be used to formulate a qualitative aspect to the study. An example of this approach might be a quantitative survey, the responses to which would determine who could be contacted for a follow-up interview. Another option is the sequential exploratory design, which is a similar approach, but flipped: e.g. doing interviews first, and then using that information to formulate a more focused survey. There is also interest in broadening the research into non-honors courses; while the study with Musgrave's course is unique, undergraduate course collaborations with the DML at the undergraduate level are not, and there is great opportunity to expand research into multiple disciplines and ranks of courses.

Additional related research, currently being pursued by Hutton as a part of her Ph.D. dissertation, is a phenomenological case study model. She is investigating the use of Self-Determination Theory (SDT) as a theoretical framework in phenomenological case study with open courses. This could illuminate a direct connection between undergraduate student participation in courses with a participatory OER authorship or OA publishing of student artifacts model, to the development of internal goals and deepened engagement (Vansteenkiste et al., 2006). Hutton hypothesizes that the resulting analysis will create a compelling case for the adoption of OER materials beyond the affordability argument, further advocating for the engagement of students in open scholarship at the undergraduate level.

As for the course itself, Musgrave reflected that in the future he would include incremental assignments leading up to the final project, and more practice opportunities to build different skills depending on what the student's role was in the group – for example, the person doing the narration would practice speaking and breathing into the microphone, and the person doing the mixing would have more practice sessions with equipment. This in many ways calls for *more* integration with Libraries and other co-curricular institutions, since the implication is to offer more audio production workshops. One challenge with running an innovative and creative classroom is that it entails giving up on the "sage on the stage" model, replacing it not only with a "guide by the side," but with an entire support network beneath students. Increased workshops in support of the final podcast could potentially take away from class time focusing on the research content of the course.

Working out how to make this model succeed will entail differing practices for both curriculum development and credit-sharing practices. If a faculty member is the instructor of record, but not the only University employee providing instruction, how can the efforts of various people providing instruction be rewarded, measured, and compensated? The converse is that failing to incentivize and monitor such collaborations could lead to a mismatch in missions. If the library believes that its job is to provide digital media equipment but not, say, tailored modules instructing students in how to use that equipment in a class, then the equipment may not be utilized fully, or at all, because the burden of instruction in specialized, non-academic matters may be too great for the faculty member to bear. At UMass Amherst, there is an interest in continued research for this course, but broadening this model to other courses would require a stronger incentives model, potentially in collaboration with the Center for Teaching or other interested support organizations. Given the encouraging implications of the research, this is a model worth deeper exploration and implementation in additional courses.

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APPENDIX

Considerations for Other Institutions

As we are from a large New England (U.S.A.) public university, the researchers are well aware of the privileges and resources that students have access to. For those institutions with fewer resources, it could be a challenge to undertake this sort of pedagogical approach. When reviewing the following considerations, interested faculty and librarians should additionally consider partnerships across their organizations, or inter-institutional collaborations for additional support.

Considerations include:

- The class: How much experience do they have with the subject matter? How tech-savvy are they? What do they know about the country's copyright and Creative Commons?
- The audience: Is the learning object geared to a particular audience, or the public?
- Resources available: Do the students have access to audio/video recording equipment, editing software, screen capture, stock sounds, music, video?

- Storage: Where will the digital objects be stored? Will they be downloadable or streaming? Is there an institutional repository, or will third-party sites be used?

The technology issue is particularly important, since podcasts and other audio or audiovisual learning objects require access to equipment, hardware, and software. Smart phones have recording capabilities, and once the recording has been uploaded to a computer, it can be edited and enhanced using open source or otherwise free software.
   Some free-to-use and open source resources include:

- [What is Creative Commons?](): An explanatory YouTube video by Wikimedia Foundation
- [Internet Archive](): A collection of public domain and Creative Commons licensed sound, music, video, images, etc.
- [FreeSound.org](): A collaborative database of Creative Commons licensed sounds
- [SoundBible](): A collection of free sound effects
- [Free Music Archive](): Music under a Creative Commons license
- [Jamendo](): Creative Commons licensed music by indie artists
- [Audacity](): Open source audio recording and editing software
- [Soundcloud](): An online audio distribution platform website
- [Podbean](): A podcast-hosting site with free, basic options
- [Vimeo](): Video hosting with Creative Commons licensed content

Course-Specific Resources

Includes links to course library guide, survey instrument, and final projects

- [Scholarworks@UMassAmherst: Final Examination]()
- [http://bit.ly/sharingend]()

Teaching Wikipedia: A Model for Critical Engagement with Open Information

AMANDA KOZIURA, JENNIFER M. STARKEY, AND EINAV RABINOVITCH-FOX

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Project Overview

Institution: [Case Western Reserve University](#)

Institution Type: private, research, undergraduate, postgraduate

Project Discipline: STEM

Project Outcome: Wikipedia content creation

Tools Used: Wikipedia, LibGuides

Resources Included in Chapter:

- Lesson Plans
- Grading Rubric

Introduction

In this chapter, the authors describe the learning experience and goals of a class assignment to write content for Wikipedia about women in science and technology fields. The authors, a university professor and two librarians,

collaboratively developed this assignment to allow students to engage in rigorous research and contribute to the visibility of women scientists by writing content for the web. The authors chose the Wikipedia platform as the means to make the students' work openly available because of its ubiquity and the potential for student work to make an important impact. The assignment, used in two iterations of the course, was designed to provide students not only with a hands-on experience on working on the open web, but also with tools to assess critically the uses and abuses of open access platforms.

Over multiple class sessions with librarians spread throughout the semester, students engaged with questions such as the power and bias of authorship, the meaning of authority, the role of critical consumers/producers of information, how to evaluate and use archival documents on open platforms, as well as ethical questions deriving from producing content for the open web. The chapter examines both the challenges and successes in designing and engaging students with the assignment, offering a model of collaboration between faculty, librarians, and archivists in the promotion of open pedagogy that can be replicated at other institutions and disciplines.

Why Wikipedia?

The Wikipedia assignment was developed as a final assignment in a course on Gender and Technology that was offered as part of the Seminar Approach to General Education and Scholarship (SAGES) Program at Case Western Reserve University. SAGES seminars are usually capped at 17 students, and are comprised of a mixture of first-year and sophomore students. In these seminars, students engage with critical thinking, learning analytical and research skills, as well as gaining experience with multiple forms of academic writing. As the university is a STEM focused institution, where the majority of undergraduate students major in engineering and the hard sciences, the class topic of Gender and Technology was selected by the professor to appeal to students' interests. The course especially targeted students who seek to engage with questions on how gender and technology define and redefine each other, the role of women in science and technology, and on issues of gender (in)equality in the STEM fields that many will encounter informally throughout their studies.

Both the topic of the course and the pedagogical rationale of the SAGES seminar made Wikipedia a useful tool to promote students' writing and research skills and engage with the course topic. Women, and especially women who made notable achievements in the STEM fields, are underrepresented on Wikipedia (Harrison, 2019). In fact, as of February 2020, only 18.25% of English Wikipedia's biographies were about women (WikiProject Women in Red). The content of entries about women are also skewed to have more information about family and relationships, and speak more negatively about their subjects than entries about men (Wagner et al., 2016). Thus, the assignment was a perfect opportunity to not only provide students with experience in public writing, but also to tackle hands-on the questions of gender inequality that the course addressed. By contributing to the visibility of women on Wikipedia, and the internet at large, the assignment demonstrated to students how writing can move beyond the confines of the classroom and become a political act.

In addition, the Wikipedia assignment offered a fresh approach to the "traditional" academic paper, something that often does not generate much excitement from students. The thought behind using Wikipedia as a publishing platform was to empower students to think of themselves as authors and contributors to the information landscape, as well as to raise the stakes of producing valuable work. The fact that their work could be visible to a public audience beyond the professor or the university community was intended to propel them to think more critically, and engage in more revisions on their own writing. The students were also given the option to decide whether to publish their work publicly or not, which added to their self-reflection as writers.

Another pedagogical motivation to use the Wikipedia assignment in class was to get students to think critically about the encyclopedia and open access sources at large. As students engaged in writing content for public consumption, they encountered first hand the challenges of accountability and accuracy. They needed to think about how, and if, they could even "trust" the information presented on Wikipedia, and how they could evaluate information online. This shift from

being consumers of information/Wikipedia to producers offered students a way to reevaluate Wikipedia as a credible source, with the hope that they would take these conclusions into the future of their academic careers.

Developing lesson plans

While the instructor was in the process of developing the course, the research librarian that works with the instructor's department reached out regarding course support opportunities. The instructor responded with some details about the Wikipedia assignment she was developing and scheduled a meeting to discuss how the library could support it. During the course of the meeting, it became clear that the assignment was uniquely positioned to benefit from the expertise of members of the library's research services, digital scholarship, and archives teams. It was agreed that the librarians would lead three sessions (with the addition of a fourth working session in the second iteration of the course). These sessions would prepare students to engage with critical information literacy, research, digital literacy, and the technical aspects of the project. In other words, the sessions the librarians led would be essential to teach students the critical thinking and technical skills needed to successfully complete the assignment.

All three collaborators approached the project with an open mind and enthusiasm to experiment and take some risks. The instructor was willing to hand over parts of the planning of her course to the librarians, and the librarians were willing to learn all about how to teach students to edit Wikipedia responsibly, which was new to them as well. It became clear in the first meeting that one session alone would not be enough time to cover the social and ethical conversations around Wikipedia, the research and content aspects of the project, as well as the technical editing side. Those three components formed the basis of the first three class sessions. The research and digital scholarship librarians developed the lesson plans collaboratively, consulting the Association of College and Research Libraries (ACRL) Framework for Information Literacy for Higher Education and integrating the frames most applicable to the objectives of the assignment (see Appendix). The first session on ethics was led by both librarians, the second session on finding sources and citing in Wikipedia was led by the research librarian, and the third was led by the digital scholarship librarian to teach students editing techniques in a hands-on work session.

Each of the sessions was scaffolded into the syllabus to ensure that they were timed appropriately for the course, and the instructor communicated to students what they were expected to do before each class. A critical component in the success of the assignment was the continual communication between the librarians and faculty, allowing them to remain agile as questions arose from students, as well as the trust placed in each other to fulfil their roles as related to the course. The instructor's trust also was apparent to the students; the librarians were not simply guests in the class, but were integral to their success in the course and their learning.

What happened in class

The first class session was designed to be an introduction to the social issues surrounding Wikipedia. After a brief introduction to the assignment, the class was broken into small groups and each group was given an article about Wikipedia to read and discuss. These articles (listed in the Appendix) touched on a variety of topics, including hoaxes, bias in authorship, trustworthiness of information, and coverage of controversial issues in a public forum. Each group was asked to report back to the class on the topics raised in the articles and this ignited a discussion that allowed students to engage with these issues.

Afterwards, the students were asked to think about what principles they would want to imbue in Wikipedia if they were building it from scratch. How would they balance openness with reliability? Would they have limits on who could author articles? How would they address bias not only in the articles present but also in what is deemed worthy of an article in the first place? What guidelines and principles would they put into place to help make Wikipedia the best it can

be? In the end, they came up with a list of principles that mirrored Wikipedia's own five pillars, while also recognizing that such pillars are not a foolproof way of addressing the concerns of bias, misinformation, and reliability.

A secondary objective, and one that at least anecdotally appeared to be achieved, was that this session introduced the librarians to the class and helped to establish a rapport with them. This interaction allowed the students to both feel comfortable reaching out to the librarians for help and established the librarians as experts working in concert with their professor. By beginning with a discussion of the ethical considerations of the platform their assignment was based on, the librarians positioned themselves as open to questions, considerate of concerns, and knowledgeable on the topic at hand while simultaneously laying the foundation for future class sessions.

The second session led by librarians focused on locating and vetting sources to use in their biographical entries. An archivist was brought in to speak about the unique structure and access requirements related to archival material, which students who chose subjects that were affiliated with the university might find useful. In the second iteration of the class, the scholarly communications librarian also visited to address copyright concerns for both written and visual material.

The third session was devoted to learning to use the Wikipedia platform and creating and editing biographical entries. Students were asked to create an account prior to the session and were welcome to use their laptops to follow along as the librarian demonstrated how to access, edit, and properly format the sandbox area where students would draft their biographical entries. For the remaining class time students worked on their entries and were able to ask questions of both the professor and librarians. A fourth session, added in the second iteration of the course, was a working session designed to provide students another opportunity to work on their entries while being able to get one-on-one assistance from the librarians. The need for an open work session was demonstrated both semesters by the many technical and content related questions students asked the professor and the librarians after they got started with the work.

By the end of the sessions, all students had explored ethical and social justice concerns related to Wikipedia, acquired the information literacy skills necessary to do the required research for their selected subjects, and practiced crafting and formatting a biographical entry that would meet Wikipedia's guidelines.

Results of the assignment

Surprisingly, although many of the students were quite tech savvy and literate in using media online, using the Wikipedia sandbox platform was not self-evident to all. Some encountered technical issues in formatting their articles, and some did not really understand the format and presented a version of a "traditional" paper. Moreover, some were confused regarding how they would be evaluated, and seemed uncomfortable working outside of their comfort zone of writing a traditional essay. This concern was met by circulating a grading rubric (see Appendix) that set clear expectations, and eased many of the initial worries regarding the assignment.

Despite these difficulties, all students submitted article drafts and revised them according to comments. While there was not a required page minimum, as information about the individual subject varied greatly, the expectation was that students would have enough sources to create a substantial content article. Articles ranged from being very short (3-4 printed pages) to very long (8-9 pages), but the average article, including citations and notes, was 6 printed pages. Without question, all articles, regardless of length, demonstrated well-done and accurately cited research, using a plethora of sources that indicated that students read credible documents. Overall, students went to great lengths to locate relevant sources even beyond the University's library, going so far as to seek copyright permissions for images where free alternatives were not available, and bringing an added value to their articles. Even when information for some of the topics was more difficult to find, students showed resilience in consulting various databases and research tools beyond what they would have consulted for a traditional essay.

Some students who were writing about alumni at our institution were able to use the University Archives for research. However, they had to be careful about what items they were able to cite due to Wikipedia's restrictions on using primary

source material. They were able to use everything that had been published, such as yearbooks and student newspapers, as those met the criteria to be considered secondary sources. For students who utilized the University Archives, the experience was overall positive and interesting. "I…loved the Wikipedia project. I felt involved in my research and got to go to the archives," wrote one of the students. They commented on the helpfulness of the staff and mentioned that the experience of going through archival sources was a new but welcomed experience.

Overall, it seemed that even the students who found the assignment challenging appreciated the experience. "I really enjoyed the Wikipedia project. It is a valuable life skill to know how to operate Wikipedia. And the articles we created brought attention to underrepresented women in the STEM fields," one of the students wrote in the evaluation. This is in line with what recent research into Wikipedia-based assignments has revealed about student learning and engagement (Vetter et al., 2019).

Students appreciated the opportunity to make their writing public and felt they made a real contribution. "I…felt like my writing had a real-life impact," another student commented. Although only about half of the students ended up publishing their articles, they understood how the assignment engaged with the course's topic and appreciated the experience. During the sessions, students were made aware of the possibility that their work could be deleted or modified after publication, as part of the open nature of Wikipedia. Yet, even if their entries went through some revisions and editing by other Wikipedia users after the initial publication, one student expressed that they felt proud that it was because of their initial work that the woman they wrote about got an entry in the first place. This student did not seem to mind later edits and changes, but instead viewed the entire process as empowering.

What was learned

While the assignment overall proved to be successful and the students gained valuable skills and ethical engagement from the experience, there were some challenges that had to be worked through. Students were offered the opportunity to do either biographical entries or write about organizations related to the topic, but students gravitated strongly toward doing biographical entries. One possible reason for this is that the idea of writing about an entire organization may seem more daunting than writing about an individual, even if the amount of research involved is similar. Spending some time showing this could help reduce the anxiety around choosing an organizational topic as opposed to a biographical one. Encouraging some students to choose this path would be helpful as the "pool" of possible biographical topics is limited, and expanding the topic base could be helpful in future iterations of this assignment. Some students had difficulty choosing subjects, and to aid with this, links to lists of needed entries on Wikipedia were provided. Students were also given the option of selecting people that had entries that were insubstantial and needed to be expanded, referred to as a "stub" entry on Wikipedia.

There were also occasions when a student would select a subject to write about and then discover later there was not enough published material about them to write a full entry, even after receiving assistance from a librarian or archivist. This forced some students to pick an alternative subject. Another issue that arose was a student selecting a person to write about and then, during the course of the semester, someone else published a biographical entry about them on Wikipedia. These are difficult issues to work around and there is not an easy solution. Either students will need to change the person they are writing about or, if it is too late to change, be allowed to complete the assignment knowing they won't be able to publish the entire article publicly. They could instead submit their sandbox entry to the professor for grading and add material to the already published article if they so desire.

Another issue that arose was the fact that the campus IP range was blocked from creating new Wikipedia accounts during the course of the semester. This can happen if there is suspicious or abusive behavior linked back to them. Considering the number of users that fall within an institution's IP range is quite high, it's not uncommon for colleges and universities to have their campus IP range blocked for a time. This only prohibits new accounts from being made without review; it will not keep those who had accounts prior to the block from being able to login and edit Wikipedia.

When an IP range is blocked, a form is posted on Wikipedia that allows people to request accounts from the blocked IP

range. These requests are supposed to be reviewed and approved or denied within a few days. However, in our case the review did not happen for several months and account requests submitted through the form were not approved until well into the summer. To get around this, students were asked to go off-campus to a local coffee shop, public library, or other easily accessible venue that provided Wi-Fi and create their accounts there to avoid sending the request from the blocked IP range.

The librarians also learned from the first round of sessions and made a few changes to how they constructed their lessons in the second iteration of the class and assignment. While the overall structure remained the same, they adjusted the article list used in the first session to incorporate new material. They also demonstrated a live editing section to show the ease with which people can edit Wikipedia entries instead of asking the class to try it. Previously this had resulted in the class getting off track as they edited a Wikipedia page of interest to them with false information, and the information was quickly changed back.

The librarians also added a speaker who touched on copyright as it relates both to text and images. They were also introduced to places they could search for public domain and creative commons licensed images. While the content was useful, the speaker shared the session with a representative from the University Archives and a research librarian teaching them about finding and evaluating sources. Three speakers were too many and in the future they would be separated out into different sessions or have the information posted for students to review as they work on the assignment.

This assignment is easily adaptable to courses in a broad range of subject areas across areas of humanities, social sciences, and science and technology. The project could work equally well with one librarian collaborator as it did with two librarians. The specific news articles that formed the basis of the conversation in the first class session could be replaced with different articles, either ones focused on discipline specific issues or more recent articles. Without a doubt, new scandals, hoaxes, or other misuses of Wikipedia will arise in the world; people will edit for political gain, manipulate reputations, write fake entries and write in ways that are intentionally or inadvertently non-neutral.

The challenge of identifying unwritten and stub articles for which sufficient information exists, and which meet Wikipedia's notability requirements, will always be a consideration in adapting this assignment. Instructors and librarians can take advantage of Wikipedia's page of new entries that have been requested by users, categorized by subject and sub-topic. The Gender and Technology class focused on biographical Wikipedia entries but that could also expand to include other types of topics.

Wikipedia requires the existence of multiple independent and reliable secondary sources in order to meet the notability criteria; students were required to adhere to this and use primary sources only to fill in information gaps. In some cases students changed topics after they struggled to find the requisite secondary sources. The problem with the notability criteria is that it becomes more difficult to justify adding representation of marginalized voices. The scholarly record itself is biased against women and minorities and Wikipedia's policy perpetuates that bias. A recent illustrative example of this is the physicist Donna Strickland, whose Wikipedia page was deleted based on notability criteria a few months before she won the Nobel Prize for Physics (Koren, 2018). While the authors don't have a suggested solution for this obstacle, it is an excellent basis for class discussion.

Conclusion

The process of developing the assignment, preparing the lesson plans to complement the assignment, and working with the students on it proved to be extremely rewarding for all involved. Wikipedia provided the perfect platform for students to engage with questions of open access, writing for the public, bias of all kinds, and critically work with information not just as a consumer but also a creator. It enabled a valuable collaboration between the professor and the librarians that allowed for a deep-dive into information literacy concepts that students were immediately able to put to practical use. Since this type of assignment is subject-agnostic, requires little technical skill, and has few barriers to

entry for all involved, the authors highly recommend it for anyone interested in experimenting with content that lives at the intersection of ethics, information literacy, and open pedagogy.

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Appendix: Lesson Plans and Grading Rubric

Session one

Learning objectives

- Critique Wikipedia, paying particular attention to issues of bias
- Examine the benefits and challenges of user-created open information sources
- Construct a list of values upon which an open information resource should be based

Association of College and Research Libraries (ACRL) frames covered

- Authority is constructed and contextual
- Information creation as a process

Class outline

- Introduce the reason why this assignment has been chosen over a traditional paper.
- Lead initial critique of Wikipedia as a reliable information source.
- Divide the class into groups. Hand each group an article about different aspects of Wikipedia (i.e. hoaxes, bias, reliability, etc.) and have them read it. Then have each group report back on what the article was about and what that tells us about Wikipedia. Use this as a jumping off-point to further discuss the benefits and challenges of an open, easily-editable, internet-accessible information source. Issues such as bias, reliability, privilege, and access will likely arise.
- Ask the class: If you were developing Wikipedia, what would be your guidelines and principles? Take notes as the class discusses this.
- Show them the five pillars of Wikipedia and see how close they got.
- Demo how easy it is to edit an article, even without an account.
- Review the associated LibGuide with resources on editing Wikipedia and resources for their research. (Optional – can simply provide a link instead.)

Articles used in-class

Articles from the list below were used in each class. The librarians look for new material each time the class is held and adjust what is used accordingly.

Cieply, M. (2015, June 22). Wikipedia pages of star clients altered by P.R. firm. *The New York Times*.

Dewey, C. (2014, August 4). Men's rights activists think a "hateful" feminist conspiracy is ruining Wikipedia. *The Washington Post*.

Dewey, C. (2015, April 15). The story behind Jar'Edo Wens, the longest-running hoax in Wikipedia history. *The Washington Post*.

Ghose, T. (2015, August 24). Is Wikipedia trustworthy when it comes to science? *The Washington Post*.

Koren, M. (2018, October 2). One Wikipedia page is a metaphor for the Nobel Prize's record with women. *The Atlantic*.

Moran, L. (2017, February 15). Teen edits band's Wikipedia page to bluff his way into VIP section. *Huffington Post*.

Selk, A. & Cavna, M. (2017, March 1). Garfield's a boy … right? How a cartoon cat's gender identity launched a Wikipedia war. *The Washington Post*.

Torres, N. (2016, June 2). Why do so few women edit Wikipedia?. *Harvard Business Review*.

A LibGuide, [Wikipedia Editing Project](), was also introduced to the students and embedded in Canvas, a learning management system.

Session two

Learning objectives

- Describe neutral point of view, notability criteria, and verifiability on as defined on Wikipedia
- Use research tools effectively to find reliable sources of information
- Gain awareness of copyright and intellectual property issues as they apply to Wikipedia, particularly in terms of use of images
- Explain the purpose of an archive and the value for the project

Association of College and Research Libraries (ACRL) frames covered

- Information has value
- Authority is constructed and contextual
- Research as inquiry

Class outline

- Discuss the Five Pillars of Wikipedia
- Understand neutral point of view
- Look at examples of Wikipedia articles to understand how to integrate and cite sources effectively and accurately
- Guest speaker talked about copyright issues such as Fair Use, Creative Commons licenses, and use of images in Wikipedia pages
- Guest speaker from University Archives led exercise to analyze archival records, and explained how archives could assist students choosing local subjects to write about

Session three

Learning objectives

- Use the Wikipedia sandbox to draft articles
- Review all the pieces of a biographical Wikipedia entry
- Format biographical Wikipedia entries

Association of College and Research Libraries (ACRL) frames covered

- Information creation as a process

Class outline

- How to log in
- How to navigate to the sandbox
- How to switch between markup and the visual editor
- How to find and use different heading styles
- How to use the link feature

    ◦ Link to Wikipedia articles
    ◦ Link to external sources
- How to cite sources

    ◦ Automatically (i.e. with a website or doi)
    ◦ Manually (fill out a form)
- How to insert:

    ◦ Infobox template for quick facts
    ◦ Media

        ▪ How to upload materials you own the copyright to
        ▪ How to upload other materials using the Wikimedia Commons Upload Wizard
    ◦ References list
    ◦ Authority control template (use an orcid number as an example)
- How to save changes (click on publish changes)
- Give students time to start developing the template for their article in the sandbox and ask other questions

Session Four

- In-class workshop, no structured lesson plan
- Check in and coach each student one-on-one
- Troubleshoot technical questions about editing Wikipedia
- Answer questions about assignment criteria

Assignment grading rubric

Grade	Organization	Content	Sources	Citations	Logic and flow	Mechanics
	Student Name					
A/A-	Clear organization of headings and subheadings; appropriate transitions	Comprehensive coverage of the topic; provides relevant information with links to relevant articles for background	Article uses the best available sources, and they are appropriate for the article; includes images that improve the reader's understanding of the topic with clear captions	Every statement can easily be associated with supporting references; most references include filled-out citations or are complete	Logical flow; body of article is divided into relevant sections and in hierarchical order that follows guidelines; novel contributions	Excellent grammar, punctuation and diction; minimal to no spelling errors, no run-on-sentences or comma splices
B+/B	Purposeful organization, but article does not always flow between sections	Coverage has some gaps; provides most of the relevant information, lacks links sometimes	Article uses mostly good sources, but not always appropriate; includes images with captions, sometimes too detailed	A few statements have unclear sourcing; most references are fairly complete but some missing information	Logical flow; body of article is divided into relevant sections but they don't always follow guidelines or hierarchical order	Strong grammar, punctuation, and diction, despite lapses; may have run-on sentences or comma splices
B-/C+	Unclear/confusing organization of sections; not enough information	Coverage has many important gaps that make it difficult to follow; provides some of the relevant information, lacks links to relevant articles	Article depends heavily on non-independent sources or uses low quality sources; no images or images with limited relevancy and no captions	Not enough citations or references to sources; references have enough information to track down sources but with difficulty	Weak logical flow; article sections duplicate one another	Weak grammar, punctuation, and diction; many run-on sentences or comma splices
C/C-	No sections	Article does not provide enough information or detail for the reader; no links	Article uses unreliable sources or does not use references to sources at all; no images or images that violate copyright regulations	Very few sources or references	Few examples; ideas do not flow at all; no sections	Problems with sentence structure, grammar, and diction

"And Still We Rise": Open Pedagogy and Black History at a Rural Comprehensive State College

JOSHUA F. BEATTY, TIMOTHY C. HARTNETT, DEBRA KIMOK, AND JOHN MCMAHON

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- [Debra Kimok](), SUNY Plattsburgh
- [John McMahon](), SUNY Plattsburgh

Project Overview

Institution: [SUNY Plattsburgh]()

Institution Type: public, liberal arts, undergraduate, postgraduate

Project Discipline: Political Science

Project Outcome: student-created library exhibit (physical and virtual)

Tools Used: Omeka, LibGuides

Resources Included in Chapter:

- Course Materials
- Virtual Exhibit Website
- Images
- Videos

2020 Preface

On April 9, 2020, between our final edits and publication, one of the co-authors, Tim Hartnett, passed away. Our chapter describes just what Tim meant to the *And Still We Rise* project, but cannot articulate his importance as colleague and friend. Tim was a musician and raconteur as well as a librarian, and brought the energy of the practiced performer to the academy's milieu of introverts. For *And Still We Rise*, he drew the co-authors together; he had recruited Joshua to his position in the library, promoted Debra's work in Special Collections and the College Archives, welcomed John at a new faculty reception, and early on saw the possibilities that could arise from John's course, Debra's archival holdings, and Joshua's digital scholarship advocacy. Tim himself added a deep knowledge and lifelong commitment to Plattsburgh, exemplified by his labor chronicling the history of musicians and other performers who visited the college. We are grateful that Tim's estate recognizes the importance of his work and that they are working with the authors to preserve and curate it for future generations.

A fuller appreciation of Tim's life can be read in "A Meaningful Life," from the *Press-Republican* newspaper.

<div align="right">—Joshua, Debra, & John</div>

Introducing *And Still We Rise*

In Spring 2019, students at The State University of New York College at Plattsburgh (SUNY Plattsburgh) researched, designed, and built *And Still We Rise: Celebrating Plattsburgh's (Re)Discovery of Iconic Black Visitors* (ASWR), an exhibit in the Feinberg Library on prominent Black political and cultural figures who had visited the college since the 1960s. The thirteen students in African-American Political Thought (Political Science 371), taught by Dr. John McMahon, researched in the college's archives and secondary sources to curate photos, text and multimedia for physical and virtual exhibits.[1]

We wish to thank the students in the course, for without their ideas, work, and commitment, neither ASWR nor this book chapter would be possible: Marie Alcis, Jacob Baird, Kyla Church, Juntaro Hirose, Domenica Lacouture, Jenna Long, James McGarrity, Yukari Namihira, Keianna Noble, Nouran Noureldin, Alyssa Scott, Josh Shaw, and Kentaro Wada. The class' work can be read on the digital version of ASWR available at *Plattsburgh Rocks!*, and a video of the opening ceremony led by students is available on YouTube: "And Still We Rise: Celebrating the (Re) Discovery of Plattsburgh's Iconic Black Visitors."

McMahon conceived of the project as putting into practice a vital component of Black political thought—that it is public in its call for transformation. This thought was not limited to academic books and articles alone, but rather insisted upon the connection of theory to practice and found its audience in speeches, pamphlets, music, film, and the like—all forms represented in the course material. McMahon wanted to design a project for the course that would affirm this element of Black political thought and present its own public challenge. He had also learned from colleagues at his previous institution (particularly from faculty women of color) who developed public-facing projects about race and racism and/or had students draw on campus collections to create a public exhibit.[2] Moreover, McMahon sought to use

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1. We wish to thank Holly Heller-Ross, Dean of Library Information and Technology Services at SUNY Plattsburgh, and we are grateful for the support and contributions of Mike Burgess, Eric Laessig, and Sydni Reubin to the project.
2. Here, McMahon would like to thank Debra Majeed, M. Shadee Malaklou, Catherine Orr, Nicole Truesdell, Kylie Quave, Jesse Carr, and other previous colleagues who have taught him a great deal about the vital need to work with one's students to engage campus on issues of race and racism beyond the walls of the classroom itself.

the course to engage with and provide political reflection upon campus conversations about race and racism. These concerns, in conjunction with his early dialogue with Librarian Timothy Hartnett, led to the initial ideas for the project. He would ask that students investigate the College Archives to find information about the Black political and cultural figures who had held events at SUNY Plattsburgh. The aim was to collectively create a public exhibit to be displayed in the library, presenting this political history to the campus as a whole and declaring that Black lives matter.

Two key ethical considerations undergird the project: the first is the pursuit of racial justice; the second, the embrace of open pedagogy. To understand how these informed the project, it is necessary to situate ASWR in its particular campus context. SUNY Plattsburgh is a rural, comprehensive state college with approximately 4900 undergraduate students and approximately 500 master's students, with a faculty, staff, and student body that are predominantly white.[3] The percentage of students of color is, however, increasing, and several public racist incidents since 2015 have illuminated ongoing unresolved tensions on campus.[4] Black students regularly express feeling that they are treated as outsiders and their voices go unheard, while white students and employees are unaware of the city and college's long history of people of color as residents and visitors. By documenting and publicizing the history of prominent Black visitors to the college, ASWR intended to remind the college community of this tradition and to support calls for a more intentional and sustained pursuit of **racial justice** on campus.

Open pedagogy is a compelling approach to engage this pursuit, in a context where approximately half of the class were students of color, and most of them had not had opportunities to perform open pedagogical work. ASWR was developed with an objective of engaging students by letting them work with primary source materials to create a public work that contributes to scholarly and community conversations, thus showing the students that their voice and work matters. As DeRosa and Robison (2017) emphasize, open pedagogy broadly seeks to empower students, and four principles of open pedagogy shaped the ASWR project. First, open pedagogies center students as reflective creators, curators, and sharers of knowledge who can develop a sense of educational autonomy (Cronin and MacLaren, 2018; De Rosa and Robison, 2017; Paskevicius, 2017). Second, open education practices emphasize active collaboration and social learning (Courous, 2010; DeRosa and Robison, 2017). Third, open pedagogy ought to be built into assignments themselves, for instance through Jhangiani's **five principles of open assignment design** (2017, p. 272). Finally, open pedagogy turns student learning outward, to the public: it has the potential to "help our students find relevance in their work," "contribute to the public good," and create "engagement with the world outside the classroom" (DeRosa and Robison, 2017, p. 117). The end of the chapter returns to these principles in order to reflect on the project and its pedagogy.

3. According to institutional data available to the authors, White, non-Hispanic domestic students comprised 62.9% of the SUNY Plattsburgh undergraduate student body in Fall 2019, compared to 12% domestic Hispanic/Latino students, 10.3% domestic Black/African American students, and 6.3% international students, among other identifications. In Fall 2009, Hispanic/Latino students and Black/African American students constituted 4.9% and 4.6% of the undergraduate student body, respectively. In 2014, Hispanic/Latino domestic students made up 6.5% of the undergraduate population, and 9.5% of undergraduates were Black/African American.

4. In fall 2015, the student newspaper, *Cardinal Points*, printed a racist cartoon on its front page. Initial anger was directed at the editors and artist but soon widened into a condemnation of racism across the campus: "[For hundreds at SUNY Plattsburgh, cartoon reveals systemic racism](#)." In January 2018, a white student posted a picture to Snapchat with a caption that referenced lynching. Students of color pointed out, correctly, that little had been done to address structural racism at the college after the prior incident: "[Plattsburgh, Keene struggle with aftershocks of racist joke](#)."

Building and Presenting an Open Project on Black Campus Political History

Librarian-Faculty Collaboration in the Project's Early Stages

McMahon conceived of the project as a result of a serendipitous conversation with Hartnett over lunch at a welcome event for new faculty in August 2018. The two discussed the African-American Political Thought course McMahon would be proposing to teach in the Spring 2019 semester. Hartnett, who was creating an archive of speakers and performers visiting campus from 1960-2000 for a project called *Plattsburgh Rocks!*, relayed to McMahon that he might be surprised to learn that important Black political and cultural figures like Nina Simone, Cornel West, and Dick Gregory had held events on campus.

This initial conversation proved fortuitous in multiple ways. As a librarian at the luncheon, Hartnett's primary purpose was to informally raise new faculty's awareness of librarian expertise and library resources. In doing so, he learned of McMahon's subject expertise and teaching interests. Such communication is vital to informing librarians about faculty's scholarship and teaching activities so as to optimize the library's resources and services to better support faculty in their work.

So, what began as a chance, casual conversation over lunch developed into what would become a four-person collaboration on an open, student-driven project. Without Hartnett and McMahon sitting at the same table at a new faculty welcome lunch, this project likely would not have happened. This confirms the value of ongoing informal conversation between librarians and teaching faculty, to try to foster an environment where collaborative projects can germinate (Johnson, 2019).

A second conversation between McMahon and Hartnett at the library reference desk in October 2018 more directly launched the project itself. At that point, Hartnett shared a comprehensive spreadsheet documenting the record of campus cultural performances and political events, and McMahon began to ruminate over how to work with Hartnett–and with the other team members he would involve in the project, as discussed below–to actualize the potential of this resource. Hartnett saw an opportunity to connect the professor and his students with some uniquely relevant local materials contained in the library's College Archives. This would best be accomplished through the help of Librarian Debra Kimok, who manages the College Archives. To further assist students, Hartnett prepared an online library research guide which included links to digitized archives of several of those materials.

In a subsequent email to Hartnett in December, McMahon expressed his desire to have students prepare a library display to publicly present their work. As the librarian in charge of exhibits, Hartnett was thrilled by this news. Given the nature of the students' research and its contribution to telling the story of SUNY Plattsburgh's campus history, Hartnett contemplated ways to make it more permanently and widely available to the public. It soon occurred to him that a digital exhibit might be the perfect means for doing so. He contacted Dr. Joshua Beatty, Digital Scholarship Librarian and also coincidentally the library's liaison to the Political Science Department. Beatty quickly saw the value of and the possibilities for making ASWR an online exhibit.

## Engaging Student Research and Discovery

Beatty, Hartnett, and Kimok provided students with an initial introduction to the College Archives during an early class session held in the library, with a follow-up formal research session led by Beatty. Outlines for these sessions as well as the timeline and requirements for student research can be found in the Appendix. Following this, all three librarians provided ongoing hands-on research assistance to students. The thirteen students in the course sought primary source materials that related to their chosen subjects. Guided by the project team, they found local and student newspaper and

campus newsletter stories, yearbook pages, an "Artist Series" brochure, and archival photographs related to the campus visits of notable African American figures.

Student discovery in archives is frequently very exciting for them and is a valuable learning experience: "The use of archival material takes [students] into an environment different than a library and one with which they are not familiar. It also requires them to learn new techniques of discovery and creates a real sense of intimacy with people of a different time" (Matyn, 2000, p. 349). This kind of dynamic was most vividly illustrated when a student exclaimed upon opening a College Archives folder and seeing for the first time a 1967-1968 "Artist Series" brochure featuring a brief preview of Nina Simone's upcoming performance along with a photo of Simone, pictured below. Moments such as these demonstrate the potential thrill of discovery student-researchers can experience, one that also generates original evidence and fosters a connection to the history of their college.

Figure 1

Front cover, "Artist Series 1967-1968" brochure.
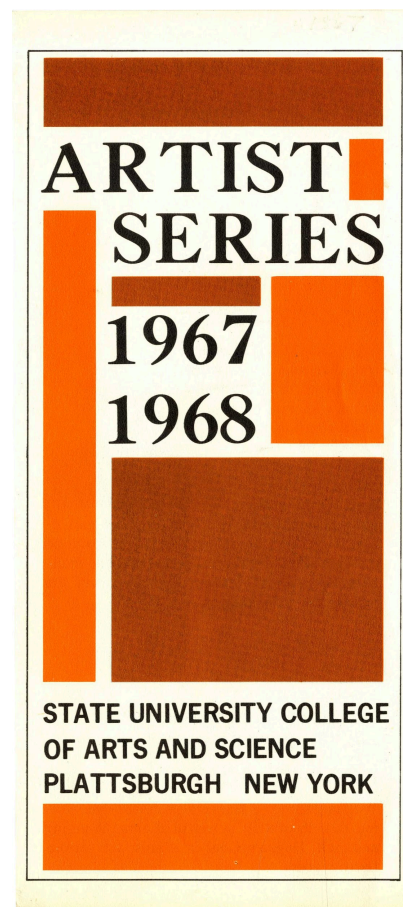
Note. Courtesy of College Archives, SUNY Plattsburgh.

Figure 2

Interior, "Artist Series 1967-1968" brochure

We invite you to enjoy seven evenings of fine entertainment featuring some of the world's most well-known musicians, dramatic players, and speakers.

MONDAY, 18 SEPTEMBER, 1967
8:00 P.M., HAWKINS HALL

DICK GREGORY

Night club and television comedian who has touched the raw nerve of the white world with his sharp, rapier-like humor. Mr. Gregory has not only preached, but he has practiced; often making great personal sacrifice, both physical and financial, to toss himself into the maelstrom of the civil rights battle. A leader of great international peace movements and author of the recent best seller **Nigger.**
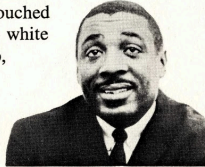
SATURDAY, 21 OCTOBER, 1967
8:00 P.M., HAWKINS HALL

HOGAN'S GOAT

William Alfred, a Harvard professor, has written this absorbing, powerful drama. Stunning and rich, **Hogan's Goat** is a must for serious theatre goers.
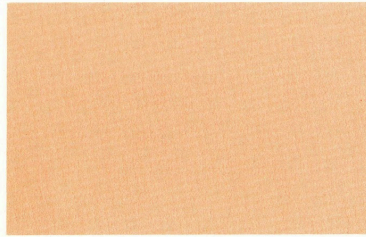
WEDNESDAY, 13 DECEMBER, 1967
8:00 P.M., HAWKINS HALL

NINA SIMONE

A colored Afro-American, far out, strange singer who has hit the big towns, LP discs and T.V. shows. She sings a song differently and has convictions about the songs she sings. The letters that spell LIVE also spell NINA. As for the word SIMONE — be cool, Jack, be cool!

MONDAY, 15 JANUARY, 1968
8:00 P.M., HAWKINS HALL

PAUL KRASNER

Editor of the Realist. Also a Contributing Editor to Playboy; author of **Impolite Interviews;** editor of the forthcoming book, "The Humor of Steve Allen", and one of the scriptwriters for the forthcoming "Pardon Me Sir, But Is My Eye Hurting Your Elbow?"

TUESDAY, 6 FEBRUARY, 1968
8:00 P.M. HAWKINS HALL

JOSE LIMONE

Lecture-concert in two parts on the art of dance.

MONDAY, 19 MARCH, 1968
8:00 P.M., HAWKINS HALL

ODETTA

A vibrant folk singing contralto, Odetta has been receiving praise throughout the world while delighting audiences from concert and nightclub, on record, in film, and on television. "If you had to settle for one in a lifetime, this is the one you'd pick." **Washington Star**
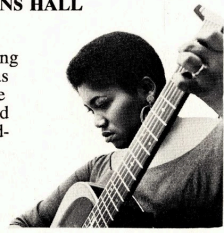
TUESDAY, 23 APRIL, 1968
8:00 P.M., HAWKINS HALL

LOUIS UNTERMEYER

A witty, scintillating speaker. His lectures do what he says literature does: offer an escape from the grim realities of life and at the same time help us to see life more clearly. He has a light touch and serious thoughts.
Education Association
Spokane, Washington

Note. Courtesy of College Archives, SUNY Plattsburgh.

Students spent several weeks engaging in archival and scholarly research with a series of scaffolded assignments, detailed in the Appendix. They met obstacles along the way–above all a dearth of archival material on some of the individuals students had chosen to research, leading students to seek further assistance from members of the project team. McMahon slightly shifted the guidelines to leave more room for emphasizing the research subject's general importance to Black politics and culture in addition to–and, in some cases, in place of–a strict focus on their event on campus. Ultimately, this process guided students toward the final form of their research, a 300–500 word account of the visit to SUNY Plattsburgh by each student's research subject, text that would become the physical and digital exhibits.

Exhibiting in Two Forms, Physical and Digital

Physical Exhibit. McMahon and his students set May 1 as the date for unveiling the ASWR exhibit to the public. This provided ample lead time to publicize and plan for the opening. By early March, students, supervised by McMahon, had

created promotional materials, including several variations of an exhibit poster, copy for a press release, a [Facebook event page](#), and an [Instagram account](#).[5]

Hartnett reserved and readied the display case located in the main lobby of the library where the physical exhibit would be installed in late April. As the project progressed, students came up with ideas for enhancing the exhibit by adding a listening/viewing station at the display case for users to access audio and/or video files containing music, speeches, and interviews of the featured individuals. Hartnett consulted with campus Media Support Technician Eric Laesing about how best to do this. Given space and infrastructure limitations, they decided to set up a dedicated media station with headphones across the lobby where visitors could listen to embedded music clips and view embedded videos selected by students from a variety of Internet sources on a large screen monitor with headphones, pictured below.

Digital Exhibit. At this point, Beatty offered to create a digital exhibit that would contain not only the audio and video files, but the text and photographs curated by the students. The digital exhibit could replace a simple list of video and audio files on the media station in the library lobby, as well as be accessible beyond the library walls. The [digital exhibit](#) was not part of McMahon's original vision for the project, but he quickly realized that it would enable the students' work to live on beyond the lifespan of the display in the library lobby and would provide access to those unable to visit the library.

The team considered whether ASWR should be a standalone site or a part of Hartnett's larger *Plattsburgh Rocks!* digital project. *Plattsburgh Rocks!* was primarily intended to chronicle the history of musical performances at SUNY Plattsburgh. It had been built by Hartnett and Beatty using the digital asset management and digital exhibit software Omeka Classic. *Plattsburgh Rocks!* was a work in progress, serving more as a holding place for a handful of posters, news articles, and audio interviews that had been digitized. At this point, the team still considered the digital version as a minor addition to the physical exhibit and opening ceremony. As such, they decided to add ASWR as a collection of items and accompanying exhibit to *Plattsburgh Rocks!*, but to give ASWR its own visual styling via a different Omeka theme to distinguish it from the rest of the site.

Students collected content from the College Archives and from online databases, notably [New York Historical Newspapers](#). College Archives staff, under Kimok's direction, digitized photographs and documents identified by students for use in the exhibit. For the design of the Omeka site, the team adapted the off-the-shelf "Seasons" theme with fonts that matched or mimicked those used in the physical exhibit.

Figure 3

*Digital exhibit page featuring Shirley Chisholm photograph taken at SUNY Plattsburgh.*

5. The name was developed by students drawing on Maya Angelou's groundbreaking poem, "Still I Rise," shifting it to "And Still We Rise" to emphasize the collectivity generated by the class and on campus through the project, and also to draw on themes of resilience and resistance to racism and racist incidents on campus. Hartnett's initial research indicated that Angelou came to campus, but shortly before the exhibit, he discovered that two scheduled events had to be cancelled. The exhibit website [provides further information](#) regarding Angelou.

AND STILL WE RISE

Browse Items   Browse Collections   Browse Exhibits   About

SHIRLEY CHISHOLM: OCTOBER 17, 1983
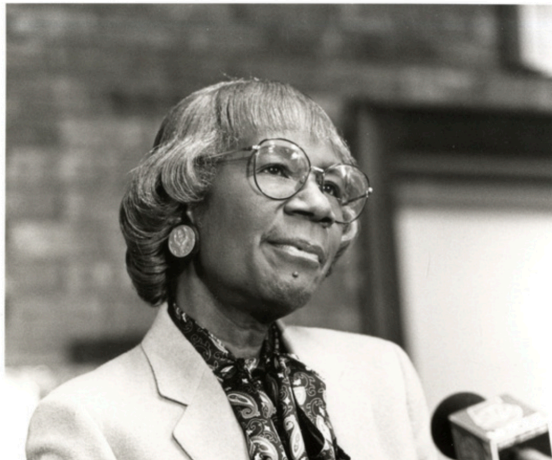
And Still We Rise: Celebrating Plattsburgh's (Re)Discovery of Iconic Black Visitors

Nina Simone: December 13, 1967

Kwame Ture: November 1974

Gwendolyn Brooks: October 18, 1975

Shirley Chisholm: October 17, 1983

Chris Rock: December 7, 1989

Maya Angelou

LL Cool J: November 6, 1991

Harvey Gantt: February 5, 1992

Yusef Komunyakaa: October 20, 1995

Cornel West: February 25, 1998

Note. Photo courtesy of College Archives, SUNY Plattsburgh.

Figure 4

Digital exhibit page featuring Cornel West photograph taken at SUNY Plattsburgh

Cornel West signs President Horace Judson and Gail Judson's copy of *Race Matters* in the Alumni Lounge, February 25, 1998. College Archives, item B-6-4012; published in *Focus on Plattsburgh*, March 12, 1998.

Black History Month

Dr. Cornel West to Speak Feb. 25

Dr. Cornel West, author of "Race Matters," will speak on Wednesday, Feb. 25 at 8 p.m. in the Warren Ballrooms of Angell College Center as part of Black History Month at Plattsburgh State.

Professor of Religion and Afro-American Studies at Harvard University, West is author of several books including "Jews and Blacks: Let the Healing Begin," "Restoring Hope," a compilation of interviews with African-American luminaries discussing hope and despair in Black America, and the forthcoming "Born Without Skin," which explores the primal well-spring of the parental force.

West teaches that racial division fosters the poverty and paranoia, the despair and distrust that undermine our nation's demo-

Cornel West (born 1953) is an American philosopher, author, political activist, and public intellectual who draws on Christianity, historicist ethics, and Africana studies as intellectual frameworks. A member of the Democratic Socialists of America, West is a non-Marxist socialist who has been notably critical of American society, as well as presidential candidates and administrations over the last two decades. His activism and advisory involvement with organizations and political projects have expanded to the consideration of issues such as racial injustices, the ethical treatment of animals, and malevolent authority among the American public.

The academic career of West—largely focused on the role of race, gender, and class in American society—has been substantial: a W.E.B. Du Bois Fellowship, attaining

Note. Photo courtesy of College Archives, SUNY Plattsburgh.

The architecture of the digital exhibit involved creating a separate event item for each performance covered, then adding each news story, publicity piece, video, or audio file selected by the students as an item connected to the event using Dublin Core relationship metadata. Initially the team planned to produce the digital exhibit after the semester was over, but as the project gathered momentum, McMahon realized it was important to be able to point people to a website for publicity beforehand and for news reports afterwards. Given more time, the team might have split *And Still We Rise* from *Plattsburgh Rocks!* to its own website with its own domain name. In the end, McMahon created a short URL (tinyurl.com/plattsburghrise) pointing to the exhibit on *Plattsburgh Rocks!* so that the team could distribute an easy-to-remember web address.

Beatty added pictures and videos from the opening event following the exhibit opening. The digital exhibit, via a

dedicated computer and media cart, remained in the library lobby near the physical exhibit through the summer of 2019. It continues to be accessible online, and future versions of the course may add to it.

At the end of the project, the team assessed the digital exhibit and reflected on changes we would make in future iterations. We would purchase a domain name well beforehand and set up the project in such a way as to make it easy to use that domain name even if it continued to be hosted on the *Plattsburgh Rocks!* server. The best way of doing this might be to convert *Plattsburgh Rocks!* from Omeka Classic to Omeka S, a newer version intended for institutional collections of digital objects that can then be used in many different exhibits. *Plattsburgh Rocks!* and a new *And Still We Rise* domain name could then both point to exhibits built in a single Omeka S instance. We would also like to incorporate students into the design and building of the digital project, rather than just have faculty or librarians build an exhibit based on students' work. One team within the class with interest and aptitude in **digital scholarship** could build the digital exhibit, while another team could concentrate on the physical, incorporating open design principles into their work. These students could then make design and organizational decisions from the start, as their peers would with the physical exhibit.

Exhibit Opening. McMahon and his students prepared the program for the May 1 opening, which included remarks by Hartnett, the Dean of the School of Arts & Sciences Andrew Buckser, McMahon, and six of his students. Hartnett arranged for a speaker's podium, seating, and a professional sound system to create a more formal ambience befitting the importance of the event. Hartnett also enlisted Matt Rist, a library student-employee skilled in videography, to record the program. The Dean of Library, Information, and Technology Services Holly Heller-Ross provided funds for refreshments for attendees. There was local newspaper coverage prior to the opening and Mountain Lake PBS attended the event to shoot live footage of the program and interview participants and attendees afterward. The size of the crowd exceeded expectations. There were a significant number of community members in attendance and an unexpectedly large turnout by faculty and administrators as well. From the perspective of those of us who have been on campus the longest, the ASWR project was one of the most visible events on campus featuring the work of a single class.
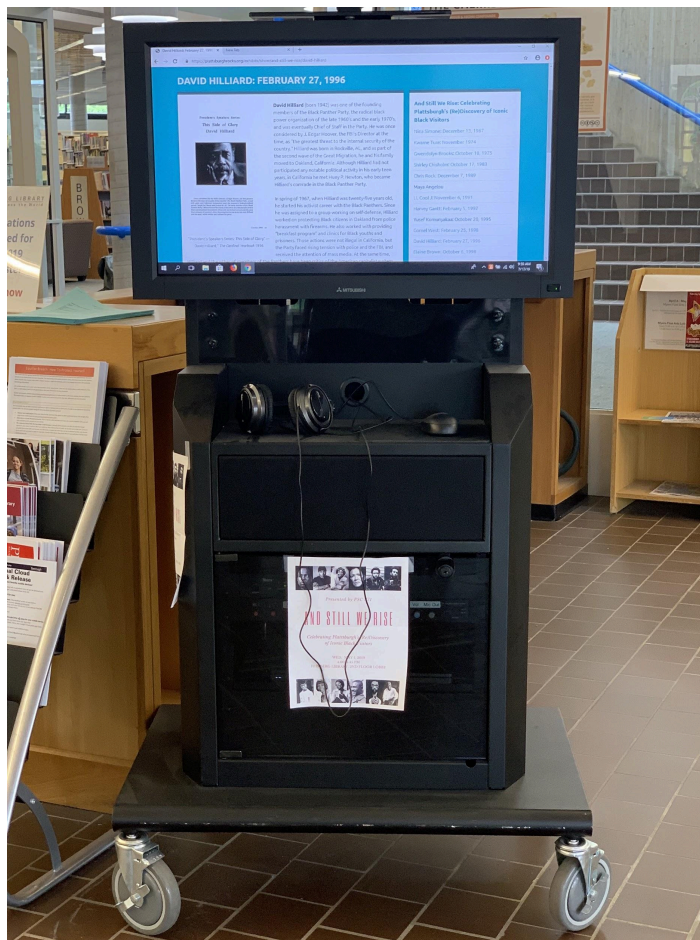
Figure 5

Photograph of exhibit, lobby of Feinberg Library, SUNY Plattsburgh.

Figure 6
Media cart displaying digital exhibit, Feinberg Library, SUNY Plattsburgh.

Reflecting on *ASWR* and Open Pedagogies

Pedagogically, the project works to enact several motivating principles of open education. Important for us is that open pedagogy does not just implicate specific curricula, assignments, and resources, but also carries with it *values* (Cronin and MacLaren, 2018), such as those identified in the introduction. This project intertwined specific practices with a broader mission. ASWR facilitated students' development as knowledge creators, researchers, and public authorities on the subject. The project also instantiated open practices and served a broader political and social purpose on campus.

More specifically, in terms of the first principle articulated in the introduction, that open pedagogy can facilitate student educational autonomy, ASWR enabled students to exercise such autonomy in their self-directed research, public writing, and presentation about a prominent figure from Black campus history. Students chose their figures, engaged in the research, and wrote the exhibit text for their figures. The second principle involved active collaboration and social learning. The project fostered this mode of learning through the collective decision-making processes about the exhibit name, display, social media, and so on, and also through regular check-ins and class-wide brainstorming sessions about the research and exhibit. Additionally, ASWR provides an example of how the elements of open pedagogy-driven assignment design in the third principle identified in the introduction can be translated into public-facing practice.

In retrospect, what became most important was the fourth identified principle, that open pedagogy orients student scholarship to public audiences and to public good. In its conception, its process, and especially its exhibit and open presentation, ASWR brought what students had been learning in the classroom to the campus community—and beyond, with the online exhibit—as a project for racial justice. In this, the authors took inspiration from the work at a similarly-

situated comprehensive college by Risam, Snow, and Edwards (2017). The authors thus hope the project at least partially realizes the purpose that Smyth et al. identify for open educational practices to "support social transformation, sharing and co-creation of knowledge in fully open ecosystems, where benefit for social good is expected" (2016, p. 211). In the most optimistic interpretation of ASWR, it involved the sharing of instructor, librarian, archivist, and student knowledges for the co-creation of an open resource that positioned students as independent researchers and that can, at the very least on campus, contribute to racial justice projects of social good.

Libraries have been at the forefront of the open pedagogy movement within colleges and universities (Hensley and Bell, 2017; Walz, 2017). At SUNY Plattsburgh, a small group of interested librarians—Beatty, Kimok, and OER Librarian Malina Thiede—had been promoting services related to open pedagogy, such as digital scholarship, student publishing, and Open Educational Resources (OER), while encouraging the library to give these services a more prominent place. The librarians' interest in open pedagogy stemmed from a belief that one of the best ways to engage students with their education is to show them that the work they do matters. By giving students an opportunity to make their work public-facing, open pedagogy initiatives allow students to directly engage the public and to make a difference in the larger world.

Librarians run digital services necessary to open pedagogy, but the content expertise of teaching faculty and students is essential to making open materials meaningful. Plattsburgh librarians had identified possible avenues that would be most effective for open pedagogical initiatives, with an eye towards the college's recent history of racial tensions. Plattsburgh librarians had identified the College Archives as a repository of materials that could illuminate the college's racial history. Students could potentially tell the stories of members of the college community who have been overlooked, especially faculty, staff, and students of color—perhaps even recording, archiving, and publishing oral histories. Finally, librarians might work with teaching faculty or college organizations to make visible the intellectual work of students from historically underrepresented groups.

The ASWR *project* became the ideal project to demonstrate how the library could support teaching faculty in open pedagogical practices because it was developed by students and directly confronted the college's recent history. The students developed new research skills, specifically how to search for information in our College Archives and in online newspapers. As detailed in the [Appendix](#), students completed a longer essay incorporating the research completed for the exhibit itself. They gained a better understanding of the history of their college and their connection to it, creating a greater sense of their inclusion in and attachment to that history. This connection enabled students to "see that they are part of a continually evolving life of a university" as a result of engaging "archival records" (Matyn 2000, p. 351). Additional evidence is found in a 2010 study of faculty use of archival materials in their teaching, which reveals that "faculty who have brought undergraduates into an archives or special collections department to let students work with original documents report that students are powerfully moved by working with authentic materials" (Malkmus 2010, p. 414).

The ASWR students benefited from working with primary source materials. Using finding aids to identify archival materials that had been collected and processed, they uncovered a documentary history to bring to a broad campus awareness. This discovery had a visceral impact on the students and gave them a connection to an important aspect of the college's history. The students created the content for a resource that now *is part of* the campus historical record and *enriches the meaning of* the documents in the archival boxes and the news stories online. Moreover, the ASWR project empowered the students in several ways, one of which was to draw on the past to speak to the present and the future.

The team hopes that this project spurs further reflection and research on the possibilities of open pedagogies in the field of political science. Extant literature on openness in the discipline is limited to research on students' reception of and learning with the use of Open Educational Resources (OER), with two studies finding mixed results (Brandle 2018; Lawrence and Lester 2018).[6] However, much of the scholarship on open pedagogy emphasizes its political mission. For

6. Both articles state that using OER in introductory American government classes did not improve

instance, Kalir (2018) argues that open pedagogies are concerned with issues of equity, power, and access, while Cronin and MacLaren contend that critical digital pedagogies that frequently inform open educational practices focus on the "potential of open practices" to "function as a form of resistance to inequitable power relations within and outside of educational institutions" (2018, p. 4). These are political questions that the field of political science finds itself uniquely situated to address. At the same time, the development of open pedagogies in the discipline would be likely to help achieve many of its pedagogical aims, such as teaching democratic engagement (Sloam 2008) or political knowledge production (McMahon 2019a) through active learning practices.

Finally, the team envisioned this project as a way to make visible Black history, politics, culture and campus life. As written in the text introducing the exhibit:

> At a time when our campus–and, to be sure, the country more broadly–is compelled to reexamine its relationship to antiblack racism, *And Still We Rise* testifies to Black pasts, presents, and possible futures at SUNY Plattsburgh. It can constitute, we hope, one impetus among many for an active, self-reflective pursuit of racial and social justice, a pursuit grounded in Black experiences. This is an exhibit that centers Black life on campus and that asserts that Black lives do matter. As you engage with the histories presented here, we invite you to consider the visions and dreams for the events, conversations, commitments, actions, collectivities, and imaginations that *And Still We Rise* can impart (McMahon, 2019b).

The openness of the project enhanced its commitments to racial justice, emphasizing its collaborative processes, cultivation of student voice, and public nature. In doing this, the project not only centered Black life on campus, but also demonstrated the potential for curriculum and assignments–and for student-librarian-faculty collaboration–to do work on campus that seeks to further racial justice.

Conclusion: Creating, not Consuming

As an open project with the motivating principles discussed in the previous section, we are confident our approach can be effectively adapted by librarians and teaching faculty at other institutions. Librarians and teaching faculty should anticipate that many resources exist in the archives and special collections of their institutions, which could be used to enhance and support courses and projects. Additionally, other campuses should consider building a similar kind of archive of speakers and performers for the purpose of developing course and campus projects. Focusing on materials such as those forming the basis of ASWR would enable collaborators to develop projects and exhibits centering Black history and politics on campus. These archival resources could also be a foundation for similar projects engaging campus histories of particular topics such as environmental action, political activism, or music performances, or of other marginalized groups and identities. Broadly, proactive collection and cataloguing of materials created by marginalized social groups on campus supports a wide range of pedagogical and ethical purposes, and in all of the advice offered in this paragraph, intentional and active collaborative efforts are necessary.

In all of these possibilities, open pedagogy paired with commitments to social justice and librarian-faculty collaboration enables students to develop their skills and their voices as researchers and experts in their own right. Students *creating*, rather than merely *consuming*, open public scholarship proves particularly vital for such flourishing. Through ASWR and the pedagogical commitments underpinning it, students could articulate their own voices as

student success measured in terms of student learning outcomes. However, Brandle noted that using the OER book led to pedagogical development and a meaningful course redesign, while Lawrence and Lester identify increased affordability and access to course texts as a benefit of OER.

researchers, collaboratively investigating campus history in pursuit of public education (in multiple senses of the term) and racial justice. Such is the promise of this type of learning in its future iterations at SUNY Plattsburgh and beyond.

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Feedback, suggestions, or conversation about this chapter may be shared via our [Rebus Community Discussion Page](#).

Appendix: *And Still We Rise* assignments, timelines and lesson plans

Outline for Library and Archives Information Session, 2/11/19

1. Introductions
2. Overview of the multiple roles Debra, Tim, and Joshua will be playing to support the project this semester
3. Overview of resources
   a. *Cardinal Points*
      i. article(s)/photo(s) about event
      ii. What else was happening on campus in the month before and after?
   b. *Press-Republican*
   c. Photo collections
   d. What to do if there is *not* much info about the person they've chosen?! → (e)
   e. Other resources
      i. People: seeing if it's possible to track down writer and/or photographer, etc.
      ii. NYS Historic Newspapers, etc.
         1. speaking/performing tour – what did they talk about in other places, etc.
4. Practical considerations
   a. Accessing the archives

      b. Relevant technology and devices

          i. Hi-res scanning

5. Preview of what's come with session with Joshua next month
6. Exhibit

      a. 2nd floor displays cases

      b. Online

      c. Any logistics worth discussing now?

7. Closing – why, from standpoint of Debra, Joshua, and Tim, this is an interesting, meaningful, and/or important project!

Outline for Research and Database Session, 3/13/19

- Review: what are primary sources?
- Different kinds of primary sources

  ◦ Text, images, audio, or video?

  ◦ Printed or handwritten?

- Specific databases to search:

  ◦ New York Historical Newspapers

  ◦ College yearbooks, in New York Heritage

- Hands-on searching, with librarians guiding when asked
- Encourage students to share findings throughout class

Requirements for Exhibit Research

For your research subject, you are required to complete the following research in SUNY Plattsburgh and NYS archives:

- Find and read relevant *Cardinal Points*, *Press-Republican*, and any other local articles about the visit to campus
- Look through *Cardinal Points* archives one month before and after the event (to get a sense of campus political and social climate and events, etc.)
- Search for and identify images (one photo + one poster/flyer, or two photos) for possible inclusion in the display

  ◦ *Cardinal Points* and/or College and/or *P-R* preferred, but can search for use-able other images from the time period if necessary

  ◦ EITHER: a) attempt to contact at least three people possibly connected to the event (writer(s)/photographer(s), SA President/Activities officer, campus figures, etc.) OR b) research other speaking/performing engagements of your subject around the time period they came to Plattsburgh

    ▪ For (b), one can assume that the subject visited Plattsburgh as part of some kind of tour, and thus it can be worthwhile to examine other possible stops on the tour, especially in the region and in New York state.

Required elements for the exhibit display:

- Text: write-up summarizing a) context of person's importance to Black politics and culture, and to American politics and culture more broadly; b) relevant information about their activities around the time of their visit; and

c) information regarding their visit to SUNY Plattsburgh

- ◦ Individuals: 2-3 short paragraphs; pairs, 3-5 short paragraphs
- ◦ You will (hopefully) develop more research and information than there will be room for in the exhibit itself. Part of the writing process for the display text will be deciding what is most essential to achieve those three goals.
- ◦ *Draft text for exhibit will be due at the start of class on 4/22, for a peer review workshop on that day.*
- 1-2 photos, posters, etc., preferably of visit to Plattsburgh, but other images okay

Timeline for Exhibit Research

- Monday, 3/25: One to two sentences to put on *And Still We Rise* social media + link to one image of your subject (can be from anywhere)
- Wednesday, 3/27: Summary (about 100 words) of available archival material on your research subject
  - ◦ Include names of any alumni you want to possibly contact + any other special requests
- Monday 4/8: Identification of images from *Cardinal Points, Press-Republican*, yearbook archives for inclusion in display
  - ◦ include identifying information (for instance, the date of the *Cardinal Points* issue + page number of photo)
  - ◦ If no photos available, choose online image(s) of that person from around the time of their visit to campus, including identifying information for the photo source
- Monday 4/22: Text for exhibit display (2-3 short paragraphs for individuals, 3-4 short paragraphs for pairs)
  - ◦ Bring to class for peer review
  - ◦ Display text should include a) context of person's importance to Black politics and culture, and to American politics and culture more broadly; b) relevant information about their activities around the time of their visit; and c) information regarding their visit to SUNY Plattsburgh – what they spoke about/performed, campus climate and political debates, etc.
- Wednesday 4/24: FINAL text for exhibit display

Requirements and Timeline for Final Research Paper

Your final paper will be an essay of approximately 2500 words on the political thought of your research subject. Your paper will include: a) analysis of central political themes in the work of your subject, including an interpretation of one or more key essays, books, articles, songs, poems, etc.; b) historical context about the political activities of your subject; c) examination of how your subject relates to the traditions of Black political thought—here, you should discuss relevant themes and thinkers from the class.

- Formatting requirements will be the same as for the midterm essay assignment
- You must cite *at least* seven sources that are not part of the class (at least three of these must be written by someone other than your research subject), and also must cite *at least* two sources from the course.
- You will be required to use American Political Science Association (APSA) citation formatting. Information will be provided about APSA style.
- Intermediate assignments
  - ◦ Wednesday 4/3: List of 12 possible sources
  - ◦ Monday 5/6: Outline/planning document, minimum 500 words

Building a Collection of Openly Licensed Student-Developed Videos

ASHLEY SHEA

Author

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Project Overview

Institution: [Cornell University College of Agriculture and Life Sciences](#)

Institution Type: public, statutory, land-grant, undergraduate, postgraduate

Project Discipline: Agriculture

Project Outcome: student-produced videos

Tools Used: LibGuides, iMovie, OpenShot, Institutional Repository

Resources Included in Chapter:

- Resource Guide
- Assignment Rubric
- Teaching Materials
- Sample Release Form

Introduction

Proponents of open access have long argued that scholarly output should be obtainable without technical and economic barriers (Willinsky, 2006). Although laudable, focusing on access alone in the context of student learning is insufficient.

When so much of one's understanding depends on interactions with the content, the conversation on "openness" must also include the processes and tools capable of content creation and sense-making (Knox, 2013b, 2013a). In this chapter, I introduce an assignment from an undergraduate agriculture class that undermines the argument for mere content access. Now running in its fifth year, this student video project has evolved beyond basic instruction, which first accompanied the assignment, to include complex pedagogical design and thoughtfully designed learning outcomes. In the first year, the assignment included directions for finding open access content—such as music, photos, and film footage—to integrate into videos. However, it now includes accompanying instruction on the tools and processes capable of creating, modifying, and distributing such content, including open pedagogical practices, open source tools, and open licenses. Similar to the field of agriculture where access is sought to the biotechnology tools and research methods that produce proprietary seeds (Adenle et al., 2012), the field of education is reckoning with the inherent value of the processes and tools underlying final educational output.

PLSCS 1900

Soil and Crop Sciences (PLSCS) 1900: Introduction to Sustainable Agriculture is a medium-sized survey course taught at Cornell University each fall. Cornell University serves as New York State's land-grant university and is comprised of four statutory colleges and four private colleges. The land-grant mission of the university applies to the statutory colleges and includes a commitment to translate applied research into practical knowledge for direct application by residents of the state, nation, and the world. PLSCS 1900 is nestled within one of Cornell's statutory colleges, the College of Agriculture and Life Sciences. The video assignment for PLSCS 1900 is a deliberate effort to encourage students to share the knowledge that they develop in class with a wider audience for larger public impact.

Roughly 70 students enroll in PLSCS 1900 annually. The class meets twice weekly for 50-minute lectures and once weekly for a three-hour lab. During lecture, students learn about different topics in sustainable agriculture—such as cover crops, dairy farm management, and integrative pest management—while during lab, the class travels to nearby farms to further examine topics from lecture. For years, the final assignment in the class was a standard research paper that yielded little enthusiasm from students and required significant grading time by the professor and teaching assistant. Several years ago, when a new professor inherited the course, the research paper was replaced with a video assignment. Each student was asked to independently create a short video about any aspect of sustainable agriculture and present their video to the class at the end of the semester. As the liaison librarian to the department in which the class is housed, I was asked to support the assignment during the first year of the video assignment by creating and then introducing a resource guide (Appendix A) in a 20-minute "one-shot" guest lecture. My resource guide provided directions on finding open access images, music, and video footage that students could utilize in their videos and highlighted the videography equipment available for circulation at the library. At the end of the semester, I was invited to the final lab periods where students presented their films.

Addressing Pitfalls of Initial Video Assignment

In the first iteration of the project, students were left to independently learn how to synthesize a body of evidence and integrate resources to present a clear argument in video form. As the due date approached, students scrambled to produce a tangible product and many uploaded exceedingly large files. The final videos were of low quality with few articulating and supporting a clear message. After viewing the student films that first year and being disappointed in the quality, the professor and I brainstormed ways to revise the assignment so the output would improve.

As a new professor, he was incredibly open to my ideas and involvement in the class. As it happens, I had taken the same class as an undergraduate at Cornell from his predecessor and possessed knowledge about the course that he

and the students could benefit from. And as a new librarian that was entering the field at the time that the Association of College and Research Library's new Framework for Information Literacy was introduced, I was eager to lean into the new Framework to justify extensive librarian involvement in the assignment. With frames that included "Authority is Constructed and Contextual," "Information Creation as a Process" and "Information has Value," the new framework underscored the librarian's role in the student learning process. It positioned librarians to help students recognize the value in seeking various information types, making sense of that information and then synthesizing it in new forms for use by others (Stripling, 2010). I interpreted the Framework broadly to include both digital and analog content and skills, and believed the nature of the video assignment aligned well with my interpretation. I asked the professor if I could provide training to the students on the use of videography equipment and editing software, as well as basic instruction on storyboarding practices and general copyright education in future iterations of the class. I lacked all of these competencies at the time, but felt strongly that they would contribute to my digital literacy and pedagogy skills and enhance the depth of my knowledge when providing instruction on any information literacy topic in the future. The professor agreed, and strongly encouraged my contributions. Indeed, he supported me largely taking the lead on the project.

Over the course of the summer that preceded the next class, I developed my skills and built a solid infrastructure for the project. I first met with a team of web developers that maintain eCommons, Cornell's institutional repository that provides open access to the research and educational output from the university. With their help, we developed a process that streamlined the video submission process for students while simultaneously allowing for self-deposit in the repository so their videos could be used as teaching examples in future years. I then met with the library's Director of Copyright Services to learn more about copyright and Creative Commons license options and concerns related to the Family Education Rights and Protection Act (FERPA). She designed a consent form that students would sign if they agreed to archive their work in eCommons.This consent included the agreement to affix a CC-BY-NC license to each student's film. Falling somewhere in the middle of "most restrictive" and "most open," this license seemed like a happy medium for graded student work and was in alignment with the rules established in the university's code of academic integrity.

After meeting with the Director of Copyright Services, I then worked with the library's Instructional Technology Coordinator, who has significant experience in video capture and editing. He provided me with a brief tutorial on the functionality available in iMovie. I then supplemented this self-guided professional development with online tutorials and videos from Lynda.com on things like video production and storyboarding. Pulling this all together, the professor and I collaborated to rewrite the original assignment and associated instruction for it. We transformed a last-minute replacement in the syllabus to a structured, pedagogically sound assignment that utilized Open Education Practices (OEPs). The result has led to frequently viewed and openly licensed videos created by budding undergraduate videographers who just happen to be studying agriculture.

Grounding an Assignment Redesign in Pedagogical Principles

Open Educational Practices (OEPs) seek to recognize the agency that students have when developing competencies and skills (Ehlers, 2011) and embrace 'pedagogical openness,' such as active learning, interactive and adaptable learning tools, and peer collaboration (Murphy, 2013). Active learning refers to the pedagogical approach of incorporating hands-on engagement when constructing knowledge to promote creativity, critical thinking and knowledge transfer across disciplines (Armbruster et al., 2009; Burbach et al., 2004; Freeman et al., 2014; Prince, 2004). Indeed, when an instructor's teaching philosophy aligns with constructivism, or the belief that knowledge is constructed and developed over time at each student's pace, the classroom becomes student-centered, learning is kinetic and students report higher levels of engagement with the course material (Dori & Belcher, 2005; Sawers et al., 2016). Active learning prevents students from passively consuming information and requires involvement in the production of new knowledge and understandings (Bransford et al., 2000; Knight & Wood, 2005). All of this, of course, is key when tasking students with creating a short

video. This would otherwise be a daunting assignment for most undergraduates in the life sciences who have never done this before.

Generating student engagement is notoriously difficult to build in one class session but easier when integrated into the course (Kvenild & Calkins, 2014; Mery et al., 2012; Walker & Pearce, 2014). As such, the professor agreed to let me implement a problem-based learning instructional framework for the assignment that would span several weeks, thus exposing me to students multiple times to facilitate hands-on collaboration, creativity and critical thinking (Kenney, 2008). Problem-based learning incorporates realistic tasks into the instructional framework to encourage future recall and application of information. It also underscores the idea that education is most effective in the context of future anticipated scenarios (Glaser, 1982). With this in mind, I introduced new, solvable problems that would be included throughout the semester that focused on the skills required for successful completion of the assignment.

Nuts and Bolts of the Revised Assignment

The first step when re-writing the assignment was to clarify desired learning outcomes. When the project was conceived, the professor desired to promote creativity while encouraging the development of technical skills. Somewhere throughout the first year of the project, the professor and I also recognized the need to educate students about their rights and responsibilities when creating and using content. Altogether, these goals were commendable, but they lacked specificity and an assessment plan. Without clear parameters and definitions, students floundered.

With my willingness to take the lead on the redesign and execution of the project, the professor formalized my role in the class by listing me as a co-instructor on the syllabus, further codifying my ability to contribute. Relatedly, he shared confidence in my vision, provided instructor-level access to the course Learning Management System, and encouraged my involvement in the assignment grading process, even with other assignments and course lectures. By acknowledging my role, he empowered me with creative and intellectual freedom to develop a high quality, high-impact student assignment.

When introducing the assignment in the second year, in the interest of employing OEPs from the beginning, we encouraged students to work together in groups of 2-3 and we outlined expectations of group members. To avoid unwieldy and epic films, we also established time limits on the videos and asked that they be between 3 to 5 minutes long. I distributed our rubric ([Appendix B](#)) for grading the final videos so students could see each metric by which the final video would be judged. We explicitly verbalized our learning outcomes and defined critical thinking. For the purposes of this assignment, we embraced a definition of critical thinking adopted by other biological and physical science disciplines: The ability to thoughtfully incorporate various data and other information into the problem-solving, decision-making, or argument-posing process (Holmes et al., 2015; Quitadamo & Kurtz, 2007). The formalized learning outcomes are based on the taxonomy of educational objectives (Bloom & Krathwohl, 1956) and include:

1. Apply new types of information—such as interviews, photos, diagrams and voiceover—to convey a visual and audio message;
2. Evaluate outside sources, such as USDA data, credible reports or articles, and use to justify or refute your argument;
3. Integrate resources into your film that are not protected by copyright and support your message;
4. Create a final film that is CC-BY-NC licensed with a well-developed, supported and articulated message;
5. Recall basic concepts from lectures/readings to situate your film's main message;
6. Identify and explain clearly your film's message or argument;
7. Draw connections between concepts in your film and how they relate to the topic of sustainable agriculture.

The first four outcomes align squarely with key aspects of information literacy and can be achieved best with the heavy involvement of an educational professional trained in information literacy standards, including ACRL's Framework.

To achieve each outcome, I established three distinct project milestones, each with a deliverable. Each deliverable's due date was preceded by a class period devoted to relevant instruction and hands-on learning to set students up for maximum success. Utilizing a constructivist and scaffolded approach inherent to OEP, each milestone built upon the previous one in complexity and scope and required that students expand on their knowledge to create something new instead of a simple reproduction of facts (Wiliam et al., 2004). We utilized informal formative assessment at the submission of each milestone deliverable, enabling students to ask questions as they emerged, and provided feedback in real-time (Sadler, 1998).

The first milestone is the easiest of the three, though still complex. During a lab period, students pitch their idea for their video, rationale for the idea, and a rough draft of the video's narrative. After each project team presents, at least two peers from the lab and both the professor and librarian offer conceptual feedback on the proposal's message.

To help students meet the expectations for this milestone, I lead a workshop on constructing a well-articulated and evidence-supported argument several weeks prior to this milestone's due date. I utilize deliberative pedagogy, or a consensus-type model, in which students work backwards from a given problem to collectively find a solution (Shaffer et al., 2017). I assign each student a hypothetical personal problem—like being offered a dream internship but realizing it was unpaid and therefore unfeasible to accept—and instruct each to seek and apply evidence to articulate a solution. Each student then presents the solution to a partner, who provides feedback on the strength or weakness of its supporting evidence.

In the process of engaging in the dissection of evidence and the construction of arguments, students learn that the mechanisms matter more than the platform or parts. This is a crucial observation for students and helps them understand that the technical skills required when making a video should not overshadow the construction of a solid message. This was a distinct problem that we had observed during the first year of the assignment and underscores the point that in learning, facilitating an appreciation for processes is just as important as emphasizing the final product.

Building from the first milestone, the second milestone is more laborious. Students are asked to work with a classmate to capture practice footage on a class field trip and submit the footage to me for later class review and feedback.

To help students meet expectations for the second milestone, I incorporate active learning videography instruction into an already-scheduled farm field trip during the third week of the semester. This active learning is done out of necessity; I wanted to introduce the concepts early in the semester while the professor needed to schedule field trips prior to the first frost. With more content to cover than time, we combined the lesson with the field trip in one lab period. To facilitate active learning, I distribute a complete storyboard to each pair of students on the bus ride to the farm. Each pair receives the same storyboard, which lays out the sequence of shots required to create a fictional film about the origins and operations of the farm. In true open and participatory fashion, I ask students to brainstorm with their seatmate how they will capture the visual or audio footage needed to illustrate and support at least one of the shots in the storyboard. When we arrive at the farm, I then hand out cameras and audio recorders that I borrow from the library and ask students to spend 15 minutes capturing the footage that they planned on the bus ride to capture. By putting their plans directly into action, students practice their skills in an active and impactful way, capturing the same type of footage that they may need later for their final group video (Felder & Brent, 2009, p. 7). Student footage from this activity is submitted to me afterwards and utilized during an instruction workshop that supports the third milestone.

The third and final milestone is the most daunting of all: each group uploads their final edited video. Those willing to archive their film and assign a Creative Commons Attribution-Noncommercial (CC-BY-NC) license upload their video to eCommons, thereby making it public. Those unwilling to do so upload it to a private Learning Management System open only to the class, without grade repercussion.

To help students succeed with this final milestone, I lead a workshop during a lab period several weeks before the due date on copyright and film editing. During this workshop, I utilize the practice footage the students captured on the field trip and submitted for the second milestone. Two library colleagues with experience using video editing software join me for this final workshop to address the high volume of personal questions and need for hands-on help from the students. For the first part of the workshop, I provide a 15-minute lecture on the importance of licensing and what to consider when creating and reusing content. For the second part of the workshop, I teach students how to perform basic functions in two software programs, including iMovie (a commercial editor standard to Macs) and OpenShot (an

open-source video editor compatible with Mac, Windows and Linux). I then utilize problem-based learning and assign students a 'problem' to solve in their choice of either iMovie or OpenShot. The "problem" is related to the footage and audio that they previously submitted following the field trip. Problems range from unstable and shaky video footage, inaudible interviews, fragmented footage with abrupt endings and irrelevant content captures.

Once they have solved the problem by utilizing the functions of an editing program (such as dampening sound, stabilizing footage, or combining several clips), the final scenes are complete for each storyboard frame of the video on the farm. In the process of resolving each problem, students simultaneously review and correct the work of their peers while recognizing the agency that they have to create, manipulate and give meaning to both their content and the content created by others. For the third part of the workshop, students work on their final project while I circulate to answer questions and address technical issues. At this point, the room is energized and the spirit of collaboration is palpable. As students work with footage that they have captured, they continue to reconceptualize their role as content creators.

At the conclusion of the workshop, I review the consent form that our Director of Copyright created and ask students to sign if they plan to deposit their final film into eCommons. Students are encouraged to ask questions before signing and I review the benefits and potential drawbacks of archiving it in eCommons, making it clear that consenting is optional and detached from the grading rubric. Benefits include: the assignment of a stable identifier to each video, descriptive metadata (including duration and keywords) for each video that aids in its discovery within the platform, a streaming version that speeds play time and indefinite hosting within the [class collection in eCommons](). An additional benefit (that some students view as a drawback) is that eCommons is indexed by several search engines, including Google, thus further enhancing the likelihood of discovery from outside the repository.

Each year, 2-3 students typically opt out of publishing their final film in eCommons, citing the desire to prevent their parents or future employers from discovering the video. One student has also asked to temporarily remove their video from the repository so they could submit it to an international film festival, where guidelines stipulated that the video could not be submitted or housed elsewhere. As students formally sign a consent form and agree to an actual license for their work, they further recognize the power and agency that they have in creating meaningful content in video form.

Film Festival

On the final day of class, we host a film festival in a large library lecture room complete with a popcorn maker and white lights. Each group presents their video to the class and invites questions. Films that were archived in eCommons are streamed directly from the repository, reducing the load time necessary between videos and further illustrating to students the public nature of their work. Students also score each video based on a rubric provided to them in a Qualtrics-based web form; the cumulative score determines the top ten ranked videos for the year. Following the festival, the top ten videos are noted within the collection in eCommons for further recognition.

Over the years, music videos, comedic parodies, documentaries, and stop-film animation short films have been created on a wide range of topics. Topics have included farm management practices like crop rotation, manure management and soil tillage, and also more social topics like food deserts, dining hall waste, and the aging demographic of farmers. When introducing students to the concept of sustainable agriculture at the start of a new semester and the video assignment itself, we utilize past student videos. The videos have also proven effective as a means of outreach when meeting with new faculty on campus and explaining the multitude of instruction services that liaison librarians offer. When meeting with librarian colleagues at different institutions interested in the concept of "openness", I rarely miss an opportunity to share the URL to the eCommons repository where the collection of 137 openly licensed student videos are housed. Indeed, several videos boast more than 700 views from more than 10 countries, making the case that these videos are useful and worthwhile to many people, not just the students that make them. The usage statistics also underscores a reality for students: they have a serious responsibility to consume and create content ethically. Though daunting, this realization is empowering.

Assessment

The three project milestones each yield various outputs, that are assessed in several ways, some of which was described previously. In summary, the first milestone includes a peer review where students critique the strengths and weaknesses of an evidence-based solution to a hypothetical problem. The second milestone includes another form of peer review where students are given problematic video and audio footage captured by their peers and are asked to resolve the issues with their newly acquired technical editing skills. And the third milestone includes both a peer review and instructor grade based on the previously supplied rubric.

In addition to assessing student competencies, I assess my own teaching efficacy and the impact of the video project. The professor includes questions on the student end-of-semester course evaluation about each instructor's efficacy, including our ability to clearly and effectively explain new concepts and our willingness and ability to answer questions. We also ask students to rank in order of preference each assignment for the course, including the video assignment. The video assignment routinely ranks in the top half of all assignments. Feedback over the years has included: suggestions to increase the percentage of the assignment in the overall course grade (which we did), suggestions to provide more hands-on editing help (which we have), and suggestions to improve the peer-to-peer review process (which we have implemented). Each year's evaluation brings new suggestions, resulting in an ever-evolving assignment and relatedly, open and adaptive instructional strategies.

Considerations for the Future

As one might imagine, this project is time-consuming and dependent on several factors. Chief among them is the librarian's ability to fully engage with the class and the faculty member's willingness to devote significant class time to such a project. The project now accounts for 20% of the student's final grade in the course, a slight increase from its original 15%, further signaling from the professor the value of the assignment. Without the professor's support and unwavering embrace of new pedagogical strategies, as well as his recognition of my contributions and co-instructor status, the project would suffer the same lackluster results as it did in year one. The feasibility of devoting significant time year after year is a real consideration for others considering such a project. The feasibility of creating meaningful videos derived from a course's subject domain is another consideration.

Applied classes with hands-on components may lend themselves more to video projects than other classes. Indeed, as the project in PLSCS 1900 has grown and developed, other applied classes within the College of Agriculture and Life Sciences have sought my assistance to develop similar video projects, including in the Viticulture and Enology Department and the Plant Pathology and Plant-Microbe Biology Department. Large classes with enough enrollment to enable small groups of 2-3 students may lend themselves to labor-intensive video projects. The advantage of having a larger class is that work can be distributed among several students and the students can benefit from the skills of their teammates. In general, when consulting with professors about a video assignment, I strongly recommend group videos because of the significant time it takes to create a high quality video. However, I also strongly encourage that group formation be at the discretion of the students. In other words, while the professor can and should encourage group work, he or she should ultimately let students decide if they want to work in a group and with whom they want to work. In past experience, group problems arise most frequently when groups are forced upon students, and students with different learning abilities or styles are forced to work in groups that may not recognize or respect the differences.

An additional consideration of course is the local climate on each campus, which may dictate the possibility or embrace of video project uptick. As indicated, the land grant ethos of Cornell inspires a certain degree of interest in applied and public-facing course projects. The library has also embraced the role of librarians in such projects. As the interest in librarian-supported video projects increases at Cornell, the library has devoted increased resources to meet the demand. Over the last two years, the job descriptions for several librarians have been re-written to increase the

percentage of eLearning responsibilities in their portfolios, including video project support. For librarians looking to clarify the feasibility of such a project on their campus, a conversation with library administration may be the next step. As multimedia skills become increasingly desirable in the workplace and information literacy skills become even more helpful to engage with civic life, the librarian with their relevant skill set is a natural partner to help develop these skills (Raish & Rimland, 2016). Indeed, by adapting our practices to enhance student skills desired by future employers, librarians are embracing yet another argument of Open Education Practices: that industry and education standards become more open and better aligned (Eldridge, 2017).

Finally, an important consideration moving forward concerns the relationships between the librarian and faculty member, and the librarian and student. In the project that I outlined above, I have played a significant role in the teaching and grading of student work. The professor lists me as a co-instructor for the class and recognizes my involvement with the project among his faculty peers. He and I meet regularly to discuss and collaborate on course development. Although I do not receive additional compensation for this work, I benefit from the recognition that comes from being listed as a course instructor; something that is favorably viewed by library administration in the librarian promotion process at Cornell. I also derive more respect from students who view me as their course instructor, and someone from whom they can and should seek guidance and support.

I have been fortunate to work with such a supportive and encouraging professor as well as a supportive and encouraging supervisor. To ensure this success for others moving forward, I encourage outlining expectations with the professor in advance of commencing a video project and clearly delineating each person's responsibilities. The process happened organically with this project and has evolved over time, but was completely successful because I had a very good rapport with the professor.

Conclusion

Overall, with each course iteration, improvements to the assignment have resulted in more nuanced and unique student-created videos. By incorporating distinct milestones into the project, clearly conveying expectations, and integrating associated active learning opportunities into the class at strategic times, students succeeded. This is evidenced by a high median grade on the project (A-) and active engagement with the assignment throughout the semester. Instead of stumbling with the video medium as they did during the first year, students utilized the medium to enhance and articulate a message. By requiring that students identify a message and utilize evidence to support their argument, we have found that students enhance their understanding of topics first introduced in lecture. And by actively engaging in the production of new knowledge, students engage in deliberate research to find supporting and refuting sources. Open education practices (OEPs) were harnessed in this assignment to promote and underscore students' role in the creation of content. OEPs also enhanced our ability as instructors to develop student competencies and skills in lasting and meaningful ways for the benefit of those that will consume these videos one day (Knox, 2013b). The heavily viewed OER—on meaningful topics such as solving world hunger, encouraging a new generation of farmers, and tackling food injustice—have undoubtedly been the most significant impact of course to date.

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Feedback, suggestion, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix A

Figure 1

Resource Guide

Appendix B

Video Assignment Rubric

Rubric modified from the [International Ocean Film Festival](#)'s 2014 Student Film Competition Rubric.

Criteria	Rating				Score (1-4)
	Exemplary (4)	Proficient (3)	Developing (2)	Undeveloped (1)	
I) Storytelling (message)	Conveys idea(s) or story to the audience in an effective way. The film is compelling and the purpose of the project – and its relation to sustainable agriculture – is clearly established. Several outside sources, such as (but not limited to) federal data & reports, are integrated to support a strong message.	Conveys idea(s) or story to the audience in an effective way. The film accomplishes the purpose of the project, and its relation to sustainable agriculture is usually clear. One or two outside sources are used to support the message.	Does not convey ideas or story to the audience in an effective way. The purpose of the film is suggested, but it is unclear; link to sustainable agriculture is not well established. Outside sources are used but they do not clearly support a clear message.	Lack of idea(s) or story. The purpose of the film has not been identified the video does not match the purpose. No clear link to sustainable agriculture. No outside sources are used.	
II) Audio/ sound	Audio is balanced between dialogue, music and voice over. Audio is clear throughout the video.	Audio is usually balanced between dialogue, music and voice over. Audio is clear throughout the video.	Audio is somewhat balanced between dialogue, music and voice over. Audio is clear throughout the video.	Audio is unbalanced between dialogue, music and voice over. Audio is inaudible in significant portions of the video.	
III) Video (shot) focus and lighting (Not applicable to Animated films)	All shots are appropriately focused for the intent of the film. Camera movements are smooth and at appropriate speed. All shots have appropriate lighting.	Most shots are appropriately focused for the intent of the film. Camera movements are smooth and/or at appropriate speed. Most shots have appropriate lighting.	Many shots are not appropriately focused. Motion shots are fairly steady. Some shots have inadequate light.	Few shots are appropriately focused and are not shot with intent. The camera is not held steady. Many shots have inadequate light.	
IV) Production (transitio ns, editing, effects)	Excellent use of transitions and effects; very smooth blend between scenes; invisible edits.	Good use of transitions and effects; smooth blend between scenes; edits are unobtrusive.	Poor use of transitions and effects; inappropriate blend between scenes; edits are disruptive.	Little to no use of transitions and effects; distracting edits between scenes.	

V) Visual appeal (overall aesthetics)	Excellent composition. Uses effective shots. Cinematography conveys messages about characters and story.	Good composition. Uses some effective shots. Cinematography conveys some messages about the characters and storyline.	Minimally acceptable composition. Shots are not very effective. Cinematography does not contribute to character development or storyline/ message.	Poor composition. Weak, repetitive or poor shots. Cinematography contains no messages about characters or storyline/ message.	
VI) Originality and creativity	Film shows evidence of imagination, creativity, and originality. Thoughtfulness to the style and mood that suits the film. The content and ideas are presented in a unique and interesting way.	Film shows some evidence of imagination, creativity, and originality. Thoughtfulness to the style and mood that suits the film. The content and ideas are presented in an interesting way	Film shows little evidence of imagination, creativity, or originality. Minimal thoughtfulness to the style and mood that suits the film. Film shows an attempt at originality in part of the presentation.	Film shows no evidence of imagination, creativity, or originality. No thoughtfulness to the style and mood that suits the film. Film is a rehash of other people's ideas and/or images and shows very little attempt at original thought.	
VII) Timing/ pace	All clips are just long enough to make the point clear with no slack time. The pace captures the audience attention and the "mood" of the content.	Most clips move at a steady pace. Most transitions between scenes are thoughtfully executed.	Some clips move at a steady pace. Some clips are edited to remove slack time. Transitions between scenes are somewhat thoughtfully executed.	Video clips are too long and do not advance the storyline or too short and leave out essential action. Transitions between scenes do not show evidence of thoughtful execution.	
VIII) Overall impression					
				Total score	

Appendix C

Figure 2

On-Farm Storyboard Template and Videography Techniques Handout

Video storyboard template

By end of field trip: You must capture <u>at least one of the following scenes</u>

Opening scene	Scene 2	Scene 3	Scene 4
		Case study: Oechsner Farm	Oechsner Farms
Image: Zoom in on any class reading and establish film's message	Image: Zoom in on another class reading to construct narrative	Image: Bird's eye view, pan or high angle of Oechsner Farm	Image: More Bird's eye, pan or close up of Oechsner Farmers

Scene 5	Scene 6	Scene 7	Scene 8	More images to capture...
	Milling grains sold for flour			• Soil vitality • Crop variation • Equipment in operation • Side interviews with farm workers
Image & sound: Interview at Oechsner farm about <u>market & species</u> diversification strategies employed	Image: footage of grains growing (and harvested, if poss.) for Farmer Ground Flour	Image: Footage of oats & corn grown for livestock feed; oat harvested for hay	Image & sound: Ask about sustainable profit resulting from <u>market & species</u> diversification	

Videography Strategies

You must try <u>at least one of the following strategies</u> when capturing your scene from the provided storyboard

Low Angle

Inglorious Basterds (2009)

Bird's Eye View

Good Will Hunting (1997)

High Angle

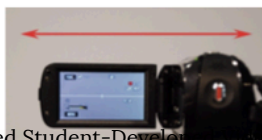*The Avengers (2012)*

Point-of-View

Silence of the Lambs (1991)

Static   PAN   TILT   ZOOM

Appendix D

FERPA Release

Student Video Project FERPA Release

Name of Student:

Student NetID:

Pursuant to the Family Educational Rights and Privacy Act (FERPA), I hereby authorize Cornell University to release the following educational records and information (identify title of the video):

The project identified above will be made available to the public in an exhibit in Mann Library, through the Cornell institutional repository (currently eCommons) and online. While I understand that it is preferred that I deposit the educational work identified above, there are times when it may be simpler for Cornell University staff to do it on my behalf. I hereby authorize the deposit of the educational work identified above on my behalf.

I authorize Cornell to distribute my work under a Creative Commons Attribution-Noncommerical license (see http://creativecommons.org/licenses/by-nc/4.0/). This allows the library and others to distribute and use the video so long as they give me credit and it is for non-commercial purposes. Otherwise, during the period of copyright protection (currently 70 years after my passing), people wishing to make commercial use of my video will need to contact me or my estate in order to secure permission.

I am requesting the release so that my project can be used as an example of work conducted and to further the Library's outreach and the work of others. I hereby authorize the Cornell University Library to take any necessary actions to accomplish this purpose.

I represent that I am the creator of this video and that the video is original and that I either own all rights of copyright or have the right to deposit the copy in a digital archive such as eCommons. I represent that with regard to any non-original material included in the video I have secured written permission of the copyright owner(s) for this use or believe this use to be allowed by law. I further represent that I have included all appropriate credits and attributions.

I understand that (1) I have the right not to consent to the release of my education records, and that (2) this authorization shall extend to Cornell University and its grantees, lessees, or licensees in perpetuity unless revoked by me, in writing and delivered to the Cornell University Library. Any such revocation shall not affect disclosures previously made by Cornell University or its licensees prior to the receipt of any such written revocation.

Student Signature

Date

Appendix E

Figure 3

Student Video Repository

Cornell University

eCommons
Cornell's digital repository

Search

Browse ▾   About ▾   Help   Login

🏠 Home / College of Agriculture and Life Sciences / School of Integrative Plant Science (SIPS) / Soil and Crop Sciences / Sustainable Agriculture Student Films (PLSCS1900)

Sustainable Agriculture Student Films (PLSCS1900)

Browse by

| By Issue Date | Authors | Titles | Subjects | Types |

Search within this community and its collections:

[   ] Go
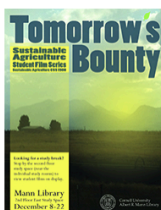
In the fall semester, students in Professor Matt Ryan's PLSCS 1900 class "Sustainable Agriculture" are asked to create a short film conveying a particular aspect of sustainable agriculture. Food and Agriculture Librarian Ashley Shea works with the class to teach traditional research search strategies, videography skills (including storyboard planning, film capture techniques and the use of editing software), and basic copyright rules and fair use considerations.

More than fifty films are submitted annually by students and judged by their classmates on creativity, quality of videography and clarity of message. Students present their films to the class during a "film festival" held in Mann Library's conference rooms while staff from Mann serve popcorn.

All students that consent to sharing their film deposit it here for the benefit of the Cornell community. The top 15 films that were selected by the instructors and their peers are noted below, in addition to being displayed at a special exhibit on the first floor of Mann Library during the two-week December exam period.

Collections in this community

2015 Student Films

2016 Student Films

2017 Student Films

2018 Student Films

Whose History?: Expanding Place-Based Initiatives Through Open Collaboration

SEAN D. VISINTAINER, STEPHANIE ANCKLE, AND KRISTEN WEISCHEDEL

Authors

- [Sean D. Visintainer](#), California State University San Marcos
- [Stephanie R. Anckle, Ph.D.](#), Marietta College
- [Kristen M. Weischedel](#), Illinois Institute of Technology[1]

Project Overview

Institution: [The University of Texas Rio Grande Valley](#)

Institution Type: public, research, undergraduate, postgraduate

Project Discipline: Education

Project Outcome: place-based lesson plan repository

Tools Used: Omeka, Wayback Machine

Resources Included in Chapter:

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1. Stephanie Anckle, formerly of the College of Education, University of Texas Rio Grande Valley, is now at the Marietta College Education Department, Marietta College. Sean D. Visintainer, formerly of the College of Education, University of Texas Rio Grande Valley, is now at the University Library, California State University San Marcos. Kristen M. Weischedel, formerly of the University Library, University of Texas Rio Grande Valley, is now at the Paul V. Galvin Library, Illinois Institute of Technology. We have no conflicts of interest to disclose.

2020 Preface

The first half of 2020 has brought two momentous challenges to the United States in the forms of the COVID-19 pandemic and the nationwide community movements against police brutality and institutionalized racism. Our project, *Whose History?*, necessarily looks different with the challenge of the pandemic in mind, while the protests make the project just plain necessary, now more than ever.

Regarding COVID, our institutions are grappling with the same issues as others across the country, and these questions resonate at the departmental and project levels as well. How do we facilitate collaborative group projects while keeping our students, staff, and faculty safe? How do we prevent materials that would be used by multiple students, and handled by library staff, from infecting others? How do we guide our students from a distance, and prepare our teacher-candidates for classroom settings that will by necessity look very different from what they did in 2019, in ways that we probably haven't even envisioned yet? Distance learning tools and digitization can help, but there are too many variables still unknown, too many inherent risks in doing things as they were, to not radically reimagine the logistics of the project. We don't at this time have the answers.

In spirit, however, *Whose History?* remains very much the same, and in light of the recent nationwide protests, more imperative than ever. The driving ethos behind *Whose History?* is to empower students to use local history materials for the creation of OER representative of their communities. Given the intense erasure and invalidation of BIPOC and other marginalized peoples, very much a feature of our Eurocentric culture, this project is especially important. While our public spaces are being emancipated through the removal and destruction of statues dedicated to the perpetuation of white supremacy, our intellectual and educational spaces need to be similarly reckoned with. *Whose History?* is one attempt to tell the stories of overlooked and erased communities and build inclusive histories. While this project is an important start, we recognize much more work needs to be done within both educational and archival spaces. We look forward to meeting this challenge in the years to come.

−Sean, Stephanie, & Kristen

Texas's **Rio Grande Valley** (RGV) population is predominantly Tejano (Texans of Hispanic ancestry). It is a region undergoing rapid growth, transforming from a rural farming and ranching region to a **conurbation** of municipalities stretching along the Rio Grande River, from Brownsville to Roma. Home to 1.2 million people, by 2050 the population of the RGV is projected to be greater than 2 million (Hoque et al., 2014).

The University of Texas Rio Grande Valley (UTRGV) is the RGV's foremost higher education entity. Formed in 2013 from two legacy institutions, UTRGV's 2018 enrollment was 28,644 students, with 87.8% of students identifying as Hispanic (University of Texas Rio Grande Valley, 2018). UTRGV aims to be the nation's first "B3" institution−bilingual, bicultural, and biliterate (University of Texas Rio Grande Valley, 2016, p. 15).

UTRGV's Teaching and Learning (T&L) program is a key producer of Latinx school teachers in the RGV, Texas, and beyond. UTRGV Library's Special Collections[2] (SC) acquires, preserves, and makes rare and unique documents related

2. The words "special collections" and "archives" are sometimes used interchangeably. For clarity's sake, archives has not been used in this chapter except for a few circumstances where using special collections may confuse more than clarify the intent of the writing.

to the culture and history of south Texas accessible to researchers. *Whose History?* project facilitators include a T&L faculty member and two librarians: the Head of Special Collections and the Digital Archivist. The T&L faculty member guides lesson plan creation using place-based education (PBE) pedagogical practices, while the librarians assist with teacher-candidate research and the online publication of select lesson plans.

Texas Essential Knowledge and Skills

The Texas Essential Knowledge and Skills (TEKS) are standards which quantify learning expectations for Texas K-12 education, or "what students should know and be able to do" (Texas Education Agency, 2010, Para 1). Chapter 113 of the TEKS designates areas of emphasis for the study of Texas social studies, taught in the fourth and seventh grades.

In Texas, over 28 million people live across the 17 Texas geographic subregions, one of those being the RGV (Butler, n.d.; U.S. Census Bureau, 2018). Providing adequate representation of each subregion with TEKS standards is difficult. There are only four subjects related to the RGV listed within the TEKS: the Battle of Palmito Ranch, Texas's Coastal Plains, the Karankawa Indians, and the League of United Latin American Citizens. Another area of study, people, face a similar problem. Of the 91 individuals mentioned in the TEKS and covering Texas's prehistory to present-day, four are significant to the RGV:

- Chelo Silva, singer
- Henry B. González, judge
- José de Escandón, colonizer
- Raul A. González, judge

Within the TEKS standards that address individuals' contributions to Texas history, neither Hispanics nor women are represented to numbers reflective of their distribution in Texas. Hispanics make up 39.6% of the state's population, but are represented in 20.9% of the TEKS standards. Women consist of 50.3% of the population of Texas, but are only 17.6% of persons mentioned in the TEKS.

Whose History? intends to address the RGV's lack of representation within the TEKS. Helpfully, the TEKS contain the following verbiage:

> To support the teaching of the essential knowledge and skills, the use of a variety of rich primary and secondary source material such as documents, biographies, novels, speeches, letters, poetry, songs, and artworks is encouraged. Where appropriate, local topics should be included. (Texas Education Agency, 2010, sections 113.15(a)(2) and 113.19(a)(2))

This language provides guidance for educators to address the lack of representation within the TEKS, and *Whose History?* provides the tools. UTRGV's Special Collections are used as a springboard for creating open access textbook supplements with the aim of fostering broader representation in classrooms throughout the RGV and Texas as a whole.

"Open" as a Guiding Philosophy in *Whose History?*

By building resources for Texas educators through the creation of open lesson plans, *Whose History?* increases the visibility of Tejanos and the RGV within Texas curricula. It addresses an OER-adaptation of Siyali Ramamrita Ranganathan's Five Laws of Library Science:[3] "Every student their educational resource" (Anderson et al., 2019, p. 5).

3. Dr. Shiyali Ramamrita Ranganathan was one of the most influential thinkers of 20th century

Whose History? empowers teacher-candidates to increase their communities' representation by making the teacher-candidates "Students as Producers," (Watling, 2012, p. 2). Students as producers is a research-oriented style of teaching and learning "where students learn about research processes, and where the curriculum emphasises the ways by which knowledge is produced, rather than learning knowledge that has already been discovered" (Neery, 2009, as cited by Watling, 2012, p.2).

Gruenwald (2003) found that experiential learning can increase student engagement. High teacher-candidate engagement combined with guidance from project facilitators enables high quality lessons within *Whose History's* Student as Producer ecosystem. The T&L faculty facilitator assists teacher-candidates with clarity of writing, structure, and adherence to PBE practices. Additionally, the resources the students use for their research are curated by the librarians, ensuring that the students have a solid, logical underpinning to their lesson plans. As the 2016 Pew Research Center Study into public libraries notes, "there is a growing sense that libraries can help people decide what information they can trust" (Horrigan, 2016, p. 3). Even though not all OER are created equal, and there can be varying levels of quality (Hilton et al., 2019), the very act of providing authoritative resources to teacher-candidates helps them design quality lessons.

Time is another barrier to the adoption of OER in classrooms (Anderson et al., 2019). If resources covering a subject are unavailable, they must be created. Student producers and library publishers building OER save educators time creating their own resources and increase OER adoption in K-12 classrooms.

Whose History? also enables open access, rights, and use by making resources freely available over the internet. Openness in these contexts will be considered later in the chapter.

Place-based Education (PBE)

Whose History? also approaches open student-led learning through the use of **place-based education** (PBE), a pedagogy which is well-suited for the project. PBE is an interdisciplinary approach that supports understanding local communities and their resources. Gruenewald (2003) defines PBE as a community effort to reconnect the process of education, the impact of enculturation, and human development to the well-being of community life.

Place is an essential aspect of human development. Young people use landmarks, customs, and local practices to understand the relevance of community in their lives (Dixon & Hales, 2013). The connection between place and learning helps young people understand the experiences provided by their immediate communities (Nissley, 2011). Embedded in the PBE approach is the desire to help learners connect with their local environment (Hess, 1981). Since communities directly impact one's environment, PBE helps students develop meaningful learning experiences (Dixon & Hales, 2013).

PBE fosters opportunities to develop social and cognitive skills. As learners develop an understanding of the history and resources connected to their locales, they sustain and support their communities. This is especially true at UTRGV where the teacher-candidates' ancestral history is often grounded within the Rio Grande Valley, and teacher-candidates use the Library's Special Collections to design lessons relevant to their families and communities. For example, one teacher-candidate designed her lesson on the Edcouch-Elsa school walkouts of 1968, a mass student protest and catalyst of the Texas's Mexican-American civil rights movement. The teacher-candidate's lesson was particularly poignant because it was created during the 50th anniversary of the walkouts and her father was one of the original protesters.

librarianship. His Five Laws of Library Science is one of the foundational texts of the discipline, and learned in library science programs the world over. Ranganathan's five laws are: 1) Books are for use, 2) Every reader his/her book, 3) Every book its reader, 4) Save the time of the reader, 5) The Library is a growing organism (Ranganathan, 1931).

PBE builds connections and communities, and uses those narratives to help learners integrate cultural and regional practices within curriculum and instruction (Sanger, 1997). Teaching through place-based instruction empowers students to analyze local history and culture through multiple viewpoints. Learning community histories and traditions engages students in their ancestral practices. In doing so, learning environments address the impact of enculturation on the schooling experiences of young people. In this sense, PBE dispels the notion that young people are responsible for little beyond their own talents (Smith & Sobel, 2010). As students better learn their communities, they build a consciousness that supports community responsibility and leadership through agency.

Learners also critically examine the political, social, environmental, and economic structures of communities. These practices are especially beneficial to under-resourced, underdeveloped, and overlooked communities (Smith & Sobel, 2010). They also give teachers and students opportunities to learn from community stakeholders, including libraries, which are specified in the TEKS.

Additionally, PBE helps young people connect their life experiences to classroom instruction, addresses curriculum and instruction through a multidisciplinary lens, and structures the community as the foundation for learning. These practices guide learners to become critical thinkers, agents, and community leaders. PBE emphasizes the importance of location as the nucleus for engaging lessons across the K-12 curriculum. Through PBE, teacher-candidates have the autonomy to identify historical issues important to their communities and design lessons based on these learned experiences.

Many students participating in *Whose History?* have gravitated towards topics that speak to them on a personal level. One student heard stories from their father about the historic Edcouch-Elsa Walkout, and was able to find photographs of him within the SC materials on this topic. Another had heard about the long legacy of agricultural work in their family, and discovered upon further research about their family member's leadership in farm unions, even traveling to the state capital to protest wages in the 1960s. Many were enchanted by the nature of South Padre Island, a local vacation spot, and in the process of exploring its natural history, uncovered family histories as well. These personal connections to the resources available through Special Collections resulted in stronger final projects, and the experience of researching their local histories resonated deeply with the teacher-candidates.

Two teacher-candidates participating in *Whose History?* grew up in the shadow of the citrus industry. Informed by their childhoods, they created lessons about John Shary, the father of the Rio Grande Valley's commercial citrus industry. The teacher-candidates taught their lesson to local students at an elementary school nestled among several grapefruit groves. As the students learned the history of John Shary and citrus in the RGV, they created songs, artworks, and writing. On the final day of the lesson, the students were named honorary "Kings and Queens of Citrus" for the day. They wore crowns, drew John Shary's house (a historical landmark), and sampled fruits and juices, passing judgement as "members of the royal court."

Whose History? Research

For the *Whose History?* project, the teacher-candidates choose a regional place, event, tradition, or person(s), and with the guidance of project facilitators, research that topic and create open place-based lesson plans. Teacher-candidates work in groups of two to four, creating lesson plans for around 30 topics each time that *Whose History?* is enacted.[4]

As PBE puts an emphasis on lived experience, the expectation is that the teacher-candidates are experts on their place. To start, the teacher-candidates identify topics of most value to them and from which they will create lesson plans. Librarians then examine the teacher-candidate selected topics and compile relevant resources. Though project

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4. While intended to be undertaken on a semi-regular basis, *Whose History*'s facilitation is contingent on the workloads of project staff, other ongoing projects, and academic schedules.

staff assemble relevant authoritative sources, it is the responsibility of the teacher-candidates to decipher the resources' meaning and their connection to TEKS standards.

Teacher-candidates are next introduced to the practice of researching in archives, and familiarized with their related archival resources. Each project cycle, approximately 100 students visit Special Collections for 12 hours over the week of the project's research phase, so materials must be easily retrievable. T&L classes for the research week are held in one of the library's reservable spaces to facilitate the large number of teacher-candidate researchers while safeguarding archival materials. Teacher-candidates are assisted with handling materials (especially rare and/or fragile resources), and project facilitators circulate the room, offering guidance throughout the research process.

PBE by its nature geographically limits topics and steers teacher-candidates into new research territories. To provide some guidance, *Whose History?* focuses on a central question: How can special collections be used to teach history? Many teacher-candidates have not previously undertaken detailed local primary source research. *Whose History?* tests teacher-candidate's research abilities as they are often less comfortable researching with archival resources compared to more familiar printed secondary sources. Teacher-candidates are encouraged to utilize **primary sources** whenever possible, giving them the opportunity to "touch and feel" their history and culture, and establishing the importance of these resources in the research process.

There are challenges and limitations when using archives and special collections for creating PBE lessons. Donation is the primary means of acquisition for many Special Collections departments, including UTRGV's. People of privilege and power are often sought as donors as they have the finances and capacity to preserve their stories, culture, and legacies. This creates a bias towards the perspectives of influential people and communities appearing within special collections. While UTRGV's Special Collections adequately represent the Latinx community, there are limited materials covering other BIPOC groups in the RGV including African Americans, Native Americans, and Asian Americans. Women are lacking representation within the collections as well.

Another related challenge involves institutional prestige, where sometimes faraway institutions may inherit archives of local heroes. For example, poet, philosopher, and writer Gloria Anzaldúa is from the RGV and many of the stories in her works take place there. However, her archives are kept at distant institutions with more name recognition, a difficult journey for local undergraduate teacher-candidates to undertake. Because of these challenges with systemic collecting bias against women and people of color and competition between archives, in a handful of instances, SC has not been able to provide resources for topics that teacher-candidates were interested in researching.

Lesson Plan Creation and Instruction

Lesson plan templates assist teacher-candidates with understanding the components of place-based lessons in social studies for K-12 students. Teacher-candidates include a summary of their lessons with an abstract encompassing the lesson's overview, purpose, and appropriate grade level. Teacher-candidates address the significance of PBE, the human development theories that guide their lesson, the background of the lesson taught, and the significance of their lesson to RGV students.

The plans also include a traditional lesson with an experiential activity and a standardized test. The assignment is grounded in **constructivist theory**, which emphasizes the importance of making learning personal to the life of the learner. Teacher-candidates use the process of discovery to learn about their topic in-depth through research and resource evaluation. Learning focuses on teacher-candidates synthesizing knowledge acquired during their research. This assignment engages teacher-candidates and peers with hands-on collaboration in a group setting.

Select teacher-candidates instruct in classrooms, and visit the campus of La Joya Independent School District (ISD) for one week. Instruction is for 55-minute classes, three to four times a day, and when a teacher-candidate is not instructing, they observe their peers' instruction. A certified teacher is present in each class, and provides support to the teacher-candidates during their instruction. Teacher-candidates are provided a certificate of appreciation by La Joya ISD upon the completion of their lesson plan's instruction.

Creating Digital Open Educational Resources

Once lesson plans are created, exemplary lessons are published online as OER. Rangathan's Five Laws #2 and #3 are adapted to OER (Anderson et al., 2019) as "Every student their educational resource," (p. 5) and "Every educational resource its student" (p. 7). The *Whose History?* digital surrogates increase the openness of resources available to students and enact these ideals.

The publishing platform for *Whose History?*, [Rio Grande Valley Primary Source Guides](#), maximizes the openness of the project by making the lesson plans and their associated digitized primary resources discoverable and searchable by the public.[5] The **Omeka** content management system, commonly used to create digital exhibitions and similar resources, was chosen to build and host the publishing platform. Benefits of Omeka include:

- Open-source
- Control over exhibitions
- Customizable layout and graphics
- Individual item cataloging
- **Linked data**

On the platform, SC staff and student workers create [subject guides](#)[6] which encompass teacher-candidate produced lesson plans and the primary source materials cited within them (for example the [Edcouch-Elsa Walkouts](#),[7] [Juneteenth](#),[8] [Citizenship in the Republic of Texas](#),[9] and the [Pharr Riots](#)[10]). Because as Pomerantz & Peek (2016) note, transparency is an integral part of openness, digitized primary source materials and the philosophy of PBE written from the teacher-candidates' perspectives are included within each subject guide.

To create subject guides, project facilitators from the Teaching & Learning department (T&L) send Special Collections (SC) select approved lesson plans. These plans are converted to PDFs, and any associated primary sources are scanned. Student workers upload the digitized resources into Omeka, and create metadata to maximize discoverability with online searching. The metadata creation is guided by a **metadata profile** which is applied to all materials uploaded by the digitization team. The team includes SC and T&L student workers, who must critically assess each digitized resource and how it relates to its associated lesson plan, and utilize that analysis to describe each item for maximum

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5. Currently, the Library uses a hosted Omeka platform, where the Library pays Omeka.net to manage the storage of digital lesson plans and digitized primary source surrogates. Efforts have been started to have a Library-built Omeka instance that would host the Primary Source Guides rather than the hosted instance currently in use. Other non-hosted options have also been explored, though nothing has been implemented at this time. There's always the chance that the Omeka links used in this article could not be in use in the future, so we've provided the Wayback links as footnotes so that the lessons can be accessed by the reader. Please note that the Wayback machine doesn't store all images – lessons viewed from the Wayback links may not have all images displayed. [This is Wayback link to the Source Guides.](#)
6. [Wayback version of subject guides.](#)
7. [Wayback link to Edcouch-Elsa Walkouts.](#)
8. [Wayback link to Juneteenth.](#)
9. [Wayback link to Citizenship in the Republic of Texas.](#)
10. [Wayback link to Pharr Riots.](#)

discoverability. Once the lesson plan, primary sources, and metadata are uploaded into the Omeka repository, the subject guide is built around the materials.

The publishing platform also allows contextualization of digitized materials. A [slave deed from 1839](#),[11] for example, is written in jagged cursive and has proven difficult for teacher-candidates to read. SC staff transcribed the document, and placed this transcription within the digitized deed's metadata, effectively making the text searchable.[12]

Spanish has deep roots in the RGV communities which these lesson plans are intended to serve, and relevant source materials are sometimes written in Spanish. Additionally, some lesson plans are bilingual, such as [Hurricane Beulah](#).[13] Omeka allows for multiple inputs in its **Dublin Core** metadata fields, facilitating translation by bilingual student workers if needed.

As Mishra states, the "basic premise of OER is that you and I can reuse and adapt them in our context, without seeking further permission from the original copyright holder" (2017, p. 371). Each lesson plan is published with a [CC BY-NC-SA 4.0](#) **Creative Commons license**. This license allows for users to reuse and repurpose for educational purposes, while requiring attribution of materials, facilitating both the crediting of these new teacher-candidates and their works, and maximizing the accessibility of these important lesson plans.

To make attribution easier for those using the lesson plans, citations are added to all published *Whose History?* materials. And as the Creative Commons license allows for creative repurposing of the guides, teachers can build upon and adjust these resources as best for their unique classroom environments. The lesson plans are free and open to use, maximizing the accessibility of PBE for all that wish to do so. The project facilitators are responsible for communicating the nuances of the license to teacher-candidates, who have, to date unanimously desired to be published and for their work to be available as educational resources.

Finally, each lesson plan is uploaded to the Internet Archive's [Wayback Machine](#), preventing link rot and preserving the accessibility of the resources, which can be ensured through persistent use (Coble et al., 2014). The Internet Archive is open access, nonprofit, and publicly available. Both Omeka and the Internet Archive are not dependent on proprietary software for access. The use of software agnostic platforms is vital to breaking technological barriers and making OER more open and portable across devices and formats to meet users where they are, whether that is in a library, classroom, or at home (Anderson et al., 2019).

Libraries As Publishers

The library as publisher model addresses time as a barrier to OER adoption by saving educators time creating needed resources. It also saves time spent in resource evaluation (Anderson et al., 2019). Among eight information sources in a recent Pew Research Center study (Horrigan, 2016), libraries were found most trusted, with 40% of respondents trusting information from libraries "a lot," the highest ranking available (Horrigan, 2017, p. 9). Librarians are also viewed as a trusted profession (Portland Research Group, Maine State Library, Lockwood, & Ritter, 2016). As such, libraries as publishers lend authenticity to library-created open resources. As Anderson et al. (2019) note, "libraries can incentivize the use of OER by providing institutional support and programs with funding and assistance for the creation, evaluation, and adoption of OER" (p. 12). This library support can be instrumental to lending legitimacy to OER, as they are often perceived as being inferior to commercial products (Hilton et al., 2019).

It is in the best interest from a financial standpoint of institutions and libraries to incentivize and facilitate the

11. [Wayback link to slave deed from 1839](#).
12. Due to the teacher-candidate/staff ratio and the level of detail required for transcription, library staff and students perform transcription work.
13. Wayback link to [Hurricane Beulah](#).

adoption of OER. More than $7 billion is spent each year on textbooks in K-12 institutions (Hilton et al., 2019). Furthermore, teachers spend a significant amount of their personal income to supplement their classroom resources with books, supplies, and additional materials (McWilliams-Abendroth, 2011). The financial burden that textbooks and supplemental supplies have on educational agencies and teachers contributes to teachers abandoning projects due to the financial strain (Latham & Fifield, 1993). School districts resort to expanding the lifespan of books in hopes of assuaging the financial burden that books and supplemental materials have on a district (James, 2013). Savings from OER adoption can be used by schools for other pressing needs, such as educator and curriculum development, and can allow teachers more financial certainty. Additionally, science and mathematics research shows that elementary students utilizing OER do as well as their peers using commercial resources (Hilton et al., 2019; Robinson et al., 2014; Wiley et al., 2012). Given that OER do not harm educational performance and allow savings to be used elsewhere, it makes sense, both in terms of pedagogy and in terms of budgets, for libraries to embrace OER.

Whose History?'s digital lesson plans are intended to be accessible by a broad community including working teachers, researchers, and lifelong-learners. Recently, the Brownsville Independent School District (BISD) received a grant for teaching PBE in local schools. UTRGV Special Collections referred BISD to *Whose History?*'s online resources due to their robust topics and open availability. Additionally, newly certified teachers who were part of *Whose History?* have begun using the project's plans and digital resources in their current classrooms. The use of *Whose History?* subject guides will grow as more students, teachers, and other interested parties embrace and practice their own PBE lessons.

By creating OER and making them accessible to the larger educational community, an important open ecosystem is facilitated. Teacher-candidates, educators adopting their lesson plans, and K-12 students learning from these PBE lesson plans are exposed to openness as a concept, and OER gain currency as valuable resources. Open production, distribution, and consumption is attained (Mishra, 2017). This is particularly important for teacher-candidates and primary and secondary school students. With familiarization to OER early in their educational and professional lives, continued future use of OER is more likely, strengthening the ecosystem of openness, and perpetuating the production-distribution-consumption OER lifecycle.

Teacher-Candidate Outcomes

Teacher-candidates participating in *Whose History?* see immediate and tangible dividends. They complete the project with a full PBE lesson plan to add to their portfolio and augment their real-world experience.

Teacher-candidates also connect to their personal history as residents of the Rio Grande Valley. The project's framework empowers students to create in-depth lessons about topics important to the RGV, but which are often overlooked in the statewide curriculum. For many teacher-candidates, topics such as the Edcouch-Elsa Walkouts, farmworker strikes, and the Pharr Riots are intertwined with their ancestral and community memory. Since *Whose History?* began, multiple lesson plans have been created around broad subjects such as military veterans, local festivals, and civil rights events. Teacher-candidates have also been influenced by politics and current events. The Texas-Mexico border wall has been a motivation for teacher-candidates to create lesson plans related to local geography and environment, which is expected to be impacted as more barriers are constructed.

To date, 237 teacher-candidates have taken part in the *Whose History?* project, creating 80 lesson plans. Twenty-five lesson plans have been taught by teacher-candidates in local classrooms, and, at the time of this writing, 20 have been published online as freely available resources. The publishing of the lesson plans on the library publishing platform and Internet Archive gives practicing educators in the RGV and across Texas access to rigorously planned lessons that reflect the life and experiences of Tejanos. As more *Whose History?* lesson plans are published, the potential of a new student-created open "textbook" for RGV learners becomes more possible. While not originally something the project facilitators envisioned, it is an outcome that now seems feasible, if still distant.

Giving teacher-candidates the opportunity to teach in classrooms in local school districts is an especially valuable experience; Latinx future educators teach classes composed of mostly Latinx students in these classrooms. These

future educators gain real-world experience and their students see representation in both their classrooms and the curriculum. When providing feedback, teacher-candidates have noted the experience as a very positive one, with the hands-on practice provided to them often being the first real classroom experience they got in the program.

Reflections

Whose History? is the first collaboration between Teaching & Learning and Special Collections, and the interdisciplinary nature of library science and education makes this project a natural fit. However, the need for adjustments to *Whose History?* became evident early on in planning. While project librarians were familiar with class-specific learning outcomes, they were new to the pedagogical concepts of place-based education and constructivism. The Teaching & Learning project facilitator had researched with archives, but was unfamiliar with archival best practice regarding access to both physical resources and digital surrogates, and to Creative Commons Licensing. Disciplinary vocabularies were also a complication, as seemingly intuitive words like "artifact"—a physical document to the librarians, but a teacher-candidates' project outcome to the educator—needed common agreed-upon definitions. A working familiarity of disciplinary approaches and respective vocabularies needed to be engendered between the project facilitators.

Using Special Collections resources to design place-based social studies lessons led by teacher-candidates also posed a few obstacles. Undergraduate students are familiar with retrieving material digitally. However, many of the *Whose History?* resources are only accessible as physical artifacts, often requiring special considerations to use and interpret. Books of cattle brands—hand-drawn and notated governmental records of ownership brands for local ranches and families—are not machine searchable, requiring more scrutiny by researchers. Early on in the project, the librarians realized they needed to better consider the teacher-candidates' requirements for creating K-12 lesson plans. The focus of many teacher-candidates was finding materials appropriate for their teaching level, while the librarians' focus on finding authoritative resources did not consider grade-appropriateness. In spite of such obstacles, teacher candidates have eagerly embraced research with rare and unique documents.

The teacher-candidates' desire to use *Whose History?* to foster community and family engagement has required the involvement of additional stakeholders. Teacher-candidates sometimes create Spanish-language or bilingual lessons, ideal for the Spanish/English language environment in Rio Grande Valley schools. These Spanish-language and bilingual educational materials can require additional support, as many UTRGV students are bilingual but not biliterate. UTRGV's Center for Mexican American Studies (CMAS) edits and proofs Spanish-language university-produced materials including *Whose History?* lessons. CMAS' participation further reinforces the collaborative effort of *Whose History?* and its support from the campus community.

The opportunity to teach the history and culture of their respective communities, often overlooked and underrepresented in the Texas social studies curricula, creates enthusiasm and "buy in" for the project, and leads to teacher-candidates contributing expansive and detailed projects. In some cases, teacher-candidates have visited additional Special Collections in the region, demonstrating the desire of community members to research, teach, and learn their community history. This desire shows promise for these types of initiatives in the future.

Conclusion

Whose History? facilitates an ecosystem of open production-distribution-consumption. Undergraduate teacher-candidates research local people, events, or topics, and create place-based lesson plans using primary resources from UTRGV's Special Collections. A selected group of teacher-candidates instruct their lessons in local classrooms, gaining experience in educating young learners about local culture and history. High quality lesson plans are published online under a [CC BY-NC-SA 4.0](#) Creative Commons license, promoting open use and reuse of lesson plans, and giving students

a published work for their portfolios. Additional open curriculum content helps educators meet TEKS social studies criteria, saves educators time and money, and binds young learners to their communities, building engagement and leadership.

The RGV continues to grow, and Hispanics are expected to become a plurality in Texas as soon as 2022 (Ura & Hanzhang Jin, 2019). New curricular materials that can be added to and updated as the region changes will add currency and relevance to outdated commercial textbooks, ideally replacing them altogether for use in classrooms.

Finally, decolonizing educational materials through PBE brings much needed representation to Texas social studies. Future teachers look back to impactful people and events, such as the student-led Edcouch-Elsa school walkouts. By creating learning resources that illustrate their communities, they directly impact the historical record. This is an immediate and powerful lesson to convey to future educators and young students who don't often see themselves in their textbooks; not only do people and events bring dramatic change into the world, but they do just that, all the time, all around us. It takes the question framed by the title of this project—*Whose History?*—and turns it into a statement: Our History!

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Appendix A: Whose History? Guiding Lesson Plan

Dear Beautiful Scholars,

   Today our class will visit the archives located in the Sharyland room. The goal of this lesson is to learn strategies for teaching research-based history lessons using local artifacts. UTRGV has been the primary archives of artifacts from the Rio Grande Valley. You may view documents of Latinx, Blacks, and women that may affect you in unexpected ways. You are welcome to talk with me or any of the Special Collections staff about any feelings that arise from this exercise. It is time for us as People of Color (P.O.C.) to write our history! This lesson will provide you with skills to teach our history, for our students, and our community!

   In Community and Kindness,

Teacher:
Date:
Topic / grade level:

Social Studies Standards/ TEKS:

Lesson objective(s): By the end of this lesson students will be able to (SWBAT)?

ENGAGEMENT The hook – How will you engage the student in the lesson?

EXPLORATION How will you provide hands-on or relatable activities?

EXPLANATION List higher order thinking (HOT) you will use to check for understanding.

ELABORATION How does the information you researched relate to the students' community? How will you introduce new vocabulary concepts?

| EVALUATION |
| How will you assess learning? |

Appendix B: Lesson Plan Template

Instrument

Article Title
Authors & Affiliation

Abstract

Essential Question:
   Rationale:
   Methods:
   Theoretical Framework (when applicable)
   Keywords: list up to 6 words (Avoid repeating words in the title)

Introduction

The purpose of the lesson
   Background

   Pedagogy – Briefly mention the pedagogy you will be using for your study. Use Scholarly articles from the UTRGV library

   For this assignment

   Introduction – What is place-based pedagogy of education?
   Significance- Why is place-based pedagogy important for the following:

Methods

Name your lesson

Grade level and population and subject:

5 E-Lesson Template

Subject / grade level:
Materials:
Standards:
Lesson objective(s):   3 lesson objectives for 5 days

Differentiation strategies to meet diverse learner needs:
   SPED
   GATE gifted
   Specific Learning Disabilities
   ELL

ENGAGEMENT: • Describe how the teacher will capture students' interest. What kind of questions should the students ask themselves after the engagement?
EXPLORATION: • Describe what hands-on/minds-on activities students will be doing.
EXPLANATION: • What questions or techniques will the teacher use to help students connect their exploration to the concept under examination? • List higher order thinking questions which teachers will use to solicit student explanations and help them justify their explanations.
ELABORATION: • Describe how students will develop a more sophisticated understanding of the concept. What vocabulary will be introduced and how will it connect to students' observations? • How is this knowledge applied in our daily lives?
EVALUATION: • How will students demonstrate that they have achieved the lesson objective? This should be embedded throughout the lesson as well as at the end of the lesson

Instructional Collaborations

Teaching Local History Reflection Assignment
Date- 3rd Monday of the Semester
We will meet in the Shary Room
Objective: This lesson will teach you how to design a social studies lesson from research and artifacts.
S.W.B.A.T.: Design a place-based lesson for elementary school students using artifacts housed at the local library.
Reflection questions:
1. Please list your topic
2. Grade level
3. Standards
4. Explain the reasons for choosing your topic (200 words)
Cite the sources you will use
Author [last name first]. (year month day). *Title* [description of material]. Name of collection (call number, identifier or box/folder/item number). Name and location of repository.

Assessments

2 – 3 double-spaced pages

- Multiple Choice Questions
- 10 questions

- Project
- Rubric
- Anchor Video (5 minutes or less)

References/Citations

(Works cited in APA)

Scholarly Bridges: SciComm Skill-Building with Student-Created Open Educational Resources

CARRIE BALDWIN-SORELLE AND JENNIFER M. SWANN

Authors

- [Carrie Baldwin-SoRelle](), Lehigh University
- [Jennifer M. Swann, Ph.D.](), Lehigh University

Project Overview

Institution: [Lehigh University]()

Institution Type: private, research, undergraduate, postgraduate

Project Discipline: Science Communication

Project Outcome: student-created textbook and course materials

Tools Used: Google Docs, ACRL Framework, OER Commons

Resources Included in Chapter:

- Student Samples

2020 Preface

As we finalize this work for publication, our nation is facing a number of formidable and unprecedented challenges—the COVID-19 pandemic, nationwide civil unrest, and an unpredicted, deep economic downturn—that together have brought our nation's vast income inequalities into sharp relief. Financial stratification, fueled by racial injustice and compounded over generations, is exacerbated by disparate access to quality education. While financial aid helps close the gap, it

rarely covers the full cost of textbooks and other educational materials, forcing low-income students to resort to used, outdated, or substandard materials. Open access textbooks help address this problem, providing high-quality educational material free of charge. Moreover, as we describe herein, adopting open access materials can be done collaboratively with students, simultaneously building a sharable resource and students' ability to research and create educational material and assessment tools. There is no better time to start—we hope our chapter encourages you to try your hand at the process. And we encourage you to consider adopting open access resources at your institution. An advanced education may prove to be a critical factor in closing the economic gap and promoting racial equity.

<div align="right">—Carrie & Jennifer</div>

Introduction

As stewards of knowledge, researchers must convey their findings to the general public. Our current academic apprenticeship model falls short of this goal, producing scientists that are deeply embedded in the jargon of a highly specialized subject. While scientific contributions can have broad-reaching effects, the language, style, and format of scientists' communication is often an obstacle in communicating with the general public. Writing for a textbook conveys a great deal of information to an audience that falls somewhere between expert and general public. This form of writing may prove a useful tool for broadening researchers' perspectives and ability to communicate concepts in plain language.

An interest in embedding these **science communication** skills into an undergraduate science curriculum prompted educators at Lehigh University to incorporate open educational resources (OER) into an upper-level, writing-intensive biology course. Student-created OER are an ideal collaboration opportunity for library workers and teaching faculty: They offer students entry to conversations about scholarly publishing and metacognition, in combination with subject matter mastery and technological skills. In this chapter, a neuroscience professor and a scholarly communications librarian will describe our motivations, challenges, and collaborative approach to a student-created open access textbook and the pedagogical advantages of using OER as a bridge between scholarly and professional writing.

Adopting Openness

Open pedagogy, in its original sense of exploratory, student-led learning (Mai, 1978), is an opportunity to preempt the disengagement that comes from traditional lecture-based teaching by focusing on students' individuality and agency. In higher education, the "flipped classroom" model, which involves moving active learning activities to class time and lectures to outside class, has become popular as a way to address student engagement and knowledge retention (Abeysekera & Dawson, 2015; Rotellar & Cain, 2016). Active learning strategies, including problem- or project-based learning, also help students understand and take charge of their own learning process, with built-in opportunities for metacognitive reflection (Hmelo-Silver, 2004). Science, technology, engineering, and math (STEM) classes have an established tradition of lecture-based classes and thus have been a particular focus of open pedagogy interventions. Studies in numerous STEM disciplines including physics, biology, and geology have demonstrated that active learning improves student engagement and learning (McConnell et al., 2003; Wood, 2009), particularly for underrepresented minority students (Museus et al., 2011). Faculty who implement active learning strategies involving group work and project-based learning have found that collaborative learning approaches also benefit student engagement in course material (Huysken, et al., 2019; Wood, 2009).

Faculty across disciplines have also recently embraced collaborative writing—creating a document through student group work on a specific topic—as a form of project-based learning. In collaborative writing, students share both content and process, and communication within the group is critical to the creation of an accurate, readable document.

The deliberate involvement of students in gathering, synthesizing, and explaining complex ideas generates a deeper knowledge of the subject and improves writing skills (Nevid et al., 2012; Shehadeh, 2011).

As covered earlier in this volume, the open access movement and concerns about rising textbook costs have jointly prompted an increased interest and investment in OER (see Holbrook, 2019; Colvard et al., 2018). Combining open pedagogy, active learning, and open access allows universities to import equitable scholarly sharing principles into the classroom, while also motivating students' creativity and adaptability. Wiley and Hilton (2018) aim to define this umbrella of activities—active learning practices that take advantage of the Creative Commons licensing standards to encourage adoption, remixing, and sharing content—as "OER-enabled pedagogy." By their definition, OER-enabled pedagogy refers to "the set of teaching and learning practices that are only possible or practical in the context of the 5R permissions[1] which are characteristic of OER" (p. 135). OER-enabled pedagogy connects students with openly available scientific research and educational tools, resulting in both new creations and new creators.

Finding and preparing low-cost or open educational resources can be prohibitively time-intensive. In *Library Journal*'s 2019 Textbook Affordability Survey, 81% of respondents identified "too much time and effort" as the top barrier to faculty OER adoption, followed closely by "lack of availability" (65%). Faculty have listed the difficulty in finding resources, as well as concerns about material quality and updates, as barriers (Seaman & Seaman, 2017). Having a class create or adapt their own open educational resources can address some faculty concerns or, at least, offset faculty time investment by incorporating it into assignment design and course preparation efforts.

Active Learning and Science Communication

The implementation of open pedagogy into STEM classrooms is a particularly salient need for students, both in the classroom and for their future professional and civic endeavors. Wood (2009) points to the dual role of introductory science courses, to both "attract, motivate, and begin preparing the next generation of biologists," and to ensure that all students, regardless of career, "achieve minimum biological literacy and … understand the nature of science" (p.108). In the classroom, incorporating active learning with an eye towards students' futures addresses both demands. In particular, open pedagogy is useful in tackling science communication, collaboration, and writing.

Improving science communication skills benefits scientists at all stages, from graduate students (Kuehne et al., 2014) to late-career scientists (Liang et al., 2014). However, even graduate students struggle to find the time and resources necessary to build these skills during graduate school—a key time of professional skill development (Salguero-Gomez et al., 2009). Kuehne et al. (2014), in developing a science communication program for graduate students, identify five core skills as necessary to successful scientific careers, from academia to nonprofit to private sector jobs: writing, public speaking, leadership, project management, and teaching. Active learning strategies, and in particular OER-enabled pedagogy, open STEM classrooms to developing these five core skills. In addition, Glaser (2014) argues for incorporating peer review into a science writing curriculum, because "to effectively teach students how to understand science, both the content and the process must be included" (p. 85). With OER-enabled pedagogy, students create and then share their work with an anticipated audience of peers. In addition to the writing itself, this practice requires discussion of the scholarly publishing process to clarify how the process shapes the content. For undergraduate students who plan to pursue additional science education and careers, practicing the aforementioned skills are important in preparing them for future success.

Students' ability to engage the world as science-informed citizens is relevant, regardless of their future careers. Glaser (2014), referencing Habermas (1991), discusses the importance of building knowledge as a society through public discourse and notes that, "If lay people in a society do not accept the products or procedures of the systems' sphere (science and technology), then the systems' sphere loses its authority and its discoveries become meaningless in the

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1. The 5R permissions are retain, revise, remix, reuse, and redistribute.

context of the wider society" (p.91). Students, whether contributing to society as scientists or as laypeople, will need the ability to understand and to apply scientific concepts in a variety of contexts.

Next, we discuss how OER-enabled pedagogy was used to address both learning goals and open access principles at Lehigh University. Major learning outcomes centered science communication, in addition to professional and educational skillbuilding.

Project Background

Lehigh University is a private, doctorate-granting university with approximately 6,500 full time students and four colleges (Arts and Sciences, Business, Education, and Engineering) located in Bethlehem, PA (Office of Institutional Research & Strategic Analytics, 2018). Lehigh is a research institution; for faculty, the bulk of criteria used in tenure award and promotion rests on scholarly productivity. A Lehigh education is built on critical thinking and communication, and classes at every level include presentations and projects that require thoughtful analysis of scholarly works. As part of its general education requirements, the College of Arts and Sciences (CAS) requires all of its undergraduates to engage in a writing-intensive course during their junior year. The requirement allows students to design their writing project with a professor, but the class must include five assignments and several rewrites for a total of thirty pages of writing.

As the CAS director of student success, Professor Jennifer Swann is acutely aware of the impact of textbook costs on Lehigh's students. The professor has fielded complaints from a variety of students and parents indicating that the cost is a problem for all and that the burden is particularly stressful for low-income students. As part of the university's commitment to American Talent Initiative (Friedman, 2016), Lehigh is committed to diversifying the economic background of its student body by increasing the number of students from low-income households. Professor Swann worked with Lehigh librarians to find alternatives to traditional textbooks and took an open access course on Creative Commons licensing[2] to learn about OER.

At Lehigh, conversations around open access and open educational resources have been most successful at the individual level. Select faculty have embraced open textbooks but usually on the individual or course level, rather than as departments, programs, or university-wide initiatives. The institution has no comprehensive, campus-wide program to fund OER creation, but the library has facilitated faculty workshops, librarian-led presentations, and individual conversations with faculty and departments. One library workshop on open access sparked additional collaborations between the scholarly communications librarian, Carrie Baldwin-SoRelle, and Professor Swann, eventually leading us to pilot this OER effort.

In the spring of 2018, Professor Swann's project-based, writing-intensive course in behavioral neuroanatomy had an unusually low enrollment due to a registration error, which presented the opportunity to test a creative OER adoption strategy. Professor Swann had routinely taught the upper-level class by alternating between lectures and student research proposal presentations. The course was usually overenrolled at 20 students, providing ample presentations for the 14 week semester. As the low enrollment made this approach impossible, she changed the class format to maintain the project-based nature. Students produced open textbook content as their writing product, rather than research proposals. The new format still allowed students to build on their existing content knowledge and to thoroughly investigate a subject of their choice in more depth. It also addressed a secondary goal of adding to the scant inventory of neuroscience OER.

Openness was a priority in planning this course. The class began with a combination of lectures and administrative conversations, designed from the beginning to model openness. Students co-wrote the course goals, compiled a list of possible chapter topics, found and adapted segments of existing open access content, and drafted text. Students

2. Introduction to Open Education - edX.

also developed assessments, creating test questions from concepts, then revising the text to shape readers' conceptual understanding toward success in the assessments. In keeping with the commitment to openness, the class' products fit the four criteria laid out by Wiley and Hilton (2018) to be considered OER-enabled pedagogy, students: both created and revised existing OERs (1); added value to the activity beyond the authors' learning, by sharing the work in order to support others' learning (2); publicly shared (or expected to have their work made public in the future) a version of their work (3); and applied a Creative Commons open license (4).

Engaging in OER creation also allowed students to learn about the current publishing ecosystem, its limitations, and change-making activities in which they can actively participate. Though the first class did not complete enough of the textbook to publish it, they were prepared to hand it on to future students for eventual open access publishing. The class was offered in the same format during the 2019 and 2020 spring semesters. Again, students contributed to planning and structuring the course. By the conclusion of the second course, students had completed one chapter of the open access textbook, with accompanying assessments, and drafted most of a second. The OER-enabled pedagogy model for this class fully incorporated active learning strategies: engaging students in developing course aims, charging students with first learning then teaching new content, and building critical thinking, scientific communication, and effective writing skills.

Library-Faculty Collaboration

Integrating library and instructional technology staff into the class from the beginning made long-term collaboration possible. The professor developed the course through consultation with a science subject librarian, an instructional technologist, and the scholarly communications librarian. Once it became clear that the small class size would offer the opportunity for experimentation, the faculty-library team met collectively before the course began to discuss course aims, strategies, and the logistics of student-authored content. Each collaborator then met with the students to present on their area of expertise: research strategies, technology integration, and copyright and academic publishing.

Library partners had the OER discovery, platform, and technological background to provide guidance from the beginning. The scholarly communications librarian focused on training and facilitating the class' access to OER and on the related copyright, technical, and accessibility concerns. This included a presentation on the scholarly publishing cycle, OER, and an overview of applying copyright and fair use to the content students would be working with. Together, the students and scholarly communications librarian searched OER repositories for content related to the course and practiced using advanced search tools for filtering out Creative Commons licensed content on sites such as YouTube, Flickr, and Google image search. The science librarian visited the class later for a more traditional introduction to subject databases, as students searched for scholarly articles to update and supplement content. The instructional technologist introduced students to Bloom's Taxonomy to assist them in writing assessment questions. All of the librarians were "on-call" for the rest of the semester when unexpected issues arose:

- the students needed more training on scientific databases.
- the class had questions about accessibility requirements for the published version of the chapter.
- the group needed clarification about the formatting and technical requirements for the documents' long-term stability.

As the second and third iterations of the class built on the work and writing of the first class, calling upon the existing library-faculty partnership sped up preparations and allowed for improvements to the class. For example, the copyright presentation from the third course iteration also included a segment differentiating copyright from citation, prompted by earlier students' confusion. The team of educators worked to model for students how interdisciplinary teamwork could make a project more effective. The class then empowered student-scholars to create the content, which required

that they would engage in teamwork, taking their individual strengths and existing knowledge into account when dividing tasks.

Feedback from the course evaluations indicated that students valued the collaboration with library staff. One commented that, "The multiple visits we had from library staff were greatly beneficial in educating us on the online world of publication… Everyone that came in and spoke was engaging and knowledgeable on the topic, which made asking questions and receiving answers simple and efficient." A back-and-forth conversation, consistent with the informal, team-based approach of the course, lowered the barrier to student questions that may persist through one-shot library instruction sessions (Parks, 2019).

An OER for Science Communication Skill-Building

Pedagogical goals from both the biology department and the library influenced the class' structure and effectiveness. In both arenas, learning outcomes in higher education reflect not only standards for subject knowledge but also the institutions' goals for its graduates. Throughout their coursework at Lehigh, undergraduate biology majors are expected to demonstrate their ability to "evaluate data and communicate [science] results" and to "apply biological principles to new situations," among other skills (Lehigh Department of Biological Sciences, n.d.). Of Lehigh's class of 2018 College of Arts & Sciences graduates, 52% were employed within six months of graduation, and 39% continued their education. The expectation reasonably follows that a class of biology majors would be applying the departmental learning outcomes to various jobs and graduate degrees after graduation. By engaging students in a collaborative textbook writing project, this course helped students build their writing, science communication, and team-based project management skills in ways that would prepare them for graduate work, professional settings, and engaged citizenship.

The class structure heavily emphasized writing, project management, and teaching, all among the five core skills listed by Kuehne et al. (2014) as necessary to successful scientific careers, whether within or outside academia. In our class, students worked as a team to research primary scientific literature, parcel out writing responsibilities for different sections, develop assessment questions that reflected their perspective as teachers, and keep each other accountable to team goals. Not only did students need to manage their own work and mastery of the content, they also had to review the work of their classmates. This was accomplished using the editing and comment features of Google Docs (see Figure 1). Incorporating peer review at various stages of the writing process helped students understand how their classmates' perspectives could shape and change their writing.

Figure 1

Screenshot of Chapter with Peer Comments

Next, students had to figure out how to relay the content they had just mastered to a less knowledgeable audience—and then test that mastery. This ability to translate subject knowledge is a teaching skill, as well as an important foundation for science communication. Writing assessment questions proved one of students' major challenges (see Table A1 for samples of test questions). The class focused on multiple choice questions because, when constructed to address concepts rather than facts, they require a deeper level of understanding to construct and therefore provide greater learning opportunities (Teplitski et al 2018).

In keeping with active learning principles, students generally worked on reading research and creating outlines outside of class. The bulk of in-class time was devoted to writing content, administrative planning, and discussing peer review comments. Project-based learning—combining topic mastery with the challenges of teamwork—is a situation that will inevitably occur in future professional settings.

This class structure allowed us to address both institutional and individual goals. As citizens, students will need the skills referenced in the Biological Sciences program goals: the ability to apply biological concepts to new settings. This class incorporated science communication explicitly into the undergraduate curriculum. Students worked, through the research and writing demands of this class, to communicate advanced scientific knowledge to a more general audience. By centering science communication as a prerequisite for undergraduates to move on to either graduate education or professional environments, this class primed students to take science communication seriously. In addition, by preparing their work to be open access, students actively engaged in scholarship and participated in scholarly publishing. The project-based collaborative writing process mirrored both workplace and scholarly practices, building communication skills that will be in demand in any career and in science graduate programs.

In planning course-based student engagement, Lehigh's librarians regularly use the Association of College & Research Libraries (ACRL) Framework for Information Literacy, which encourages the pedagogical application of scholarship as a conversation and information creation as a process (American Library Association, 2015). Students entering the class had a minimal understanding of the scholarly publishing process. To address this, the librarian's copyright instruction also included an overview of peer review and publishing. Our students applied these discussions by both writing as a team and, in the second iteration of the course, reviewing the work of the first class for accuracy and completeness. In writing the textbook, students had to engage as scholars to understand their source material, and they were required

to develop skills for conveying that material to non-specialist audiences. An example of students' writing process can be seen in how the chapter's learning outcomes changed (see Table A2 for a side-by-side comparison of chapter drafts). In the students' original brainstorm document, they appeared as follows:

Learning Outcomes

At the end of this chapter the reader will be able to:

- Characterize a circadian rhythm and describe the brain regions and genes involved.

- Explain the rhythm of metabolism and how this plays into the overall circadian rhythm of the organism.

- Propose solutions to mishaps in this system.

In the final chapter, the learning outcomes are listed as follows:

Learning Outcomes

In this chapter you will learn:

1. the defining characteristics of circadian rhythms

2. the molecular machinery that runs cellular rhythms in mammals and insects

3. the neural structures that regulate and coordinate our behavioral expression of circadian rhythmicity

4. the role of circadian rhythms in health and disease.

The later learning outcomes reflect students' deeper understanding of the subject matter, in addition to their improved abilities to organize the material in a logical manner, write with clarity, and understand their audience as learners.

Students explicitly mentioned the intended outcomes in their course evaluation. One student credited the textbook-writing process with improving their writing, sharing that "From this class, I learned how to be a better writer by taking what I've read and paraphrasing it down into understandable material for wider audiences." The student also commented

more generally on writing improvement and the assessment-writing exercises, saying "I was also able to become a better editor, to more easily pinpoint mistakes and room for improvement, and turn the information I've written into thoughtful questions." Another student pointed to the in-depth topic analysis as an effective strategy for learning content, saying, "I know more about the material we covered during this one semester than the combination of all my other science classes over the past four years." Students also valued the explicit open mission of the class. One commented that creating and publishing an OER "gave this class a positive mission and made me feel good about what we are doing." The student evaluations, in combination with the products of their work, help build an argument for open educational resources adoption in a project-based learning environment.

Challenges and Future Directions

The first iteration of the course revealed some immediate limitations and the need to adjust expectations. The initial plan was to cover a range of topics, dedicating several weeks to each topic and building textbook chapters from each one. However, the writing process was much slower than expected, limiting the topic coverage that the class was able to achieve. In the future, we plan to continue building upon students' work over subsequent semesters by both drafting new chapters and revising and updating existing content. The chapter is currently posted on the sharing network OER Commons[3] and is slated to undergo peer review by the MERLOT biology community of scholars.

The class addresses a number of common skill sets and learning outcomes that appear frequently in undergraduate teaching: student writing and editing; critical thinking, including evaluating and communicating scientific information; and cooperative or team-based learning. In looking to expand this course model to other subjects or institutions, there are several criteria to consider. First, the collaborative peer writing model for this course was structured for very small classes of 4–5 students (an exceptionally small size for Biology classes at Lehigh University). If not taught in a seminar-style setting, the organizational burden for faculty would likely expand dramatically. However, the elements of group work, in-depth topic exploration, collaborative writing, and assessment-crafting could all be incorporated with some adjustments. For example, students in a larger class could work in small groups to draft chapters or segments, then review the content across groups.[4] Another consideration is the type of class that would be a good candidate for this work. Our class is an upper-level writing-intensive class with a secondary goal of teaching neuroanatomy. It is an elective, not a survey, and doesn't serve as a prerequisite for any other classes. Students bring their existing content knowledge to a project-based setting to solve a problem. Therefore, writing skill development takes precedence over the breadth of content covered. In exporting this class to another institution, writing-focused and elective classes would make better candidates.

Secondly, any faculty interested in adopting this method should consider their existing background (or interest in developing expertise) in OER use, Creative Commons licensing, or both. Consulting or co-teaching with library workers is highly recommended. Our team developed an OER brainstorm document to assist other faculty and librarians in planning for OER use.[5] When the OER use includes substantial modification or creating new content, particularly as an OER-enabled pedagogy effort, faculty will also need to consider writing platforms. We used Google Docs to draft and share content, which has an added advantage of easily exporting to OER Commons, our eventual sharing platform of

3. Available at [OER Commons: "Circadian Rhythms."](#)
4. Lehigh professor Todd Watkins and his students used this strategy to create a traditionally-published collaborative textbook (Watkins, T. A. (2018). *Introduction to microfinance.* World Scientific Publishing Company), written over multiple semesters with classes of 20+ students, totaling more than 200 authors.
5. Available at "[OER Brainstorm Document](#)."

choice. The platform should be flexible enough to accommodate both multiple writers and any multimedia that the class wishes to incorporate into the OER. Other educators investigating the benefits of collaborative writing have utilized "wikis"–editable knowledge-based websites–as platforms for student writing projects (Trentin, 2009). While wikis also employ OER pedagogy, they do not easily offer the opportunity for students to create assessments. The quiz questions embedded in textbook chapters provide essential feedback for the reader and unique opportunities for learning for the students that create them (Teplitski et al., 2018; Lujan & DiCarlo, 2014). These were a priority for us in determining a platform.

Thirdly, institutions play a critical role in guiding faculty publications: faculty produce what will grant them tenure and promotion. The value of open access journals has been under discussion in higher education for many years (Fister, 2013). Hopefully, as the understanding and adoption of these principles advances, the conversation will move towards OER as well. Moving an institution towards valuing OER work and encouraging faculty creation of OER would require granting OER chapters publication status in tenure and promotion documents, rostering OER courses as part of the teaching load, and funding or providing release time for OER creation. In addition, institutions that highly value teaching and students' classroom experience may see additional value in classes that incorporate OER-enabled pedagogy.

Overall, the course was a helpful bridge between our students' undergraduate work and future academic or professional pathways. A collaboration that called upon the expertise of both teaching faculty and librarians expanded the outlook of the course. Students, in addition to learning the subject matter, developed skills for science communication to serve them as scientists, professionals, and citizens. They also developed an understanding of the scholarly ecosystem with communication and project management skills that are highly valued in multiple settings, regardless of their future career paths. Finally, by incorporating learning approaches prioritized by both library and disciplinary experts, the teaching faculty-librarian team expanded on opportunities for students through collaborative expertise.

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Appendix

Student Work Samples

Table A1

Assessment Question Samples

This table presents a sample of how student work changed over the course of the semester. The early drafts of assessment questions (left column) are from the beginning of the second iteration of the class. The final drafts of assessment questions (right column) are from the version that was published to OER Commons. Correct answers are in bold and marked as (C).

Early draft of assessment questions

When are TIM and PER are broken down when their levels are rising? What happens as a result of their break down when levels are rising?

- **Late in the day; the clock is set back** (C)
- Late in the day; the clock is set ahead
- Late at night; the clock is set back
- Late at night: the clock is set ahead

Why do blind mice have a hard time keeping their circadian clock on time?

1. They do not: 1–2% of the ganglion cells in their retina—instead of depending on signals arriving from rods and/or cones—detect light directly.
2. They do not: When exposed to light, these ganglion cells become depolarized and send their signals back to the suprachiasmatic nucleus (SCN).
3. Because they do not have rods or cones, which are necessary to detect light
4. **Both 1 and 2** (C)

Final draft of assessment questions

Which of the following is true regarding PER/TIM activity in Drosophila after PER/TIM inhibition of gene expression is lifted?

- When PER/TIM levels rise, the clock is set ahead.
- **When PER/TIM levels rise, the clock is set back.** (C)
- When PER/TIM levels decline, the clock is set back.
- PER/TIM levels have no correlation with setting the circadian clock.

Why are mice who are totally blind able to keep their circadian clock on time?

- Because the ganglion cells in the retina depend only on signals from rods and cones
- **Because 1–2% of ganglion cells in the retina can detect light directly** (C)
- Circadian clock has nothing to do with the retina at all

Table A2

Introductory Segment of OER Chapter on Circadian Rhythms

This table presents a sample of how student work changed over the course of the semester. The early draft (left column) is from the beginning of the second iteration of the class. The initial draft was adapted from the open textbook *Kimball's Biology Pages.*[6] The final draft (right column) is from the version that was published to OER Commons.

6. John W. Kimball. *Kimball's Biology Pages*. This content is distributed under a Creative Commons Attribution 3.0 Unported (CC BY 3.0) license and made possible by funding from The Saylor Foundation.

Early draft:

All eukaryotes and some microbes (e.g., cyanobacteria) display changes in gene activity, biochemistry, physiology, and behavior that wax and wane through the cycle of days and nights.

Examples:

- the level of the hormone melatonin that rises in your body during the night and falls during the day.
- fruit flies (Drosophila melanogaster) hatch in greatest numbers just at dawn.

Fluctuations in physiological and behavioral parameters can be generated by a variety of conditions internal and external to the organism. Biological rhythms vary in period from micro-seconds – as shown in spontaneously firing neurons hindmarsh-rose neuron to years as in the annual rhythm of hibernation of the Golden-mantled ground squirrel.

Circadian rhythms are a subset of biological rhythms that are characterized by 3 factors:

1. Circadian rhythms are endogenous. When the organism is placed in constant conditions (e.g., continuous darkness), these rhythms persist Circadian rhythms have a period of about 24 hours. Without environmental cues, circadian rhythms tend to be somewhat longer or somewhat shorter than 24 hours–giving rise to the name **circadian** rhythms (L. circa = about; dies=day)
2. Circadian rhythms can be synchronized or **_entrained_** by external **_zeitgebers_**. There are limits to the period length that a zeitgeber can set. For circadian rhythms the period is no more than 22 – 26 hours. For example, circadian rhythms will NOT entrain to a zeitgeber with an 18 hour rhythm. Light is the most powerful zeitgeber – one second of bright light can synchronize wheel running rhythms of the laboratory rodents. Other zeitgebers include: access to food, exercise, and drugs.
3. Circadian rhythms are temperature compensated. That is they are independent of changes in the organisms internal temperature. This fundamental property is important because the ambient temperature changes over the course of the day and the seasons of the year. A temperature sensitive clock would slow down at lower temperatures and speed up at higher temperatures making the clock unreliable. While many rhythms have been shown to maintain their periods in vivo and in vitro the mechanism is unknown. And circadian rhythms can be entrained or synchronized by ambient temperature in some organisms.

Final draft:

Biological Clocks

We live in a rhythmic world. The earth turns on its axis, presenting a new day every 24 hours. The earth also turns around the sun creating dramatic changes in daylength and temperature we refer to as seasons. The moon waxes and wanes, tides come and go all with a predictable period. These predictable patterns are routinely used by all living organisms to predict changes in light and temperature to survive. For example – diurnal animals (those that are awake during the day) return to their burrows before the night sets in. This allows them to avoid nocturnal predators who are much better equipped to find them in the dark. Tidal clocks allow marine invertebrates to synchronize their reproductive behavior to insure procreation. Circannual rhythms prepare species for drastic changes in food availability and dramatic changes in temperature and landscape. Thus, biological rhythms vary in frequency and can be classified by **_period_** length. Those with periods greater than a day are referred to as **infradian**, those with periods less than 24 hours are referred to as **ultradian**. The most ubiquitous and well known are those with periods of about 24 hours – **circadian** (circa – about; dian = day)

True biological rhythms are driven by internal oscillating systems. As the environment we live in also oscillates it is often difficult to determine if the rhythm we are observing is an active process (endogenously driven) or a passive response to external stimuli.

Circadian rhythms are a subset of biological rhythms that are characterized by 3 factors:

1. Circadian rhythms are endogenous. When the organism is placed in constant conditions (e.g., continuous darkness), these rhythms persist or **_freerun_**. Circadian rhythms have a period close to, but not exactly, 24 hours, giving rise to the name **circadian** rhythms (L. circa = about; dies=day). Without environmental cues, circadian rhythms tend to be somewhat longer or somewhat shorter than 24 hours.
2. Circadian rhythms can be synchronized or **_entrained_** by external **_zeitgebers_**. There are limits to the period length that a zeitgeber can set. For circadian rhythms, the period is no greater than 22-26 hours. For example, circadian rhythms will NOT entrain to a zeitgeber with an 18 hour rhythm. Light is the most powerful zeitgeber – one second of bright light can synchronize wheel running rhythms of laboratory rodents. Other zeitgebers include: access to food, exercise, and drugs.
3. Circadian rhythms are temperature compensated. That is, they are independent of changes in the organism's internal temperature. This fundamental property is important because the ambient temperature changes over the course of the day and the seasons of the year. A temperature sensitive clock would slow down at lower temperatures and speed up at higher temperatures, making the clock unreliable. While many rhythms have been shown to maintain their periods in vivo and in vitro, the mechanism is unknown.

Note: footnotes from both drafts were omitted.

Harnessing the Power of Student-Created Content: Faculty and Librarians Collaborating in the Open Educational Environment

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Project Overview

Institution: [Ohio University]()

Institution Type: public, research, undergraduate, postgraduate

Project Discipline: Hispanic Linguistics

Project Outcome: student-created textbook

Tools Used: Pressbooks, Institutional Repository

Resources Included in Chapter:

- Sample Assignments
- Sample Illustrations

2020 Preface

Reflecting on how devastating national events have affected higher education and U.S. society in 2020, we recognize the continued importance of open education and open pedagogy as a means of ensuring equitable access to education and shedding light on racial, social, and economic inequities in our society. As higher education moved to remote learning in response to the COVID-19 pandemic, open education has gained interest from administrators, faculty, and students who are looking for ways to cope with that shift. Likewise, tragedies, such as the continued killings of black people, the racist and xenophobic violence against people of Asian descent, and the ongoing destruction to Native American lands, lives, and communities, have brought issues of structural racism to the forefront of the national conversation, making it clear that there is an urgent need to design courses and textbooks in ways that foreground and center social justice issues. Open education can respond to these needs in ways that traditional textbooks typically have not by making it possible to revise content to reflect the current moment as well as surface and support marginalized voices. Moreover, the use of open educational practices to provide students with the opportunity to delve into these topics themselves, assess them, and write about them could present a way to demonstrate meaningful, active allyship. We also believe that libraries should continue to engage in this type of work with faculty and students, as it demonstrates the continued relevance of the library profession to the mission of higher education.

—Bryan, Ashwini, & Chris

For several years Ohio University Libraries have attempted to build relationships with faculty interested in using or creating open educational resources (OER). Strategies for this included a workshop series on open textbooks, focus groups on OER creation, and the purchase of an institutional repository. Additionally, two librarians and a faculty member applied for and received an internal Ohio University grant, administered by the Libraries, to support local OER creation on campus, determine the needs of faculty creating OERs, and ascertain how these projects impact the undergraduate experience. The Libraries use this grant to hire student assistants to work on faculty OER projects and to pay for technology needed to publish and share these projects with a wider audience. Through this grant two faculty members are currently leading student-developed projects that use open pedagogy to fill a void in terms of available course texts and ancillaries by directly involving students in the creation of those materials. In this chapter we describe one of those projects, a purely student-generated textbook (still in progress) for an undergraduate 3000-level Hispanic linguistics course, and we discuss the impact and power of the project on undergraduate student learning. This project illustrates how librarians, faculty, and students can collaborate in order to create OER that fill important needs and provide students with learning experiences that are more engaging and rewarding.

While OER are often touted as a means of making education more affordable, simply switching from a commercial textbook to an OER textbook does not necessarily ensure that the course will be delivered in a different manner. Saving students money is an admirable goal, but projects like the one we describe also improve teaching and learning by making them more innovative and learner-centered. This change in focus from open educational resources to open educational practices (OEP), is "concerned with opening up educational practices, for example, by shifting from teacher-directed to learner-centeredness, where learners can be more actively involved in the creation and use of resources for their learning" (Conole, 2013, p. 250). OEP transform students from mere recipients of content to active contributors to the greater body of knowledge. Ehlers (2011) defines OEP as "practices which support the (re)use and production of OER through institutional policies, promote innovative pedagogical models, and respect and empower learners as co-producers on their lifelong learning path" (p. 4). DeRosa and Jhangiani (2017) directly link OEP to the adoption of open pedagogy, which they describe as a process in which students take greater agency in their education by actively contributing to the public knowledge commons.

OEP recognize the importance of student production and peer-learning by emphasizing the creation and sharing of educational resources among students. This entails a shift away from "disposable assignments," which Wiley (2013) describes as "assignments that add no value to the world – after a student spends three hours creating it, a teacher spends 30 minutes grading it, and then the student throws it away." Instead of disposable assignments, students focus their energy on projects that will exist beyond the class, such as a textbook that will be used by other students in the

future. Also, rather than focusing on predefined outcomes, OEP concentrate on the growth in the learning process itself. Conole (2013) explains that OEP aim for a learning environment in which "social processes, validation and reflection are at the heart of education, and learners become experts in judging, reflecting, innovating and navigating through domain knowledge" (p. 250).

Evidence shows that the high level of student engagement in OEP results in greater knowledge retention (Bonica et al., 2018). Additionally, by focusing on the creation of non-disposable assignments, this approach positions learning in a larger context than just that of the course at hand. Engagement in OEP through non-disposable assignments helps students forge a greater connection with the course content and take greater ownership of their learning by recognizing that it has a value outside of the classroom. As Bonica et al. (2018) explain:

> The students understood that they were producing something that, if done well, could be used to show the quality of their work. This recognition triggered a high level of intrinsic motivation. They were no longer just working for a grade. Rather, they were working to create something that had clear value beyond the limits of the course. (p. 19)

By using OER as more than mere replacements for commercial textbooks, they can transform the teaching and learning process in ways that benefit students.

Although cost is often one of the principal motives that encourages the creation and use of OER, there are other legitimate and practical reasons that motivate a project such as this. In introductory Hispanic linguistics courses taught in Spanish, instructors face two unique challenges. The first challenge is that for many students, the Introduction to Hispanic Linguistics course is their first exposure to the discipline of linguistics, and the second challenge is that the linguistic concepts introduced to the students are presented in a language that they are still learning. The Linguistic Society of America notes that the term "linguist" is used in non-academic contexts to refer to language teachers (2020). Consequently, many students incorrectly assume that a linguistics course is an advanced grammar course. This makes them unprepared for common tasks in the discipline such as analyzing simple linguistic evidence, summarizing a scientific reading about aspects of language, and making a linguistic argument. The students' ongoing endeavor of mastering a foreign language adds a higher level of challenge to these courses. It is very possible that in an Introduction to Hispanic Linguistics course, a student may be making their first attempt in Spanish at communicating scientific ideas using formal language. In many university Spanish programs students take Spanish language courses before taking a Spanish linguistics course. In Spanish language classes students learn to use Spanish in **informal** and **formal** settings. The advanced Spanish language courses are similar to English Composition courses: the emphasis is on learning to express opinions and thoughts through clear, coherent, cohesive, and engaging writing. It is only after taking language classes that focus on improving language and intercultural skills that students enroll in a Spanish linguistics course. Normally students have not used formal language in Spanish until this point to describe a scientific phenomenon or to write up an analysis using scientific terminology. In Spanish linguistics courses students learn to use linguistic terminology to talk about language and linguistic phenomena in a scientific way (e.g. how do humans make the sounds in their language, or in more technical terms, how does the interaction of the different organs of the human articulatory apparatus produce the phonetic inventory of a particular language?).

The commercial textbooks currently available for the introductory courses are written with the main purpose of transmitting large quantities of information, and frequently the language used in these textbooks is beyond the students' proficiency level. These textbooks are used across diverse institutions (large research universities, liberal arts colleges, community colleges, and more), in different programs (Spanish majors with literature and linguistics courses, Spanish linguistics majors, Spanish literature majors with a minimal to no linguistics requirement) with little flexibility to adapt to their wide-ranging audience (heritage speakers, first-generation students, students from rural versus metropolitan areas, etc.). Publishers are unable to keep up with dynamic and constant changes – new linguistics research and current authentic examples of language on the internet – and incorporate them into the textbooks.

Ashwini Ganeshan, the professor leading the open-access Hispanic Linguistics Textbook (OAHLT) project, attempts to address these challenges. In order to create a more accessible and up-to-date Hispanic linguistics textbook, her goal with the OAHLT project is to publish a textbook that is composed solely of student-authored and student-edited texts on an open platform that can include many varied and changing sources of information and examples of language use.

Because not all institutions offer a Spanish linguistics major and many institutions offer a Spanish minor or major with limited linguistics courses, the professor choses to include discussions of social justice issues into the textbook (e.g., the benefits and challenges of being bilingual or multilingual, the connection between accents and prejudice), making the topic of linguistics more relevant to the vast majority of students who do not plan on continuing to study linguistics and becoming researchers in the field. As of January 2020, the professor has published the first two chapters of the textbook, *La lingüística hispánica: Una introducción,* using the Pressbooks Open Book Creation Platform. The rest of the chapters are currently being compiled. A one-time PressBooks upgrade costing $99 was purchased since it allows the book to be downloadable in various formats (e.g. pdf, epub, mobi, xhtml), removes watermarks, and provides 250MB storage on the Pressbooks platform. The upgrade makes the book more discoverable and more usable for users, and the added storage is helpful for authors and editors to store a variety of files directly on the platform.

Before delving into the process through which the textbook is being created, for clarity and ease of reading, the authors identify the different people that are involved in the creation of this textbook. They are the professor leading the project (Ashwini Ganeshan, pronouns: she/her), the students enrolled in the professor's Introduction to Hispanic Linguistics courses, the student-editors hired to edit the texts, and the librarians (Bryan McGeary, department liaison librarian for Modern Languages, pronouns: he/him; and Chris Guder, subject librarian for Education, pronouns: he/him) who supported the project in various ways. Additionally, an art student was hired to draw illustrations in the textbook and an alumna and current staff member of the university designed the cover of the textbook (See illustrations and cover image in Appendix A). We refer to these main roles (the professor, the students, the student-editors, the librarians) and elaborate on them in the rest of the description of the OAHLT project.

The idea for the project originated during the academic year 2016-2017. In the fall the professor taught an Introduction to Hispanic Linguistics course. She observed that her students could explain complex linguistics concepts in simpler and well-written texts that were more accessible to their peers. She initially considered reusing her students' work, with their permission, in future classes as readings to accompany the text. In the spring the professor attended a series of workshops on OER, information literacy, and Creative Commons licenses led by the Ohio University librarians and decided instead to create a textbook using those texts, resulting in the OAHLT project. That same semester, the professor also participated in the Reimagining the Research Assignment workshop (Saines et al., 2019), in which faculty worked with their subject liaisons to revamp their research assignments to incorporate information literacy standards better. In this workshop, she worked closely with her departmental liaison librarian to create the study guide final project for the course she taught that semester. The study guide project was the first way in which the professor attempted to gather texts for the OAHLT project.

For the study guide project students in the professor's Introduction to Hispanic Linguistics course worked in groups to create a study guide for their chosen field of Hispanic linguistics (e.g. phonology, morphology, syntax). Through this project, students provided basic content, such as key concepts and their definitions as well as simple exercises, for these different fields. The professor informed students of the study guide project a little more than a month before the last day of classes. After giving students instructions about the study guide project and how it would be graded, the professor also announced that these study guides could be utilized for the OAHLT project if students wished to provide their consent. In order to obtain consent in an ethical manner, the professor requested the help of a staff member in her department. At the end of the semester the staff member handed out the consent forms to students and then collected and placed them in a sealed envelope. Once the professor submitted the final grades, the staff member verified the submission and handed over the sealed envelope. This procedure ensured that there was no undue coercion to contribute materials to the project. The professor has continued to use this consent procedure with all other student groups that have since then worked on materials for the textbook.

Once the students started working on the study guides in groups, the professor arranged for the departmental liaison librarian to provide the students with a workshop on Creative Commons licenses. She explained to the students that since this textbook was meant to be created through student-authored texts, they could decide what Creative Commons license to use for the textbook. After the workshop the students were given a week to discuss the matter among themselves before deciding together in class. The students decided as a class to license the textbook under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (CC-BY-NC-SA) because they

were enthusiastic about making the book available for free to their peers and wanted to ensure that no one could profit financially from their collaborative work.

After final grades were submitted at the end of the semester, the professor received the consent forms in the sealed envelope from the staff member and was pleasantly surprised that all students had provided their consent. Encouraged by this result, the professor started to design different assignments for her Introduction to Hispanic Linguistics course that could complement the material already collected and provide more substantial main texts and exercises for the new textbook (for examples see Appendix B). In all her following courses, students completed these assignments as part of the routine coursework, and the resulting texts are now utilized as the main texts and exercises for the new textbook. For most of the assignments students were required to revise, edit, and re-submit their work after a round of feedback from the professor, ensuring student learning and a quality end product. The individual homework assignments included short answers, essay questions, and exercises with answer keys, each filling out different parts of the textbook. A sample of each of these is provided in Appendix B with a link to the outcome in the open access textbook. The study guide assignment, other assignments, and the syllabus for the course can be accessed on the professor's website.

The professor continues to gather materials from her students through the methods described above. The contributed materials include texts explaining important linguistic concepts, essays on pertinent issues in Hispanic linguistics, and exercises in linguistics. At the end of every semester students are introduced to the project and are invited to contribute the materials they have already created as part of the course work to the textbook. Students are informed that if their material is used, they will be listed as contributors in the textbook. Students' consent is obtained through the signed consent forms procedure described previously.

The first group of students that worked on the study guide project differ from the following groups of students: the first group knew that their work would contribute to the OAHLT project while working on the study guides, whereas the following groups of students were only told at the end of the semester after their work was completed. The professor hesitated to inform any students about the project early on because there was no end-product in the form of chapters that she was able to show them. However, she did discuss with them that the assignments submitted needed to use formal language and simple explanations that were accessible to their peers. Now, with two chapters of the textbook published the professor can show future students what their work contributes to, fully aligning with the principles of OEP. The professor is optimistic that when students can envision their work in the textbook and realize that they will be creating a lasting and meaningful text, it will motivate them to engage in deeper learning.

In order to keep the textbook student-authored the professor applied for grants available through her university to hire students with knowledge of Spanish and linguistics as student-editors for the book. Through the Undergraduate Research Apprenticeship grant, the Program to Aid Career Exploration grant, and the 1804 grant, the professor advertised the student-editor position. Selected applicants went through an interview process that inquired about their interest and motivation to be a student-editor and tested their Spanish skills and linguistics knowledge. The professor hired four student-editors for the project. Each editor held a three- to nine-month term as student-editor and did not overlap. The student-editors helped edit, organize, and format the student-authored texts under the professor's supervision. They discussed and finalized chapter outlines with the professor and helped plan the content of the textbook. They also researched and incorporated current and open online resources into the textbook, including images, audio, videos, and blogs, to keep the textbook up to date. They learned to work with the Pressbooks platform and set up the texts on Pressbooks, working on all the final formatting of the texts. All this work has resulted in the publication of the first and second chapters of the textbook, *La lingüística hispánica: Una introducción*, on the Ohio University Institutional Repository. The professor and the current student-editor are working on compiling and completing the rest of the chapters. In order to provide a different way for students to access the book, the current student-editor is also audio recording the first two chapters of the textbook.

Although the process – assignments, revisions, final product – seems linear, it was not. In some instances, after compiling work submitted by students, the professor and student-editors realized that there were still gaps in content to fill. Sometimes the professor went back to the students in the classroom the next semester and collected materials to fill the gaps through assignments; other times, the student-editors filled the gap themselves by contributing original material. For example, students were assigned a question on the homework that asked them the difference between

linguistic competence and **communicative competence**. The answer students provided was generally a basic text to explain the difference between the two important linguistics concepts. In a different homework assignment, students were asked to explain why students of Spanish are often able to explain grammar rules but still make mistakes when speaking using the same concepts of competence. The best answers provided by students were compiled by one student-editor into a longer cohesive and coherent text. Another student-editor added to this text a different point of view, that of linguistic and communicative competence of Hispanic immigrants and their children who are differently proficient in English and Spanish. This final text thus connects the topic of linguistic competence and communicative competence to other social-justice issues, such as the stigma against bilingualism/multilingualism (incorporated as a topic in the textbook) and the social-burden these children carry as translators for their parents in U.S. society (link provided in the textbook to an article that discusses the issue). This nonlinear process, in our opinion, enriches the teaching and learning experience and has resulted in a more complex and interesting textbook.

Throughout this project the professor's departmental liaison librarian provided information on open textbooks, information literacy, and Creative Commons licenses to the professor and the student-editors. He also provided letters of support when the professor applied for grants to hire student-editors for the project. The departmental liaison librarian initiated and led a collaboration with the professor and the subject librarian for Education to apply for a university grant to support the creation of OER and open pedagogy projects. The professor received additional monetary support through this grant to hire student-editors. The professor and the librarians continue to have a strong team dynamic and work together in a flexible manner to respect and accommodate each other's knowledge, competencies, and schedules. For example, the librarians acknowledge that the professor can only work on the project when she has the opportunity to teach the linguistics class and sometimes at a slower pace, given her other responsibilities on the tenure track, and the professor keeps the librarians informed of the progress made every semester.

From a pedagogical perspective by engaging in this project, students and student-editors not only improve their language skills and knowledge of linguistics concepts, they also create a textbook effective for students and share their knowledge with their peers. Rather than passively receiving information from a static textbook, students are engaging with a body of knowledge to which they are actively contributing (DeRosa & Robison, 2017). The OAHLT project engages students in renewable assignments which, as Wiley (2015) states, "result in meaningful, valuable artifacts that enable future meaningful, valuable work". From the professor, the student-editor learns important professional transferable skills such as the rules of writing and formatting in the field of linguistics as well as how to edit academic texts, including checking facts, data, citations, and footnotes. From the librarian, the student-editor learns about copyright, plagiarism, Creative Commons licenses, and open access publishing platforms and repositories.

Open pedagogy allows students to engage in higher-order thinking tasks from Bloom's (1956) taxonomy, such as analyzing, evaluating, and creating. Open pedagogy also provides students the opportunity to take part in significant learning experiences, especially in terms of how to learn, integration of knowledge, caring, and the human dimension as described in Fink's (2013) "Taxonomy of Significant Learning." This project involves students in the application and integration of foundational knowledge, when they create materials for the textbook and when student-editors evaluate and edit these texts for the final product. Both students and student-editors learn that their work has value and that they can be effective carriers, contributors, and transmitters of knowledge. Through this project they are engaging in inquiry and are constructing knowledge in the field of Hispanic linguistics. This project allows students and student-editors to show creativity when exemplifying linguistic concepts or terminology, and when they come up with practical solutions to content and logistical matters, ensuring the book is better understood by future readers, their peers. Overall, this project creates a more effective, engaging, and lasting learning experience for students.

The OAHLT project we have described in this chapter embodies several facets of OER-enabled pedagogy (Wiley & Hilton, 2018). Wiley and Hilton identify a distinction between what is often referred to as open pedagogy and to what they define as OER-enabled pedagogy. In their pedagogical model, the output must enable the creators to make decisions about copyright licenses and permissions attached to their work. To this end, Wiley and Hilton (2018) have developed a simple four-part test that can be used to evaluate projects to determine the extent to which their definition of OER-enabled pedagogy is being implemented:
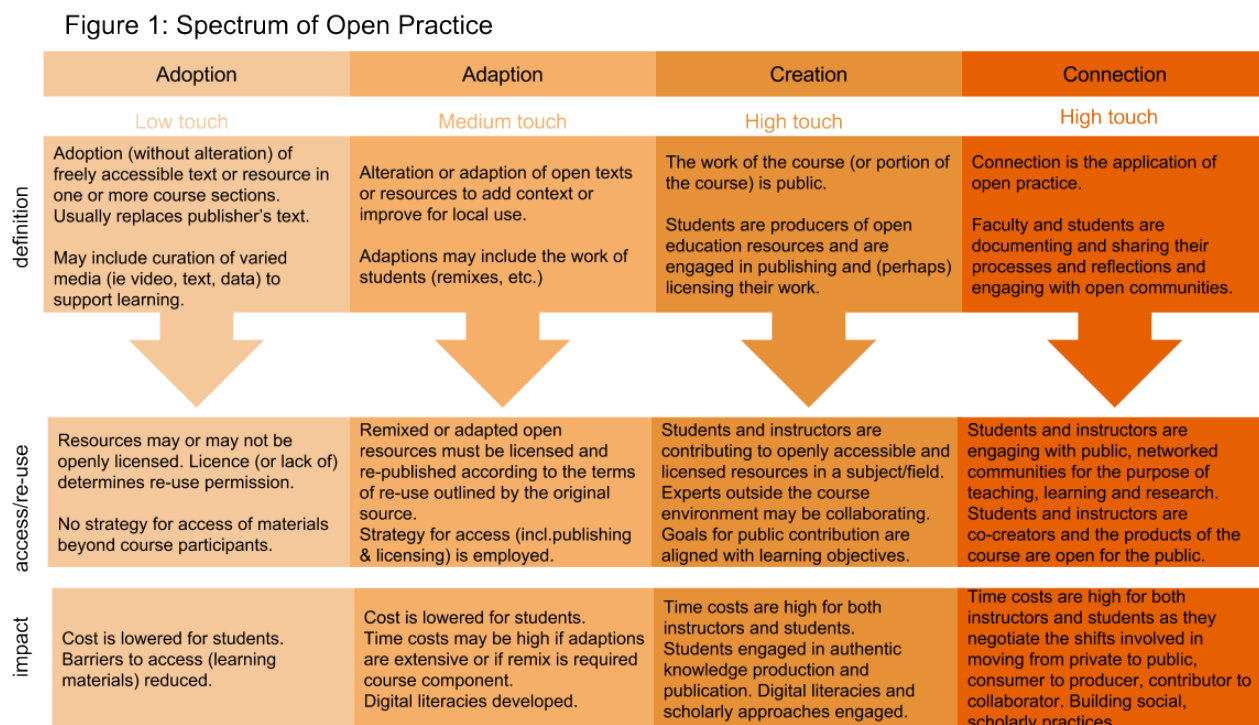
1. Are students asked to create new artifacts (essays, poems, videos, songs, etc.) or revise/remix existing OER?
2. Does the new artifact have value beyond supporting the learning of its author?
3. Are students invited to publicly share their new artifacts or revised/remixed OER?
4. Are students invited to openly license their new artifacts or revised/remixed OER? (p. 137)

Apart from incorporating the facets of OER-enabled pedagogy, the project makes the copyright licenses and permissions a condition and prerequisite to the content creation. Through the OAHLT textbook project the professor combines several benefits related to open pedagogy and invites the students to understand and contribute to the global conversation by making their work be available freely on the internet.

While creating an open textbook using student-authored texts improves the teaching and learning experience in the many ways outlined above, it is also a challenging endeavor. Creation is at the higher end of the spectrum of open practice (Figure 1) and requires a greater investment of time. Based on the way this project is designed, the main challenge of time or lack thereof affects only the faculty member and not necessarily the students. Although students are also under pressure to submit assignments on time, students' time invested is expected as part of the course work, and for student-editors, their time is paid. Not many faculty members have the time to dedicate to a long-term project like this, especially if it is not recognized and valued sufficiently nor substantially in their institutions.

Figure 1

Spectrum of Open Practice

Figure 1: Spectrum of Open Practice

	Adoption	Adaption	Creation	Connection
	Low touch	Medium touch	High touch	High touch
definition	Adoption (without alteration) of freely accessible text or resource in one or more course sections. Usually replaces publisher's text. May include curation of varied media (ie video, text, data) to support learning.	Alteration or adaption of open texts or resources to add context or improve for local use. Adaptions may include the work of students (remixes, etc.)	The work of the course (or portion of the course) is public. Students are producers of open education resources and are engaged in publishing and (perhaps) licensing their work.	Connection is the application of open practice. Faculty and students are documenting and sharing their processes and reflections and engaging with open communities.
access/re-use	Resources may or may not be openly licensed. Licence (or lack of) determines re-use permission. No strategy for access of materials beyond course participants.	Remixed or adapted open resources must be licensed and re-published according to the terms of re-use outlined by the original source. Strategy for access (incl.publishing & licensing) is employed.	Students and instructors are contributing to openly accessible and licensed resources in a subject/field. Experts outside the course environment may be collaborating. Goals for public contribution are aligned with learning objectives.	Students and instructors are engaging with public, networked communities for the purpose of teaching, learning and research. Students and instructors are co-creators and the products of the course are open for the public.
impact	Cost is lowered for students. Barriers to access (learning materials) reduced.	Cost is lowered for students. Time costs may be high if adaptions are extensive or if remix is required course component. Digital literacies developed.	Time costs are high for both instructors and students. Students engaged in authentic knowledge production and publication. Digital literacies and scholarly approaches engaged.	Time costs are high for both instructors and students as they negotiate the shifts involved in moving from private to public, consumer to producer, contributor to collaborator. Building social, scholarly practices.

Note. Source: Spectrum of Open Practice, by Cindy Underhill, licensed CC BY-SA 3.0. Image description available in Appendix C.

In general, as Roberts (2018) states, there exists an "enormous barrier presented by systemic policies and the tenure

and promotion process" that discourages faculty from participating in open education. At Ohio University, as with many institutions, OER creation does not have a significant impact, if any, when it comes to securing tenure, because it is seen as a teaching-focused activity rather than something that fulfills research requirements. As James Skidmore, associate professor and director for the Centre for German Studies at Waterloo University, explains, "For some people, it's a question of how much time they want to put in their teaching. So typically at a research institution, faculty are told to not overdo it on the teaching. [The notion is] do enough to be good, but don't do more than that" (Roberts, 2018). This advice can be particularly problematic for a faculty member who is currently on the tenure track.

In hindsight, the professor recognizes that some changes could have been made in terms of the process for the creation of the textbook. More time could have been dedicated to plan the project before beginning the work of collecting texts so that texts could be collected in such a way that they are ready to be incorporated into the textbook without editing. The professor also acknowledged that she could have fully embraced the practice of OEP by telling students upfront what their work was contributing to. In addition, the professor could have presented the students with a skeleton of the textbook and asked them to directly fill in sections to complete the book. The majority of the student texts in this project were of good quality, devoid of serious language and content errors, given the process of students revising and correcting their own work. However, the texts were not necessarily ready to be cut and pasted into the textbook in their current form. As described above, the student-editors also worked on the texts resulting in a more complicated and lengthy process. Another suggestion would be to investigate possible partnerships with faculty teaching the same course so the project could move faster, even though it cannot be assumed that collaborations may take less time. Any expectation for a project of this size and complexity to move in a linear and smooth manner is also unrealistic. Additionally, often faculty members do not have control over what courses they are assigned, and this can delay the process as well. The professor therefore recommends taking it slow and enjoying the process instead of focusing on the resulting product, since the process itself aids in professional and personal growth.

In terms of adaptability of this project, the creation of exercises and answer keys is the most easily adaptable part of this project, followed by the explanation of concepts with examples that students are familiar with/relate to (See examples in Appendix B). Since each of the chapters of this textbook is unique in organization, the project cannot be replicated exactly or expanded on in the same way as other inspirational projects such as the *Open Anthology of Earlier American Literature* or the *Antología Abierta de Literatura Hispana*. In broad terms, the model described here of creating an open textbook within a course and the use of partnerships between faculty, librarians, and students is something that can be replicated by faculty at other institutions.

While the professor and her students have been the catalyst and authors of this project, the partnership between the professor and the librarians has proven to be beneficial to both. Through workshops and other library events the professor was able to learn more about open access and engage with others on campus who have similar interests in OER and open pedagogy. Having access to a unit on campus that has expertise in publishing, scholarly writing, open access, and copyright proved to be beneficial not only to the professor and students as authors, but also to the Libraries' significance in the area of OER and how well the Libraries are situated to partner on other OER projects.

At Ohio University there are now two additional local projects: one that has a student creating a test bank for an art history survey course, and another that involves a faculty member creating their own open textbook out of course materials and open access government documents. These types of partnerships are proving beneficial to the Libraries by increasing library engagement with academic departments, demonstrating the tangible impact that they make on student success, and enabling them to take a leadership role on campus in the area of OER. As interest in OER expands, the Libraries are positioned to provide new services to support those needs. Currently, the Libraries are piloting some services aimed at addressing those needs. These initiatives include the provision of financial support to hire students to assist faculty with OER creation and to purchase any necessary publishing tools, such as a Pressbooks upgrade.

The leveraging of partnerships between faculty, librarians, and students that we describe can be replicated by faculty, librarians, and students at other institutions to create similar projects of their own that harness the power of student-created content. Since monetary costs have been relatively modest, the largest expense has been the time of all those involved. However, the benefits outweigh the challenges, and as the value of open pedagogy becomes more apparent to students, faculty, and libraries (not to mention universities and legislators), the case for dedicating resources and

librarian time to collaborate with faculty and students on such projects should become stronger. Projects of this nature provide a richer, more engaging learning experience for students as they become knowledge producers rather than just consumers.

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Author's Note

My deepest thanks to my enterprising students who contributed to this OAHLT project, to the student editors—Maggie Saine, Paige Wilson, Anna Traini, Analee Davis, Elle Dickerman—for their labor and creativity, and to many, many other people who supported this endeavor in enriching ways.

—Ashwini Ganeshan

Appendix A: Illustrations and cover image

Illustrations made by Emily Dialbert:

- Link 1: Phonetic Apparatus
- Link 2: Vowels

Figure 2

Figure 3

la cavidad nasal

A

la lengua

Figure 4

la cavidad nasal

E

la lengua

Figure 5

la cavidad nasal

I

la lengua

Figure 6

la cavidad nasal

O

la lengua
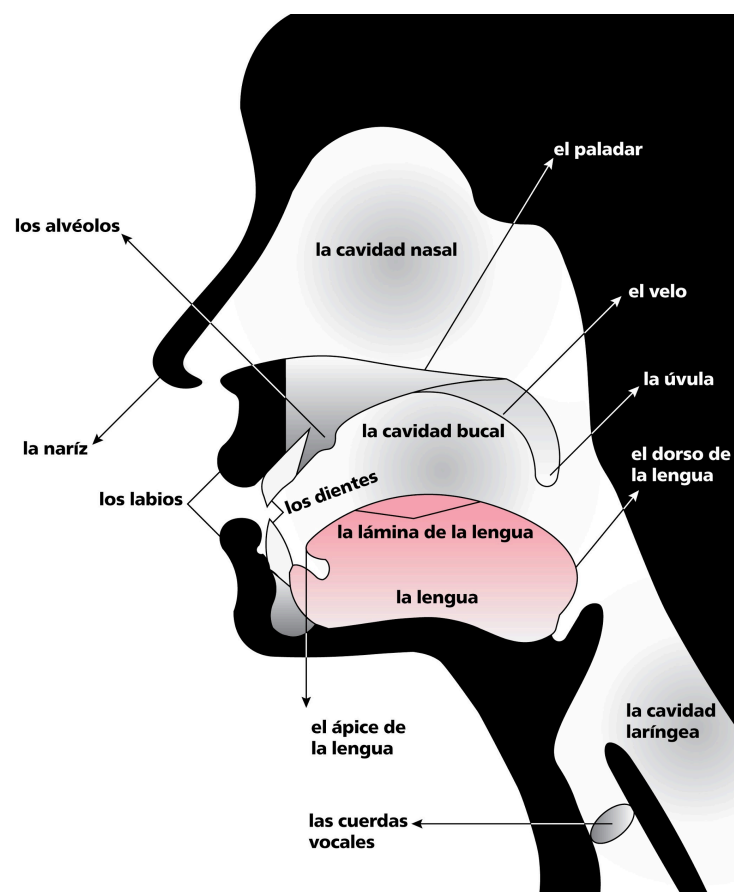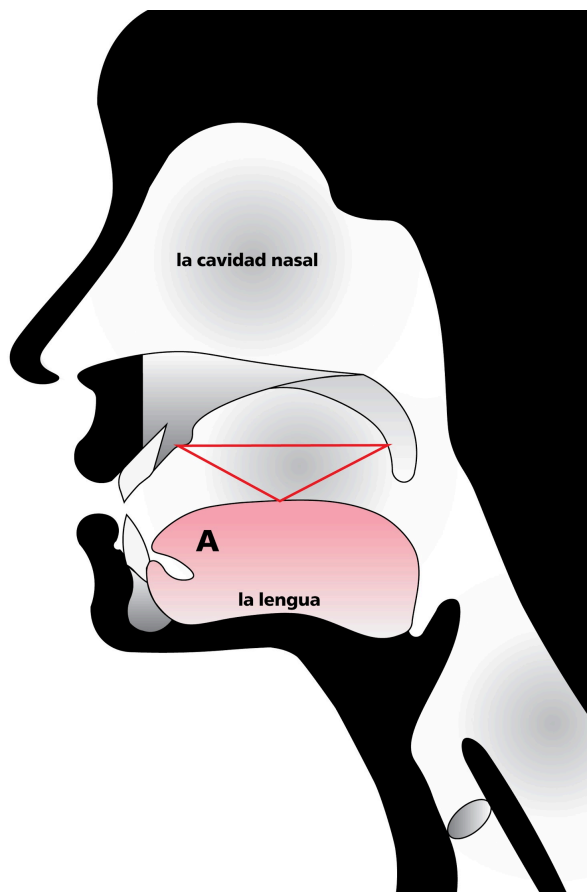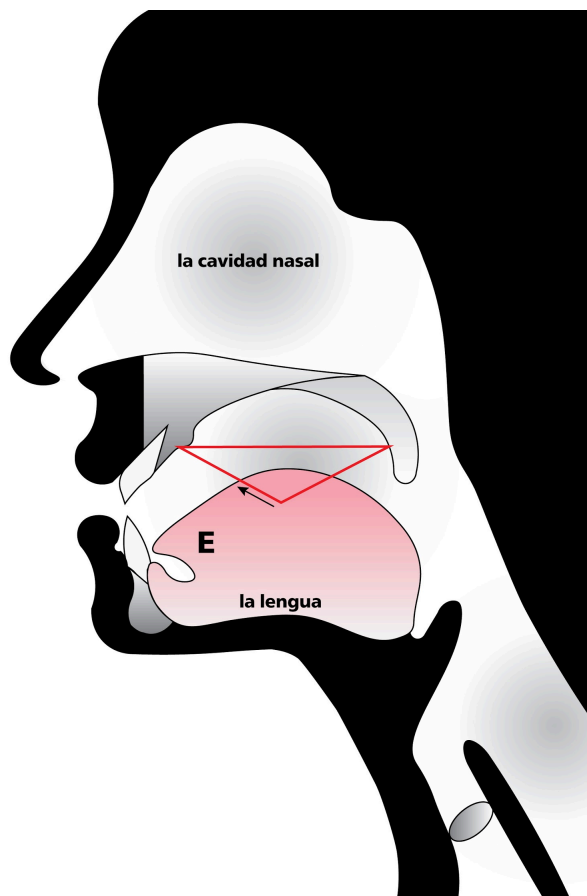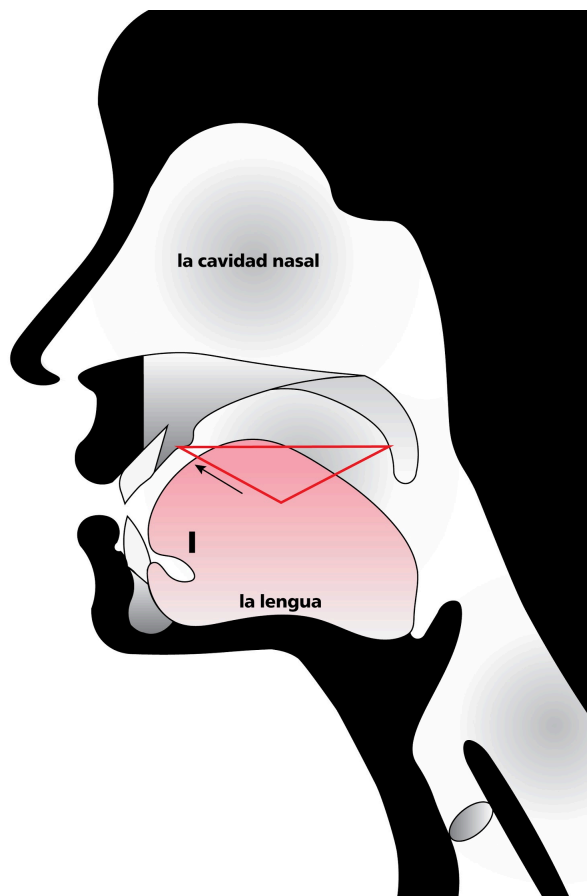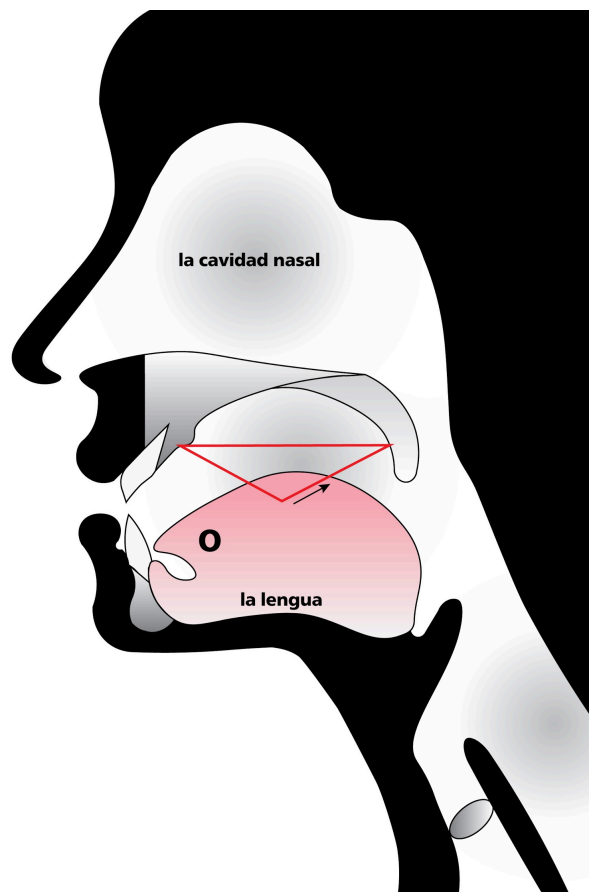
Figure 7

Figure 8

Figure 9

Note. Cover image designed by Shelley Barton: La lingüística hispánica: Una introducción
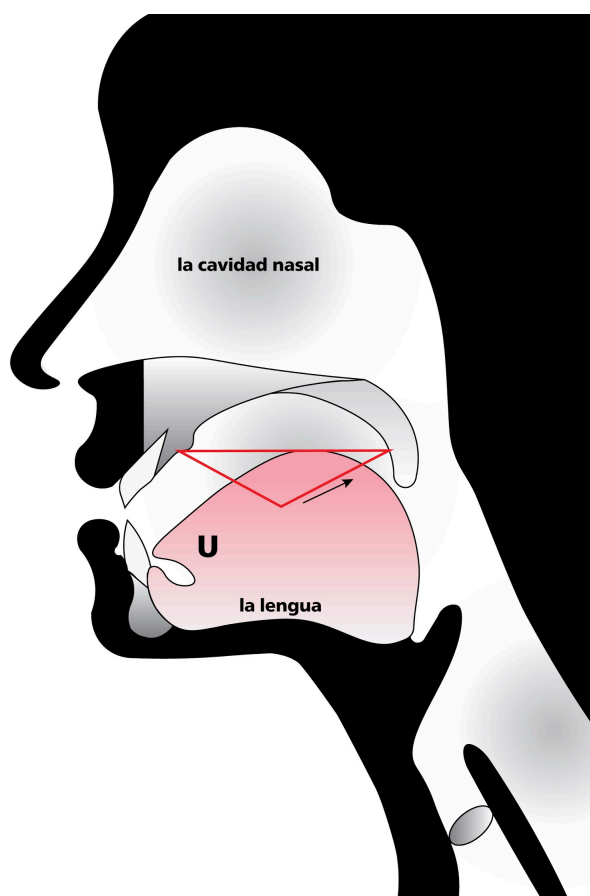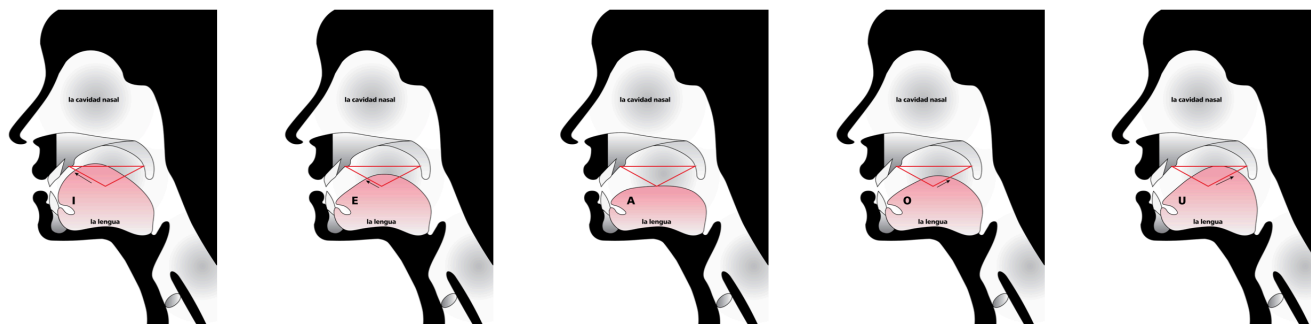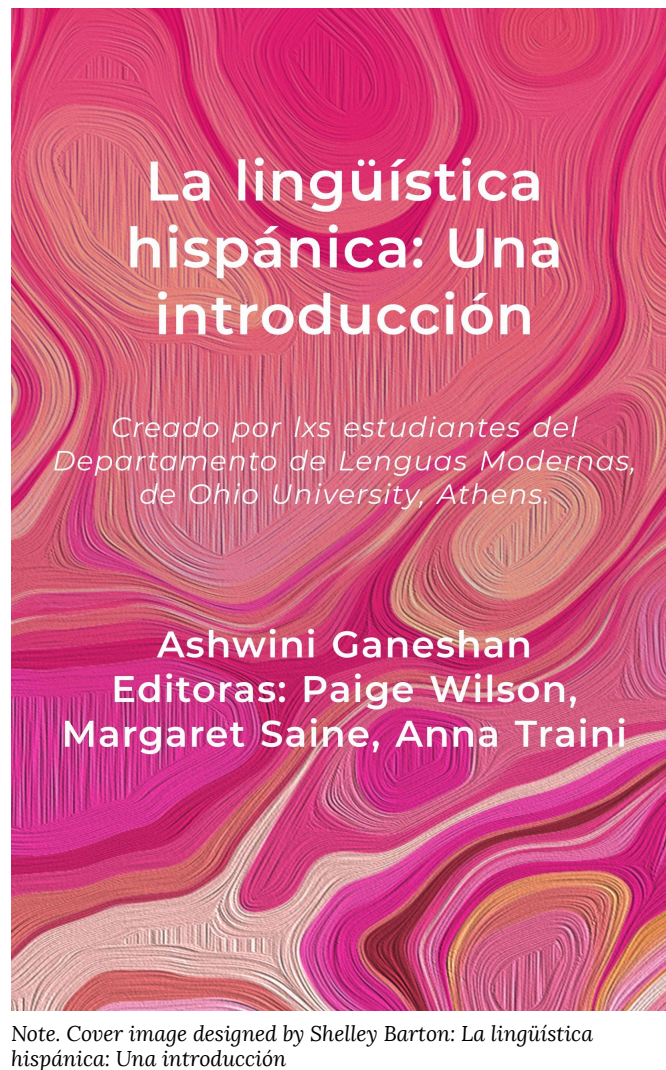
Appendix B: Examples of assignments

The example assignments presented here provided content for Chapter 1 of the textbook. All the assignments are written in Spanish and have been translated into English here for convenience.

We have linked each question to the part of the book they resulted in after editing by the student-editors.

Short answer questions

1. Explain the difference between:
    a. *langue and parole*.
    b. *linguistic competence lingüística and communicative competence.*

2. [Give two examples each of prescriptive rules and descriptive rules of a language that you speak.](#)

Essay question

1. [Using the concepts of communicative competence and linguistic competence, explain why a student of Spanish is able to often explain grammatical rules, but when they speak, they do not necessarily use the rules correctly.](#)

Exercise with answer key

1. Create a practice exercise with answer key for one of the following topics:
   a. [functions of language](#)
   b. [characteristics of language](#)
   c. [prescriptive and descriptive rules](#)
   d. [types of variation](#)

Appendix C: Image Description

Figure 1 Long Description

[Figure 1: Spectrum of Open Practice](#)

Adoption (low touch)

- Definition: Adoption (without alteration) of freely accessible text or resource in one or more course sections. Usually replaces publisher's text. May include curation of varied media (i.e. video, text, data) to support learning.
- Access/Re-use: Resources may or may not be openly licensed. License (or lack of) determines re-use permission. No strategy for access of materials beyond course participants.
- Impact: Cost is lowered for students. Barriers to access (learning materials) reduced.

Adaption (medium touch)

- Definition: Alteration or adaption of open texts or resources to add context or improve for local use. Adaptions may include the work of students (remixes, etc.).
- Access/Re-use: Remixed or adapted open resources must be licensed and re-published according to the terms of re-use outlined by the original source. Strategy for access (incl. publishing & licensing) is employed.
- Impact: Cost is lowered for students. Time costs may be high if adaptations are extensive or if remix is required course component. Digital literacies developed.

Creation (high touch)

- Definition: The work of the course (or portion of the course) is public. Students are producers of open education resources and are engaged in publishing and (perhaps) licensing their work.
- Access/Re-use: Students and instructors are contributing to openly accessible and licensed resources in a subject/field. Experts outside the course environment may be collaborating. Goals for public contribution are aligned with learning objectives.
- Impact: Time costs are high for both instructors and students. Students engaged in authentic knowledge production and publication. Digital literacies and scholarly approaches engaged.

Connection (high touch)

- Definition: Connection is the application of open practice. Faculty and students are documenting and sharing their processes and reflections and engaging with open communities.
- Access/Re-use: Students and instructors are engaging with public, networked communities for the purpose of teaching, learning and research. Students and instructors are co-creators and the products of the course are open for the public.
- Time costs are high for both instructors and students as they negotiate the shifts involved in moving from private to public, consumer to producer, contributor to collaborator. Building social, scholarly practices.

OPEN PEDAGOGY AS OPEN COURSE DESIGN

Open Pedagogical Practices to Train Undergraduates in the Research Process: A Case Study in Course Design and Co-Teaching Strategies

STEPHANIE N. LEWIS, ANNE M. BROWN, AND AMANDA B. MACDONALD

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Project Overview

Institution: [Virginia Tech]()

Institution Type: public, research, land-grant, undergraduate, postgraduate

Project Discipline: Information and Data Literacy

Project Outcome: student-created research proposals and digital poster sessions

Tools Used: Institutional Repository

Resources Included in Chapter:

- Course Syllabus
- Grading Rubric

Using an "open" course design to teach research and data literacy

As we look toward the future of course design and integration of best practices, the demands of a global workforce requires training in information, data, research, and digital literacy. Courses, co-curricular experiences, and collaborations across campus are necessary to create these experiences. Innovative routes for students to get hands-on experience in these literacies are also required. Additionally, academic institutions are continually looking for opportunities to authentically engage more students in **experiential learning** in order to make them more career-ready and adaptive to changing professions. A recent employer survey suggests that employers and hiring managers want applicants and new employees with a basic set of adaptive skills, such as effective communication, teamwork abilities, and application of university knowledge to real-world settings (Hart Research Associates, 2018). These practices are among a variety of competencies that can be learned through experiential pedagogy.

Quantitative and qualitative research experiences offer pedagogical outlets for students to practice experiential and professionally relevant skill sets. Universities typically have strategic initiatives to enhance undergraduate research and related experiences, but often students are unprepared and unsure of routes to fully engage in the research process (Brew & Mantai, 2017). Different paths to engagement in systematic research are necessary for undergraduates. Individual disciplines have specific requirements for formalized training in research methods, data collection, information literacy, and auxiliary processes like critical thinking and problem-solving. Common and cross-disciplinary practices provide opportunities for collaborative teaching efforts, which fosters development of open content by instructors and allows research mentors to engage more undergraduate students in the research process. Brew (2013) describes undergraduate research as an experience where students are both participants and audience members engaging in one of four process domains: research-led, research-tutored, research-based, and research-oriented. These four domains highlight the experience types and needs of students engaging in this process.

The research-oriented domain requires students to focus on developing important research and inquiry skills that are not a required part of undergraduate research experiences in which learning is reserved for mastery of techniques and methods. The skills involved in research-oriented engagement allow for transdisciplinary course development because the fundamentals of quantitative and qualitative research are generally ubiquitous. Examples of ubiquitous topics include finding, using, and collecting information and data, evaluating sources, and communicating findings. Often these topics are not formally introduced to first- and second-year students, with subject-specific techniques taking precedence in undergraduate research and capstone experiences later in their academic careers. The introduction of literacy practices early in the learning process as a part of research-oriented design affords students the opportunity and time to explore relevant topics in their chosen discipline in a way that fosters their curiosity and creativity as budding professionals. With the addition of exploratory course design to this transdisciplinary learning environment, students can engage in conversations across disciplinary lines, share their ideas and strategies, and see the successes and areas of improvement encountered by their peers. Ideally, the experience translates to students graduating as successful professionals capable of innovative problem-solving.

In this chapter, we discuss the design and pedagogical background of a research-oriented course that engages students from a variety of disciplines in the practice of critical thinking, where information, data, research, and digital literacies are their tools. This course was developed through collaboration between library and university faculty in order to meld pre-existing independent learning experiences into a single course. Framed as a case study, the "openness" of the course design outlined here stems from the open resources used, the autonomy of the enrolled students, and the pedagogical practices that promote diverse perspectives about transdisciplinary topics. Students produced research proposals and digital posters that were made openly accessible through a library-housed online repository. The theme of open pedagogy is embedded in the course design, learning outcomes and final projects, which showcases one application of openness in higher education.

Needs addressed by Honors Research Practices

Virginia Tech, like many research universities, strives to encourage student participation in undergraduate research. As one of the eleven high impact practices (HIPs) (Kuh & O'Donnell, 2013), undergraduate research can be an important step toward pursuit of a research career (Lopatto, 2004). As students engage in courses within their selected majors, instruction in research methodology and best practices is sometimes minimal, disconnected from transdisciplinary endeavors, or limited to lab-based classes. Translation of information from the classroom to real-world applications can be difficult for students who are at the early stages of learning. Options for students to participate in the research process can be limited, and the level of training and rigor can vary across academic experiences (Lopatto, 2004). This leaves a conundrum: How can an institution be deliberate in how it trains and engages students in the research process? Is the provision of foundational research literacy training for all students, regardless of major, feasible?

Course-based undergraduate research experiences (CUREs) are growing in popularity as a means to connect with a large number of students and ask them to contribute meaningful work to the greater body of knowledge on a subject (Auchincloss et al., 2014). CUREs are akin to accelerated research experiences in which an instructor mentors students through the research process, using their primary research interests as the focus of the course work. However, these courses tend to be discipline specific (Powell & Harmon, 2016; Corwin et al., 2017) or require students to enter with an established level of disciplinary knowledge (Lopatto et al., 2008). While these experiences are extremely valuable in fostering scientific identity and encouraging students to continue pursuit of research careers (Corwin et al., 2017), there is limited space for exploration of research concepts outside of one's primary discipline. It is in this intellectual space that the concept of the Honors Research Practices course emerged as a way to provide first- and second-year students with broadly relevant, entry-level research training in a learning environment where transdisciplinary research ideas are encouraged.

The course schedule and content of Honors Research Practices helps students to identify and interpret the need for inquiry, work in groups towards an overarching goal, and experience the freedom (and difficulty) in narrowing topics down to feasible research projects. The autonomy of topic selection presents a new interpretation of open pedagogy, but also complements accessibility with regard to resources used and availability of class deliverables for public consumption.

Pedagogical theory

From the beginning of the semester, we set high, yet attainable, expectations for the students. The most challenging aspect of the course is the creation of a transdisciplinary research question, which student teams subsequently craft into a detailed project proposal and digital research poster. Learning objectives are presented to the class through the syllabus, and explained throughout the semester, in an effort to show the ties between the course assignments and the stepwise process necessary to engage in the research process. This scaffold approach to learning (Belland, 2017) is based heavily on the updated Bloom's Taxonomy (Anderson & Krathwohl, 2001), in which students walk progressively through independent stages of the learning process. Elements of the Entering Research curriculum for training students in research were included (Balster et al., 2010), and many of the assignments and activities mirror best practices from Hanstedt's book on course design (2018). The research process is taught through an adaption of the canonical structure for writing a scientific paper (Heard, 2016), where the results and discussion sections become a thought exercise in predicting outcomes and strategizing alternatives. In order to experience the research process, each group of students walks through defining a problem, reviewing the literature on the topic, designing a protocol based on published studies, developing a hypothesis, predicting outcomes, identifying pitfalls, strategizing different ways to tackle their research question, and summarizing how the outcomes of the study could impact general knowledge on a topic. In brief, the course structure has weekly lectures focusing on skill introduction, and recurring in-class work sessions reserved for

completion of checkpoint items. Students are asked to accomplish micro-goals in a logical order as building blocks for subsequent work, which culminates with the final proposal (see [Appendix A](#)).

The course was further constructed with inquiry-based learning (IBL) in mind (Lazonder & Harmsen, 2016). IBL, sometimes referred to as inquiry-guided learning (Lee, 2012), allows the students to explore their own questions rather than depending on the interests and views of the instructor. Instructors provide constructive feedback to reinforce the learning goals. To maintain openness, guidance regarding topic selection was limited to encouragement to identify a novel and valuable knowledge gap from current research literature. This practice is a combination of the open-ended problem exploration in a learner-centered environment associated with problem-based learning (PBL) with the active, question-driven learning of IBL. The benefit of IBL is that the students are intrinsically motivated to find answers to questions that they generate either individually or as a group. They are not limited by questions pre-determined by the instructors (PBL), the content knowledge of the instructors (content-based learning), or specific examples of research (case study-based learning). This technique has proven beneficial for diversity in course topics, diversity in student-developed concepts, integration of ideas across majors into project design, and the demonstration and progression of team-based research. Students' reflection responses suggest that they perceive contribution of their learning outcomes to success in future job environments. Successes reported by the students are shared later in this chapter.

The combination of PBL and IBL approaches has been shown to foster creativity and promote the development of complex skill sets (Rodriguez et al., 2019). However, the open design in the IBL aspect of the course is not met without challenges. Students have had difficulties narrowing down research concepts and forming questions, which demonstrates one challenge within open pedagogy. We have recently modified the course to include a lecture on determining a research question, narrowing project scope, and searching subject-specific databases to address this challenge.

Creating a honed research question is an essential, yet often overlooked, concept in classroom instruction and lab courses. Linked directly to information literacy instruction, students were challenged to consider their individual interests and questions. By searching news outlets and databases, students explored potential topics and sources using metrics and altmetrics to better understand the scholarly conversation surrounding their ideas and to identify novel research questions. While it is not close to the depth of a literature review, it is a great entry-point for teaching first- and second-year students about the process of research and developing original research questions using the IBL framework outlined above. This design aspect focuses on our first open element, which is the open pedagogical design. Students have autonomy in selecting research topics and areas of focus, which then lead to greater engagement and buy-in in the research process. Further, students use and interact with open sources of dissemination as they explore the significance of digital literacy to the problem-solving and decision-making processes.

The course openness translates to benefits for the instructor. First, enrollment of students from a variety of majors in the course promotes exploration of transdisciplinary and multidisciplinary problem framing. Students bring new perspectives to and from disciplines like business, history, architecture, medicine, environmental conservation, biology, engineering, horticulture, and communications. The lack of restriction on majors has led to the development of interesting research concepts outside of our disciplines. Second, we were able to focus on mentoring the groups because we did not have to spend extra time developing and testing project ideas. The shift of this work from the instructor to the student challenges them to think critically about the research process. Because we, as instructors, often did not have the disciplinary expertise necessary to understand the research areas selected by the students, we were able to model good research practices as we guide them through finding the information that they needed and development of their research questions. The students were expected and allowed to develop a sense of authority regarding their topics (Hanstedt, 2018) because they were required to be content experts for their developed research question. The students were also encouraged to seek out other campus faculty, who are established authorities pursuing research goals in the same or similar areas. The ownership of the research concept, and breadth of student exposure to transdisciplinary topics promotes and supports open pedagogy design. The design provides the basic structure necessary to impart research and data literacy skills, while leaving enough open-endedness to allow independent inquiry.

Ethical considerations

HIPs have been described as experiences in which all students should participate in order to be academically successful while in college (Kuh, 2008). The experiences serve as a means for students to practice and reflect on transferable skill sets, and encompass opportunities like collaborative assignments, internships, and study abroad. These academic endeavors ultimately translate to professional capabilities after graduation. However, prevalent conversations about access and availability of opportunities suggest a perception that a limited number of students are introduced to and engaging in these practices. Resource limitations for the research mentor, and knowledge limitations for the student seeking to participate also exist, which limits the number of students who can participate in undergraduate research. Our introductory course strives to meet many of these ethical concerns: open access for a large number of students from all disciplines to engage in transdisciplinary research training using minimal resources. No prior knowledge beyond general K-12 education is required, and students do not pay for textbooks or need to purchase additional materials. This course is designed for first- and second-year students new to research, but there is no restriction on course enrollment. Other faculty have commented on the earliness of introduction of these techniques and the depth of engagement in the proposal-writing process of students. While the research practice topics we cover are typically introduced in junior and senior level courses, introducing them early and often strengthens the mastery and utilization of these skills throughout a student's undergraduate career.

Modeling multidisciplinary collaboration

Course narrative

The Honors Research Practices course was developed from previous experiences of all the instructors involved. The teaching faculty taught previous versions of the course for science majors and students actively involved in undergraduate research, while library staff ran a recurring workshop series to prepare students for engagement in research. Although these two efforts were originally developed and run as isolated learning experiences, the decision was made to combine the courses as a means to reach a broader audience of students while building upon the successful hallmarks of the individual efforts. Previous versions of the research-oriented course provided activities and agenda items to drive course progression. Elements imported from the research course include the development process for the final proposals, and discussions about topics like research integrity and collaborative research. The established Advanced Research Skills (ARS) training program, housed within University Libraries, provided elements of literacy processes, like organizing scholarly literature or designing effective posters. At the same time, the Honors College at Virginia Tech strove to make updates that included curriculum and course development to increase the competitiveness of students for engagement in experiential learning opportunities.

The ARS program was developed as a co-curricular workshop series to introduce students to the concept of undergraduate research and provide a chance for students to practice high-level research skills needed for formal undergraduate research experiences. While the curated curriculum for the workshop series is not yet openly available, the individual learning objects were created to be openly accessible and adaptable with Creative Commons licensing. The librarian requested that an Undergraduate Research Collection be added to the Libraries' digital object learning repository, Odyssey, and uploaded associated scholarship on the program in VTechWorks, the university's repository.

Combining elements of these opportunities made addressing the learning needs of students from diverse disciplines obtainable, and allowed us to foster IBL and motivation to engage in the research process. The level to which students felt inclined to continue in research was evaluated using a pre- and post-course assessment. Students were asked to rate their interest in pursuing research careers in college and after graduation, and were asked if they met and interacted

with researchers during their course experience. The outcomes of this assessment were used to inform adjustments to the course and understand any value placed on the course by the students.

Students were asked to generate their own research path. The assignments for this process included identification of potential professional associations/consortiums for their selected research area, cataloging of top research sources related to their questions, establishing questions through scholarly conversations and identifying gaps in the literature, and formulating the first draft of their research question. The remainder of the class sessions proceeded as a "how-to" guide for developing a research proposal. The students used their research question as the driving force to creating a hypothesis, searching the literature, and vetting resources. Their goal for the semester was to develop a project proposal for addressing their research questions. Assignments served as checkpoints through which assignments like the annotated bibliography require students to learn about citations for relevant literature, critique of selected works, assessment of author authority, and assessment of content relevance (Bauder & Rod, 2016). We strove to provide feedback and critiques, which included conversations about adjustments to project ideas, and strategies for answering the various elements of their often complex research questions. At the end of the semester, students submitted a written research proposal and presented their work at a digital poster symposium. Throughout the semester, students practiced elements of iterative design while tapping into their intrinsic motivation to produce quality work. Example rubrics from some of the final assignments are included in Appendix B, as well as reflection questions from the end of the course evaluation of students' perceptions of learning.

Collaborator roles and contributions to success

The instructors possessed distinct educational backgrounds and experiences:

- A faculty member from University Libraries holding a doctoral degree in biochemistry, who manages a large undergraduate research lab.
- A teaching faculty member for the Honors College holding a doctoral degree in genetics, bioinformatics, and computational biology with pedagogical theory and curriculum development training.
- A librarian from University Libraries holding two master's degrees in English Studies and Library Science.

The academic experiences of the instructors provided a well-rounded introduction to qualitative and quantitative research. All instructors were viewed as equally valuable in the course development process. This collaborative approach to instruction also served as a model of successful teamwork and group diversity.

Collaborative teaching, or co-teaching, is a beneficial, yet challenging endeavor. This approach to instruction involves a team of instructors working together to prepare and deliver content within a course, and can take many forms. A collaborative teaching agreement was composed before the course was delivered. The agreement aided in addressing minor issues such as distribution of work, accountability, and addressing student concerns about coursework. All three instructors collaboratively developed content, taught classes, and grading course work. The instructors' individual contributions to class sessions and content creation were based on their expertise. All three instructors reviewed and agreed upon course content. However, some assignments required an individual instructor with the greatest practiced knowledge on a topic to grade assignments individually. All instructors reviewed grades and feedback before providing this information to students.

The ARS training program continues as a co-curricular workshop series offered by the University Libraries in support of the Office of Undergraduate Research. It serves as an avenue for students across the university interested in or currently conducting undergraduate research to practice research skills, while providing academic flexibility. For librarians, the process of embedding a co-curricular workshop series into a credit-bearing course is an ideal illustration of how library instruction programs move into the curricular sphere. The decision to offer ARS curricularly and co-curricularly was to provide an avenue for students to obtain an introduction to basic skills without adding a full course

to their academic schedule. For some students, adding a research methods course can be a course credit overload. The ARS program is run as a short-course, workshop series with less demanding coursework and reduced topic coverage (when compared to the Honors Research Practices course). On the other hand, the Honors Research Practices course is geared toward students with room in their schedule to delve deeper into the practice of research methods. A second section of the course is currently offered in order to extend the learning opportunity to non-Honors students.

Importance of library-faculty partnership

Having a librarian liaise with the Honors College was new to the university, and this collaboration provided an avenue for the librarian to conduct outreach and develop partnerships with faculty and students. As shown by Mery, Newby, and Peng (2012), one-shot instruction sessions are helpful for teaching skills, but full course instruction is more effective. Such involvement increases the likelihood of future email transactions and face-to-face reference appointments with students (Hayman 2017). From this collaboration, the librarian was named affiliate faculty for the college, listed as the instructor of record, and was able to connect with students during their first year. This library-faculty partnership added value to the library through creating an avenue piloting deliberate and lasting partnerships.

Within the Honors College, the library provided resources, such as an online textbook, tailored information and resources, data and digital literacy instruction, two faculty members with differing areas of expertise, and access to a smart classroom. Additionally, University Libraries oversees the university's repository, VTechWorks, which provides an open access publishing space for students. This partnership serves as an example of how the library employs a variety of discipline-specific experts to integrate and partner with university departments.

Student success through open outcomes

Part of our assessment of the class included a questionnaire, in which students provided their thoughts about research before and after participation in the class. There is a long-term goal to publish the outcomes for other educators to consider. The students' final reflections outlining what they learned also provided takeaways for course development. Anecdotally, students perceived successful research skill development for each offering of the course. First and foremost is the interest that students express in research and the research process. The population of the classes included a variety of motivations to enroll: uncertainty about research, desire to learn what research is, future planning for engagement in undergraduate research, and pure curiosity. By the end of the semester, students often displayed solidified perspectives regarding what they want their role in research to be.

Although seemingly daunting for students, especially first- and second-year students, the micro-deliverables were viewed as useful by the students, who commented that "the instructors did this on purpose!" A small group of students also saw the course as a way to engage with faculty and "audition" for research positions in their labs. Students demonstrated confidence in their ability to engage in and discuss research while showcasing what accomplished in a single semester. For the students, the most valuable aspect of the course was the research projects that they develop. For example, students were not just broadly studying a concept, such as conservation. Instead, they strove to understand specific ideas, like the role of microplastics pollution on mussel filtration in the Chesapeake Bay. Additional examples of student projects and deliverables can be accessed through the VTechWorks repository. This second part of "openness" of the course has been beneficial for the students in terms of being able to electronically link to a completed research proposal and/or poster for discussion at internship and job interviews.

Moving forward from lessons learned

Challenges

Each semester of the Honors Research Practices course began with a conversation about the definition of research. We repeatedly saw differences in perceptions of research and misunderstandings about what it is. The diversity in perspectives was expected, but we did not anticipate the resistance we observed to updating the definition of research by some students. Students reported that research falls into the science-only or STEM-only category of academia. In the course, we strove to show students that research can take many forms and is present in many, if not all, disciplines. Despite these efforts, the semester typically ended with reflections indicating that what we did in class was not research. The reason for this perspective was not fully clear and would be an interesting topic for further research.

Another common issue in the class was the abstract nature of developing a proposal for a project that may never be realized by the students. Because students were given the opportunity to consider topics that genuinely interest them, the restriction on the ability to realize the proposed project presented as unauthentic. Students often asked if they were expected to complete the proposed projects and if they would have enough time in a semester to do so. We viewed the course as an opportunity to teach students through a semester-long thought experiment that learning how to write a proposal is an important aspect of research. Not all research proposals become active projects, and not all research ideas are fundable or feasible. The concept of planning without doing may not be a practiced skill for some, and was therefore confusing; or their motivation to invest in the effort surpassed the expectations for the course. Differences in experiences before students matriculate into college may be the impetus for the differences in expectations that we saw. It stands to reason that the inclusion of critical thinking and problem-solving in the course was beneficial, but may not be fully translated by some.

The disconnection between developing a proposal and completing a project contributed to one last challenge: the limitation of completing the proposed projects after the conclusion of the class. As teaching faculty with other responsibilities, we do not have the resources or bandwidth to mentor a student throughout a research project constructed in the class. Additionally, the projects often fell in a discipline for which we are not experts. We encouraged students to reach out to faculty with similar research agendas for that reason. However, the open nature of the project development process meant that we can, and have, seen projects proposed that do not have ties to ongoing research at our institution.

Adjustments

One overarching approach to potentially address all of the challenges is to increase the information literacy instruction and framing of the research process within the course. This adjustment reinforces the significance and relevance of including library faculty in the teaching process. An online course option is also under development, which will allow the instructors to curate information and publications to supplement and support the learning objectives. This online component creates potential for asynchronous learning to supplement this and other courses at the university. Future iterations of the course could also benefit from the involvement of additional faculty, who can mentor and guide the students throughout the semester, and potentially after the completion of the course.

Adoptions

Institutions or groups wishing to adopt this course or build a similar course should do so with a significant amount of lead-in time to establish the instruction team and outline the learning objectives for their specific group of students. A collaborative teaching plan should be developed where roles and responsibilities are clearly delineated. There are a variety of co-teaching options, and instructors should evaluate which configuration will work best for their course goals. We recommend consulting the updated Entering Research curriculum (Branchaw et al., 2020) as starting points for developing a course agenda, and perusing the online elements of our course linked within this chapter. Syllabus elements and sample rubrics are provided in the appendices relevant to this chapter for convenience. We also recommend maintaining the flexibility to adapt, in real-time, as the students participate in the course so that their learning needs are appropriately addressed.

Conclusion

The Honors Research Practices course highlights a few pedagogical practices that foster an open learning environment, encouraging students to think outside of their disciplinary boxes and share their ideas for the progression of research. The implementation of this course as a research-oriented learning experience contributed to transdisciplinary learning access for a variety of students. The inclusion of students from any major, the undefined research topic exploration and selection by the students, the utilization of open digital media and online resources, and the open sharing of student artifacts with the university at large and interested individuals outside of the university are all benefits that translate to a course that exemplifies access as a hallmark of student success. While the benefits to students and instructors are numerous, the most significant seem to be student engagement in an ever-evolving classroom space that adapts to their learning needs over the semester, and for instructors, an increased understanding of how to communicate with and engage students from a variety of academic and social backgrounds. The decision to embed open elements in the course structure successfully translated to developing exploratory spaces for students in a variety of majors.

This course has been a successful example of open pedagogy. Conversations continue to emphasize the importance of open access and open educational resources, and instructors for this style of course can continue to expand on its openness. Examples of this re-envisioning could include the selection of an open textbook, continued focus on the creation of digital learning objects to aid in teaching students research skills, and increased discussions about open publishing. Additionally, the information and digital literacy instruction students receive in this class could include locating and gathering open-access peer-reviewed, scholarly information. Potential exists for the open nature of the course and collaboration between an academic college and the university library to serve the greater academic needs and mission of the university.

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Appendix A

Sample syllabus for Honors Research Practices. Segments of the syllabus used in the spring (January to May) 2018 iteration of the course are included below. University-specific content, such as a statement about the Honors Code and university grading policies were removed.

Course description

This course is a means of creating a community of practice where University Honors students learn the process of exploring aspects of a research problem in order to better understand the approach and process to successfully execute a research project. This course is centered on the completion of a final group project, which will aid in developing both your research and collaboration skills for future endeavors.

Learning objectives

By the end of this course, students will be able to:

- Assess and work through multiple issues to consider when working on research projects or community-based service projects
- Present knowledge learned using resources and information collected throughout the course in both written and oral formats
- Use critical thinking skills to assess a problem and determine potential solutions and workflows
- Explore interdisciplinary, multidisciplinary, transdisciplinary, and collaborative research projects, and assess good collaborator skills

Communication

Your success in this course is important. We encourage you to see us before/after class or at another scheduled time if you have any questions or need clarification concerning the projects or material discussed in class. Discussion of deliverables and assessment will be done in class, as well as class time given for group work (please see schedule). The goal is for you to explore and learn about the landscape and process of beginning research, start your own literature search on areas of interest to you, and define questions to ask relevant to your research area of interest. If you find yourself spending too much time working on the project or are confused on how to proceed, please ask questions through email or by scheduling a meeting. Please do so in a timely fashion so you can appropriately complete assignments and projects for the class.

Please note: The agenda and information provided is the initial plan for this course. This syllabus is a dynamic document that can be updated as needed based on the progress of the course and needs of the enrolled students. Any updates made to this document will appear on the course site as they are made by the instructors to this document. Announcements will be made in class regarding updates as well.

Target audience

This course is designed to provide honors students with an introduction to conducting a successful research career within a university environment. Students that are interested in pursuing any type of undergraduate research project are encouraged to enroll. Foundations in literature searching, presentation skills, writing skills, and being an transdisciplinary, collaborative researcher will be discussed.

Textbook

"How to be a Researcher: A Strategic Guide for Academic Success" (ISBN: 978-1138917309) will be used for this class and readings will be discussed in-class as well as in your final reflection. You can access a copy of this textbook through the course site. Documents containing information about useful writing and presenting tips and rubrics for grading will be provided via the course site. Journal articles are available online, through the University Libraries system. If you have any questions or are unable to access journal articles, ask one of the instructors for help. You are encouraged to dive into the background literature of your project and that will require reading many scholarly, peer-reviewed journal articles.

Concepts that will be explored in this course include:

1. What are the current questions posed in your research field of interest?
2. What are common approaches to solving questions in your field of interest? What resources does VT provide for assistance?
3. What are the small, medium, and large implications of your research topic?
4. What are the ethical concerns for the research topic? How will you address these concerns?
5. What does the current body of literature say about your topic? How will you handle the literature and synthesize it into a concise, clear presentation?
6. How do you envision your approach to solving your research question? Consider grant funding, data management, and ethics of working in communities/with individuals among your topics.
7. What are some potential pitfalls of working on this project and how will you manage them?

Assignment	Percentage of total grade
Final Paper Poster Presentation	35%
Course participation and engagement (Participation, weekly assignments, and peer evaluations included in this portion of the grade)	50%
Reflection and Future Directions	15%

Agenda

Week	Agenda item	Assigned task	Due assignments
1	Introduction to course	Literature review, proposal, poster presentation (final semester deliverables) Read chapters 1 & 2	N/A
2	Defining areas of research interest and working on transdisciplinary teams	Define research topics and form research groups	N/A
2	Becoming a Researcher	N/A	Chapters 1 & 2
3	Roundtable discussion of research topics	N/A	Research project topics and question
3	Finding scholarly literature	Citation list	N/A
4	Managing and organizing information, citation managers	Read chapter 5	Finding Scholarly literature assignment
4	Predatory reading, discussion of research article	Group summary of paper reviewed in class	N/A
5	Annotated bibliography	Annotated bibliography (2 sources per group member)	Citation list Group summary of paper
5	Understanding data	Summary paragraph for annotation	N/A
6	Using data and information ethically	Ethical issues to consider (writing prompt)	N/A
6	Ethical research practices, conflict of interest, and intellectual property	Mid-semester peer evaluations Read chapter 6	N/A
7	Research collaboration and inter/multi/transdisciplinary research	Read chapter 4	Ethical issues to consider
7	Research funding; roadblocks and how to address problems	Outline of paper Read chapter 3	N/A
8	Project management and protocol design Introduce abstracts	Abstract	Annotated bibliography Mid-semester peer evaluations
8	Work session: outlines and questions for instructors	N/A	Outline of paper (due at end of class)
9	Writing appropriately for your field	N/A	N/A
9	Work session: abstracts and question for instructors	N/A	Abstract (due at end of class)

10	Writing successful conference proposals Critique of abstracts	N/A	N/A
10	Creating effective research posters	N/A	N/A
11	Creating research figures	Critique example research posters and figures	N/A
11	Work session	N/A	N/A
12	Work session	N/A	Critique example research posters and figures
12	Data visualization	N/A	N/A
13	Work session: group work, critique, question for instructors	N/A	Poster and paper rough drafts (optional)
13	Work session: group work, critique, question for instructors	N/A	N/A
14	Presentation skills and formatting	End of semester peer evaluations	N/A
14	Critique of posters	N/A	Rough draft of poster Final paper
15	Work session	N/A	N/A
15	Honors Research Practices Poster Symposium	N/A	Peer evaluations Poster

Appendix B

Sample rubrics used in the course for some of the final assignments are included below. This appendix also includes the writing prompts used at the end of the course as a final reflection of the learning experience. The prompts were evaluated based on completeness of answer and if the question was addressed in the response. Scoring accounted for variations in interpretation of prompt questions.

Annotated bibliography (100 points total)

Criteria	Points
Did the document include a title that effectively describes the research topic?	5
Did the group appropriately synthesize all of their articles in the summary paragraph?	20
Did the group use the appropriate in-text citation format in the summary paragraph?	5
Did the group use appropriate grammar, spelling, and syntax in the summary paragraph?	5
Did the group use scholarly, peer reviewed primary source journal articles?	15
Did the group use articles published within the last 10 years? If older articles were required, did the group explain the necessity of the older text?	5
Did each cited source include a properly formatted reference listing preceding each citation annotation?	15
Did each annotation include enough information to establish the authority of at least the primary author and validity of the source material?	20
Does each annotation include a statement of why this source informs the research topic, and an assessment of how it complements the other cited works?	10

Final poster rubric (100 points total)

Criteria	Points
Coverage of topic – Poster sufficiently covers the elements of the research proposal (background, methods, expected outcomes, pitfalls and alternatives, potential conclusions)	20
Use of graphics – Poster includes illustrations to show key elements of the project instead of words (where appropriate)	15
Organization – Elements of the poster are well organized and clearly show thought progression and logic	15
Layout and design – The layout and formatting make the contents of the poster easy to view, read, and understand	20
Sources – Includes subset of cited literature for key background information included on the poster	5
Grammar and spelling	10
Presentation and answering of questions (symposium)	15

Final reflection prompts

1. Did you find any aspects, activities, or assignments in the course challenging? What was the challenging aspect and how did you handle that challenge?
2. Did you find any aspects, activities, or assignments in the course overly easy? What was the easy aspect and why was that activity easy for you?
3. Have you been able to apply any skills or knowledge gained in this course in your in-major course work? Which skills/knowledge and how did you use that information?
4. Think about what made you successful in this course and the challenges, both big and small, that you may have had to overcome. What advice would you give to the next cohort of students about this course and how to be successful in it?
5. How might you use some of the skills, information, or experiences from the course in your future career? Please describe what you envision your future job to be and how you would apply something from the course.

Open Pedagogical Design for Graduate Student Internships, A New Collaborative Model

LAURIE N. TAYLOR AND BRIAN KEITH

Authors

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- [Brian W. Keith](#), University of Florida

Project Overview

Institution: [University of Florida](#)

Institution Type: public, research, land-grant, undergraduate, postgraduate

Project Discipline: Graduate Level, Multi-Disciplinary

Project Outcome: student-designed library internships

Tools Used: Institutional Repository

Resources Included in Chapter:

- Internship Program Guidelines
- Internship Application Template

Introduction

Institutional Background & Context

The University of Florida (UF) is an enormous public, land-grant, sea-grant, and space-grant institution (16 colleges, over 52,000 students, over 2,000 acres for the main campus with offices in every county in Florida) and serves as the only Association of American Universities member in Florida. Logically then, UF's libraries serve as the largest information network in the state of Florida, and its communities expect maximum information access and operations and facilities that best support UF's massive scale. At the same time, libraries are adjusting to evolving academic and research environments. These adjustments require new technologies and services, and new ways of working. As a result, we need professional expertise and abilities from multiple disciplines.

Concurrently, the declining market for tenure-track academic positions and intense competition for other professional positions, particularly at the entry level, are challenging graduate students and their programs. Students need exposure to alternative careers to expand their professional horizons in addition to opportunities to gain marketable work experience and skills.

To address each of these issues in creative ways, collaborators within the libraries and in teaching departments came together to develop a new internship program tailored to graduate students.

In our experience as teachers, we design our classes to ensure students gain skills, portable knowledge, and experience in communication and collaboration as part of this work. As administrators in the libraries with broader programmatic responsibilities and leadership roles, we have also worked with student volunteers and interns. In these previous processes, we often saw fantastic work and learning outcomes for students. We also observed tremendous benefits to the internship directors in the libraries from supports for onboarding and orientation for the interns; support for their needs to best develop the internship and when problems arose; and for the overall outcomes and outputs from the internships with a more stable and simpler process for their work. At the same time, we saw uneven support for the internship directors, where too often people had to create orientations, seek grants to provide funding, and invest intensive work in addition to the work of leading and mentoring interns. The prior ad-hoc approach to internships disadvantaged potential directors with the additional work requirements. Internships often lacked consistent supports, experiences and well-defined learning and experiential outcomes for interns as workers and as students.

Within the nexus of library and graduate student needs, the innovative Smathers Graduate Student Internship Program remakes graduate student internships within the libraries through a design based on collaboration with teaching department faculty and library faculty. Through this program, launched in 2015, librarians propose and lead internships, based upon identified and specific needs for projects within the library, in collaboration with teaching faculty. With a new model for an institutionally-integrated, formalized program, the structures and process are enabling outcomes for interns, internship directors, and collaborators, with final work that can be showcased publicly by students and that benefits the library and its communities.

The program follows open pedagogical design. We ascribe three major considerations to this approach: flexibility, formal structures to support transparency and procedural justice, and openly available work produced by and for students.

Open Pedagogy & Critical Pedagogy

As two of the leaders creating the Smathers Library Graduate Internship Program, and as feminists, we developed a program oriented to the problems and needs facing libraries, graduate students, and academia more broadly. As two individuals, we are oriented and align our work with Open Pedagogy because of our experiences as teachers at the

community college and university level, and as students, professionals, and workers; and this joins with the wealth of experience contributed by others on the Internship Program Committee.

As Robin Derosa and Rajiv Jhangiani (2017) discussed, *Open Pedagogy* has been defined for many years as an approach to teaching that relates to other pedagogies: "we merge OER advocacy with the kinds of pedagogical approaches that focus on collaboration, connection, diversity, democracy, and critical assessments of educational tools and structures, we can begin to understand the breadth and power of Open Pedagogy as a guiding praxis" ("Open Pedagogy"). Open Pedagogy is in direct alignment with the values of higher education and feminism; values which are threatened with the current privatization of higher education. By privatization, we mean the shift from societal support for education as a public program in support of the public good to a market-controlled, individual good, with the removal of public funds and support, as well as the removal of the expectation for community positive impacts from education. As Christopher Newfield (2016) explains, the greatest value of higher education is for the community and in nonmarket and social benefits. Yet, the shift to privatization forces students and institutions to focus on individual concerns and "the maximization of their own economic self-interest" because they have to when: "The converting of public funding into higher tuition focuses the student on assuring her future income to cover higher costs and debt" (p. 30). This shift "involves redefining the educated person....reducing the full range of personal goals to the economic. Most forms of individual progress are non-economic, to become happier, clearer about the meaning of one's own life, less emotionally confused, more creative, more coherently prepared for meaningful work" (p. 30). As teachers, our pedagogical work is deeply informed by our professional and personal ethics where we seek to support our students, including for their very real economic needs as well as to counter the devolutionary cycle of privatization of higher education. Our work thus includes finding ways to support our students (and colleagues and communities) as individuals and as members of our collective communities and society and positioning them to attain future goals and accomplishments.

Our perspectives are framed in the tradition of liberal education, which is supported through critical pedagogy. Russell Kirk (2007) explains the primary purpose of a liberal education to be "the cultivation of the person's own intellect and imagination, for the person's own sake...ordering and integrating of knowledge for the benefit of the free person—as contrasted with technical or professional schooling" (para. 3, para. 1). Kirk's alternative conservative perspective argues a contrasting view that "genuine education is something higher than an instrument of public policy. True education is meant to develop the individual human being, the person, rather than to serve the state" (para. 3). Open pedagogical design offers the opportunity to engage with pedagogy, students, and intellectual work in ways that further the purpose of liberal education.

Of critical pedagogy, Sabrina Billings (2019) states:

> Critical Pedagogy is an educational theory based on the idea that schools typically serve the interests of those who have power in a society by, usually unintentionally, perpetuating unquestioned norms for relationships, expectations, and behaviors. In order to combat these taken-for-granted biases in schools, teachers and students must constantly question their world, both inside and outside the classroom. (para. 3)

Thus, critical pedagogy offers the opportunity to build and model a better world which actualizes autonomy and interdependence, freedom and responsibility, and democracy and participation to uplift individual students for their immediate needs and our community needs to build capacity for procedural justice within our institutions and extending beyond. Procedural justice refers to the idea of fairness in the processes that resolve disputes and allocate resources (Cropanzano& Randall, 1993), and is thus an inherent consideration in designing the educational framework and overall work processes for Open Pedagogy.

Considering Open Pedagogy as a full praxis allows the focus to include OER and open resources as well as the related processes, procedures, and systems for collaboration, inclusivity, democracy, and critical evaluation. The Internship Program's use of open pedagogical design draws upon the fullness of Open Pedagogy in implementing open pedagogical design for the immediate work of the internships, internship program, and for the broader impacts and outcomes from the program.

Creating the Graduate Internship Program

We recognized that the libraries' decentralized model needed more structure to ensure students had support and that the workers in the libraries directing the internships had guidance, including articulated standards. Further, for procedural justice and equity, the libraries needed a program that provided systematic, consistent, coherent, and accessible support for potential internship directors and interns, resulting in just and intentional outcomes. At the same time, any new support had to provide for the space to explore that is inherent in mastery learning and mentoring processes. We took these considerations into account in designing the Program.

Collaborators within the libraries and in teaching departments came together to develop the new internship program. This process had to be as transparent as possible to gather feedback and insight to best develop the program, ensuring that the program could meet all needs. In developing the program based on these considerations, collaborators defined core goals:

- Students need a portfolio of work experience based on the application of their discipline-based expertise, collaborative work experience, skill development, paid work, collaborators, and colleagues
- Library faculty need collaborators in teaching departments, collaborators for their own work, and collaborators to support students together; opportunities to change campus culture and foster new relationships through collaboration that is deeply grounded in local expertise and practices; programmatic supports for students as workers and for student learning; and, funding opportunities for paying student workers a fair wage
- Teaching faculty need collaborators in the libraries, collaborators for their own work, collaborators to support students, opportunities to change campus culture and foster new relationships through collaboration that is deeply grounded in local expertise and practices, programmatic supports for students as workers and for student learning, and funding opportunities for paying student workers a fair wage.

The libraries created the Program to address these needs, and to provide the apparatus to facilitate collaboration premised on the university as a system for individual attainment, economic and otherwise, and societal benefit.

To ensure immediate and ongoing support, the libraries started by creating an Internship Program Committee to support the Program. The committee, in consultation with collaborators within and external to the libraries then developed the program materials: program guidelines ("Program guidelines"), application template ("Application template"), committee listing ("Committee"), and email list for questions.

The committee created the timelines and processes wherein the committee solicits proposals twice a year and referees the proposals to ensure that the project best supports the internship director in the libraries, co-director from a teaching department, and the student.

The libraries award the internships via a competitive and iterative process. The outcome for the student must include an open learning experience (e.g., structured with learning outcomes and deliverables in the internship plan, and finalized with the student, based on the student's needs) and a "cv-worthy" accomplishment (e.g., a completed research project with information openly available online for the student to cite and reference in their CV; online exhibits with the student as the named designer). The Internship Program Committee, comprised of library faculty, evaluates each internship proposal according to established criteria, which include benefits to the student (e.g., experience with tangible work products and credit related to developing and launching a marketing program with resources for the full process), teaching faculty collaborator, and internship director (the library professional managing the internship). The focus of each internship is unique, having been conceived of by the faculty partners, but it becomes clearly articulated through this supportive peer-led process. Within this flexible framework, internships take a variety of approaches, and result in various outputs and outcomes relevant to the specific internship work and stakeholders. The Program requires learning outcomes in the proposals, with these providing space for open pedagogical design oriented towards outcomes.

The committee designed the review process to be iterative and supportive. After proposals are submitted, the

committee meets and discusses the proposals, and then shares questions, comments and suggestions with the potential internship director who then has the opportunity to revise and refine the proposal, and then submit their final version.

Committee members are available to discuss proposals prior and during the submission process, and deliver regular presentations on the Program to engage in productive dialogue. The committee uses the explicitly written and openly available evaluative criteria for evaluating proposals ("Program Guidelines") to ensure transparency (and fairness) for the evaluative process. Additionally, the program requires that all awarded proposals be posted for Open Access for worldwide access through UF's Institutional Repository, to serve as examples for others in developing internship proposals and to promote the work of each project.

Once an intern is recruited for a project, the work processes and learning outcomes are finalized through collaboration with the students. Interns cap each semester by presenting the results of their projects to the libraries and to larger audiences relevant to the project such as the impacted academic unit.

This work in program design and development, and documentation creation, along with establishing the peer support model was time consuming and thus represented a challenge. However, design, documentation, and the supportive review process are necessary to afford space for open pedagogical design, where different internship directors, collaborators, students, and the projects themselves have vastly different needs. Further, the program supports internships designed to cover one, two, or three semesters, and so the goals can vary dramatically based on this scope. Whether the project is for one, two, or three semesters, the proposals require a plan of activities for each semester. The application template also includes required sections for goals, objectives, deliverables, learning outcomes, and a section explaining the benefits, for each stakeholder: the intern, libraries, and collaborating academic unit. The program framework to support open pedagogical design includes:

- the template for the proposal
- program design with required collaborators and commitments from stakeholders
- program support with the committee comprised of experts in the libraries for directing internships and administration
- supportive review and development processes
- all program materials as Open Access
- all prior awarded internship proposals as Open Access
- student-produced resources as Open Access whenever applicable

With these to support a flexible structure, each internship could be uniquely customized to meet the needs for student learning and for the project. While each faculty team might propose very different projects and goals, the program provides a framework to ensure the open pedagogical design aligns with the goals and needs of all stakeholders.

With the open pedagogical design for each internship project proposal, the student learning outcomes and project deliverables, again, vary substantially across projects. The program requires that all interns deliver a public presentation, which may be promoted mainly within the libraries and the collaborating teaching department or more broadly. The public presentation provides the intern with the opportunity to share about the project work and results, in their own words, and relying on their academic discipline's perspectives. It also provides attendees with the opportunity to learn about and consider different project examples and methodologies.

Project Examples

For example, librarians Hélène Huet and April Hines collaborated with faculty member Christopher McCarty (Anthropology Department), on a graduate internship in Visual Anthropology (2018). They designed the internship to provide an opportunity for a graduate student in visual anthropology to apply their methods and theory "to assist library staff in better understanding how students view and utilize library spaces and resources." In this collaboration, thus,

the library is part of a research team with the intern, wherein the project provides a successful means for reciprocal gains. The libraries sought out this opportunity to better assess current work, and to inform future efforts. The libraries identified the need with hundreds and thousands of images of the libraries posted on social media using library hashtags, and with the libraries lacking a way to engage or work from this significant information and feedback resource. The team hired the intern, Hannah Toombs, to analyze and code photographs based on themes, and to conduct a focus group session to gain insight. The full team, in collaboration with the intern, used the applied work of the internship to develop a report that analyzed trends and themes (e.g., students describing and depicting the library as their first/main home, students describing and depicting the library as a work and a social space, and a space to be seen) as they specifically relate to the local UF context, with the report then informing the libraries for regular assessment needs, both as related to shared trends and unique local circumstances. Toombs utilized the internship to apply what she had learned in classes on Visual Anthropology, gain experience in presenting, and to learn about libraries and community or client relations.

Because the Program supports open pedagogical design, the examples all vary widely in theme and process for the specific work, while all are also supported by the overall framework. For example, librarian Colleen Seale led the proposal for an "Internship in expanding affordable UF initiatives on campus" for developing more Open Educational Resources (OER) at UF (2019). This ambitious internship is still in process, as of our writing this chapter. The internship is designed to support a graduate student in gaining "outreach and marketing skills, knowledge related to affordable resources in higher education and to exercise their own creativity." Further, the internship is specifically to support Affordable UF. The Affordable UF initiative seeks to increase student learning and success by providing affordable access to education through student access to quality, reasonably priced course materials, and by raising awareness of textbook affordability issues and providing support and guidance for UF faculty seeking to address these issues in their courses. The internship includes the creation of a new web portal, and social media work. Additionally, the intern is working with campus stakeholders to help develop a methodology to track OER use and adoption across campus, calculate savings, and disseminate this information to the broader campus community. This work is in concert with collaborators at UF and with statewide groups who are developing and coordinating support for OER.

Conclusion

The Smathers Libraries Graduate Internship Program serves as a case or model for open pedagogical design with resulting student-developed projects that are openly accessible online. The Program also fills the connected gaps in libraries for expertise and in graduate education for paid professional internships. It transforms the library into a career laboratory and professional learning space for meeting reciprocal needs. In doing so, it maximizes benefits for graduate students, the libraries and their faculty, and teaching department collaborators.

As of January 2020, the program has served 40 students for 65 semesters of internships (multiple students each semester), with funding totaling over $155,000, with foci such as: Public Relations; Preservation; 3D printing; Data Management; Archives and Wikipedia; Collaborative Grant Seeking; Assessment; Digital Humanities; Digital Pedagogy; Digital Scholarship; Instructional Design; and Exhibits ("Awarded internships"). In large part because of the open pedagogical design, these internships resulted in cultural change within the libraries and transformative partnerships with academic units.

For outcomes from the Graduate Internship Program, multiple former graduate student interns—who are pursuing MLIS, MA, MS, PhD, and other types of degrees—have accepted faculty or professional positions in libraries and academic institutions.

The Smathers Library Graduate Internship Program achieved a highly successful open pedagogical design because of the combination of flexibility and structure: the team designed the program to be flexible enough to support the diverse array of work activities, with this flexibility supported in a formal program structure with discrete elements and open processes. The critical learning outcomes of the unique internships are well-defined and articulated in advance

as part of the proposal development, and then students are selected with these defined. The process is flexible based on the student and their skills and experience. Further, the program is designed to best support individual needs, transformative collaboration, and the true community and cultural work that recognizes and supports a world that extends beyond individual economic outcomes.

As a result of the successful graduate internship program, the Smathers Libraries Undergraduate Student Fellowship was conceived based upon a longstanding desire to enhance diversity in the field of librarianship. This new program, being piloted in 2019-2020, will connect current Smathers student employees with opportunities to learn more about the work of academic libraries while enhancing their personal skills, knowledge, and abilities. This new undergraduate fellowship program has been created to offer opportunities to expose student employees, including those from under-represented groups, to career opportunities in academic and research libraries – with the goal of contributing to diversity, equity, inclusion, and awareness. The paid fellowships will be hosted by library units. Unlike the internships which are uniquely developed prior to the selection of the intern, the fellowships will be individualized to reflect the interests and aspirations of the awardee student. This is a student-centered, interest and aspiration-driven program. It continues to expand the library's role as a career laboratory and professional learning space, and maximizes benefits for students. An initial pilot fellowship will provide the undergraduate student with experience with social media management, account analysis, and methods for engagement and outreach to support DEI, including for bilingual and Spanish-language postings on Latin American and Caribbean related content, programming, and other areas for engagement. This impactful work, directed by the libraries' social media staff, will enhance the student's skills to succeed in a variety of careers, including academic careers in libraries and in research.

The Smathers Library Graduate Internship Program itself continues to evolve with feedback from interns, internship directors, external collaborators, and library administration. For immediate benefits and ongoing development for procedural justice, all program materials are openly available online, including, as applicable, results of the internship projects. As leaders for the Program, we are actively seeking collaborators in other libraries who are planning or administering paid internship programs so that we can share experiences and develop our community of practice.

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix

A. Internship Program Guidelines
B. Internship Application Template
C. Internship Committee
D. Awarded Internships

Adventures in a Connectivist MOOC on Open Learning

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Author

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Project Overview

Project Discipline: Professional Development

Project Outcome: cMOOC

Tools Used: Google Hangout, Virtually Connecting, Twitter, Blogs, RSS

This chapter describes a librarian's experience working with teaching faculty to create a program to support faculty development through an online Hub website and connectivist Massive Open Online Course (cMOOC). A cMOOC is a particular type of MOOC, grounded in connectivist principles where learners co-create knowledge and connect through social media such as blogs and social networks (McCauley, Stewart, Siemens, & Cormier, 2010). Initially conceived as part of a program of the Association of American Colleges & Universities (AAC&U), the Open Learning cMOOC concept continued beyond the seed funding from the Association for another two years thanks to the dedication of a small steering committee of faculty from a variety of institutions in Virginia. This chapter demonstrates how a connectivist MOOC and innovation hub website provided a robust environment for professional development over the course of three years. The story reveals how a librarian was able to contribute to such a project, and eventually step up to lead the cMOOC in its final iteration.

The Association of American Colleges & Universities (AAC&U) is committed to supporting liberal education through advocacy and programming. One of its cornerstone programs over the past decade has been its [LEAP States Initiative]() (AAC&U, n.d.-b). According to the Liberal Education and America's Promise section of the AAC&U website, the LEAP States Initiative has been serving as a "national public advocacy and campus action initiative" in support of liberal

education since 2005 (AAC&U, n.d.-c). Virginia's participation in the LEAP States Initiative includes both public and private institutions that are members of the State Council of Higher Education for Virginia (SCHEV).

In 2016, AAC&U provided funding to those LEAP states that committed to developing Faculty Collaborative "Hub" projects. According to the AAC&U website, the purpose of the Faculty Collaboratives Hub project was "to launch large-scale collaboration that begins with LEAP outcomes and enables faculty to use the frameworks and tools of an array of connected and aligned projects or initiatives…" (AAC&U, n.d.-a). The Hub was envisioned as a "virtual center with a public URL for communications and community organizing" (AAC&U, n.d.-a), and specifics were further outlined as follows on the Faculty Collaboratives section of the AAC&U website:

1. Easy to find online—with links to it readily available on related sites (a system site, for example)
2. Created as a durable and resilient resource for the state and collaborative
3. Welcoming to all faculty and all educators, using language that is appropriate to the context of the state collaborative and that gives a clear introduction to the larger project
4. Explaining terms of art and acronyms so that visitors will feel welcome and informed
5. Providing information about statewide or collaborative-wide activities or meetings for faculty leadership and learning, both connected to the project or convergent with it
6. Offering social networking tools that facilitate communication, which may include a listserv, a Twitter feed, other news feeds, a blog or blogs, a chat function
7. Presenting a news and information section, brief and cogent
8. Connecting to other important networks in and beyond the state, including other state hubs and AAC&U
9. Housing or connecting to resources for educators in the state for collective impact
10. Striving to be visually attractive and inviting, creative and playful
11. Identifying the key participants—the liaison, hub director, and fellows

(AAC&U, n.d.-a)

Virginia's Faculty Collaboratives Hub

In Virginia, Dr. Gardner Campbell, Associate Professor of English at Virginia Commonwealth University and Vice Provost for Learning Innovation and Student Success (at the time), was selected by AAC&U to lead the state's efforts, serving in the role of Hub Director. Campbell put together a small steering committee of teaching faculty from other Virginia public universities representing a broad range of disciplines. These included Dr. Stephanie Blackmon, Associate Professor of Education at William & Mary, Dr. Steve Greenlaw, Professor of Economics at the University of Mary Washington, and Dr. Amy Nelson, Associate Professor of History at Virginia Tech who were joined by staff at SCHEV from areas representing open initiatives and assessment. SCHEV administered the funds from AAC&U and assisted with an assessment of the project. This group formed the Faculty Collaboratives Steering Committee for Virginia and was connected—through AAC&U—to Faculty Collaboratives projects from other states. Open education was identified by the steering committee as a viable topic for the Virginia Faculty Collaboratives project due to the strong interest across the state in efforts tied to the movement. Virginia already had a state level committee on Open Education. Open Educational Resources (OER) and open access were already well integrated by the academic libraries across the state.

Open Access or OER are often the gateways to a broader conversation about what it means to be "open": to teach in the open, to work in the open, to learn in the open, and to develop a professional network or a personal learning network in the open. This broader set of pedagogical approaches is referred to as Open Education, or even more broadly Open Learning. SCHEV was already focused on open initiatives and the faculty on the steering committee were committed to and experienced with a variety of aspects of Open Education. Open Learning was identified as a timely subject for the Virginia Faculty Collaboratives project and a learning-by-doing approach was agreed upon by the steering committee.

Connectivist Learning and the Planning of a cMOOC

The Virginia Faculty Collaboratives Steering Committee's vision for the project included a connectivist learning approach that would take advantage of the Web's ability to support and foster the development of social networks and networked information. The influences on the Committee's pedagogical approach are seen in the readings presented in the [Open Learning '17 syllabus](#). The steering committee would not only develop content for an online website with embedded social media feeds but would also design an online course that would serve as a "happening" to generate interest in the "innovation hub" (Campbell & Covington, 2017). The overall experience would build and grow through the experience of participants in the social network that would form around the course event. As Campbell & Covington (2017) described, "the innovation hub would not only collect resources but also produce them. It would be a conversation hub, a learning hub, and a creativity hub."

To generate interest in the Hub, the Virginia Faculty Collaboratives Steering Committee designed a curriculum about Open Learning for a cMOOC, the syllabus for which would be contained within the Hub. In Open Learning '17, cMOOC participants would be expected to blog and tweet during the fourteen-week course, which would follow a traditional semester-long course format, complete with syllabus and readings.

According to Ito et al. (2013), "Connected learning is an educational framework that emphasizes learning experiences that are "socially embedded, interest driven, and oriented toward educational, economic, or political opportunity" (p. 4). As part of the Connected Learning approach, the Steering Committee placed significant emphasis on learner agency in their pedagogical approach in developing the syllabus for the cMOOC. Often multiple readings for a specific day were available to choose from, and alternate activities were included. Participants could select what worked for them on any given day in any week of the syllabus.

With funding from AAC&U that was administered by SCHEV and with guidance by the Faculty Collaboratives Steering Committee, Campbell hired two web developers to build the Hub website. The site prominently features RSS feeds to embed Twitter posts and blog posts from participants. This ensures that the site is constantly refreshing the content through the embedded feeds. In addition, in the original version of the site, a side column was populated by the syndication of tweets with specific hashtags (e.g. #openlearning17 and #faccollab) until Twitter suspended support of this feature. The 2017 version of the Hub site included a menu with links to the syllabus, background information about the project, and a link to AAC&U, along with a list of steering committee members. Using Twitter Tags Explorer, the web developers were able to dynamically display on the website the growth of the network as it occurred. The more active participants show as nodes in the network and during the duration of the cMOOC anyone could see how the networks were evolving in real time. The Tags Explorer was also used to assess how the network grew over time during and beyond the duration of the course.

The hub was well-developed by the fall of 2016 when the Steering Committee decided to expand the committee's membership. Dr. Laura Gogia joined the team to serve as a Connected Learning Coach for the cMOOC. Adding a learning coach was a pedagogical decision intended to address concerns raised in the literature on MOOCs with regard to new learners feeling at sea in a new learning environment. Saadatman & Kumpulainen (2014) suggest holding "MOOC organizers…accountable for orienting students on how to learn within the MOOC" (p. 26). Dr. Gogia developed activities for the cMOOC to engage participants early on and to keep them engaged.

Enter the Librarian

In the fall of 2016, the steering committee decided that it would be beneficial to add a librarian to the project, perhaps driven by their interest in the [Framework for Information Literacy in Higher Education](#) that had been adopted by the Board of the Association of College & Research Libraries in January. Dr. Blackmon (Associate Professor of Education, William & Mary) tapped her network and extended an invitation to me, Sue Erickson, Director of Hofheimer Library at

Virginia Wesleyan University. We had met in the previous year over an impromptu lunch at a pedagogy conference at Virginia Tech and had engaged in a conversation about Open Access. Because I direct a library at one of the independent universities in the state, my addition to the steering committee also served as an opportunity to expand the membership to include representation from a private institution. As a faculty librarian, this opportunity was a welcome addition to my portfolio of professional development and service.

The committee's decision to add a librarian to the Open Learning project is supported by the literature. As Hofhman (2016) has suggested, "modern libraries represent ideal environments for supporting connected learning. They are centers for knowledge creation and sharing, they support self-directed and interest-based learning, and they are inclusive public spaces that bring many different groups together" (p. 11). As I would later learn by attending the Connected Learning Summit in 2018, school media specialists are already active in the connected learning community, but there are few academic librarians involved and connected learning has yet to have much of a foothold in higher education. This gap offers an opportunity for inspiration and influence. Academic librarians could lead the way in helping the higher education community embrace connected learning. As the designers of physical and virtual spaces that support learning and exploration and that promote community dialogue, librarians could have a role in leading in the development of connected learning spaces in our academic communities.

Open Learning '17

In his role as Hub Director, Dr. Gardner Campbell assigned each of the other four faculty members (Blackmon, Erickson, Greenlaw, and Nelson) on the steering committee to direct or co-direct a week or more of the [Open Learning '17 cMOOC syllabus](#), with the responsibility for selecting readings and developing activities for the entire week. Campbell directed several weeks himself and invited other individuals who were part of the steering committee's professional network to direct or co-direct weeks as well. Each week of the syllabus focused on a different topic. Activities for each week typically included a combination of synchronous events (Twitter chats and Google Hangouts) and asynchronous activities (readings, pre-recorded videos, and blogging prompts).

The cMOOC kickoff was a Twitter Chat in which Connected Learning Coach Dr. Gogia asked participants to share their space through video or photo posts. This activity helped participants get to know one another and made the virtual learning experience more tangible and personal.

Figure 1

#openlearning17 Tweet

Lisa Hammershaimb @merryspaniel · Feb 15, 2017

a bit late to the **#openlearning17 space** party because...time zones. :)
Today my workspace includes a co-worker on high alert.

○ 4   ⤶   ♡ 11   ⬆

Note. Open Learning '17 participant's Twitter post during a "share your space" Twitter Chat.

By including content focused on the Web and on the human-computer connection in the cMOOC syllabus for Open Learning '17, Campbell and the steering committee hoped that participants would see the potential for the Web to be a different kind of learning environment, even as they were learning in it themselves. An experiential approach to the structure of the cMOOC was foundational to the pedagogy, and my own journey of learning by doing in OpenLearning '17 had solidified the importance, for me, of that mode of learning for this particular content.

For my role in facilitating part of the learning in the syllabus, I was paired with Maha Bali, Associate Professor of the Practice at the Center for Learning & Teaching at the American University in Cairo, to co-direct the learning for the week on Open Access. This collaboration extended the project's reach into an international arena. Through the use of Google Hangouts for planning meetings and Google Docs for organization, the week was designed as easily as if we had been down the hall from one another.

Bali is the co-founder and co-director of Virtually Connecting, and so an event that the organization was sponsoring was included in the week's activities. Virtually Connecting provides opportunities for individuals to engage in conversations around conference experiences that they cannot attend in person. The Virtually Connecting experience proved to be a pivotal moment for me as a relative newcomer to the concepts of Open Education and open pedagogy. The event that was incorporated into the week's activities was a Virtually Connecting session at the OE Global 2017 conference in Capetown, South Africa. My participation in the Virtually Connecting event solidified my understanding of the Open Education movement and crystallized my desire to support it. It also honed my skills in supporting a synchronous event through managing the Google Hangout chat with participants, including a few who were onsite at the conference. Being able to participate in such a significant global event and connect with many of the movers and

shakers of the movement was an amazing experience and spurred me to engage even more deeply throughout the Open Learning '17 course. The session made me more fully aware of the importance of social networks in fostering this special kind of learning experience and in the development of the international Open Education Movement.

When I began engaging in the cMOOC, I felt confident in my knowledge of Open Educational Resources (OER) and Open Access, but I lacked experience in other areas of Open Learning. I also had little experience with Twitter and blogging, and in some ways faced "imposter syndrome" as I navigated the course as both participant and learning facilitator in a team-teaching environment. As the course progressed, I grew to appreciate the connections I was making through the social networking features incorporated into the course. My engagement with other learners in the cMOOC increased as the course progressed and I gained confidence in my abilities as a learner in this environment that was new to me. I could see my own social networks expanding as I made connections through the course.

I found that my participation in Open Learning '17 varied depending on my other demands. I was a frequent contributor early on (tweeting, blogging, replying to blog posts from other participants), as a result of feeling the responsibility of being a new steering committee member. I also felt like I knew less about Open Learning than my fellow steering committee members, and felt I needed to catch up in terms of experience with connected learning and with topics in open learning that stretched me beyond my comfort zone of open access and OER. A few weeks into the course, I was already visible as a node in the Twitter Tags Explorer and had affectionately been given a "level up" award for "most improved" by way of a tweet with a fun animated GIF from fellow steering committee member, Amy Nelson. I documented this learning experience in my 2017 "Novice to Node" blog post that became a "poster child" story for the transformative power of the OpenLearning '17 experience. My activity waned around week 10, but I responded to the Hub Director's rally call to finish strong and participated more fully in the final weeks. This experience resonates with Daniel Pink's (2018) description in *When* where he explains that some individuals experience a spark at the midpoint of an activity or project, where other participants may have slumped.

Debriefing and Assessment

The steering committee debriefed after the close of the Open Learning '17 cMOOC, in part through an opportunity to present a panel at Old Dominion University's faculty development conference. This event was the first time some of the members met in person. A preliminary assessment of the project, based on analysis of Twitter and blog activity, was presented at the conference. The assessment showed that most participants dropped off midway through the course. Several steering committee members speculated that fourteen weeks was too long for this kind of experience and wondered if participants would be more likely to complete a shorter course, as has been argued by Jordan (2015). Committee members also recognized that participation is challenging to define and assess. While blog posts and tweets can be counted, it is impossible to know how many participants read the readings linked from the syllabus or how many read the blog posts of others but did not comment. Saadatmand and Kumpulainen (2014) refer to this type of participation as "lurking" or "peripheral participation" (p. 25).

Dr. Gogia was further engaged to complete a report on the assessment of the Open Learning '17 experience, which is linked from the Open Learning Hub. According to the report by Gogia (2017), 49 participants were enrolled in OpenLearning '17, meaning that these individuals had registered their blog in order to syndicate it via RSS into the Hub. Most participants were affiliated with colleges and universities in Virginia, where the project was based and had been promoted most heavily; others were from across the continent, and one participant was from outside North America. Participants in the Twitter chats included 365 individuals who were at institutions all over the globe.

Gogia (2017) reported that:

> [a] qualitative analysis of the learning artifacts from the course suggests that at least some participants were able to engage in connected learning, consistently drawing cross-contextual and -disciplinary connections between course readings and their personal knowledge, interests, and experience. Furthermore, at least some

participants moved through and across digital platforms effectively, leveraging the unique affordances of each to explore concepts presented in the course in multi-faceted ways. Finally, participants engaged in highly interactive discussions of the selected readings, leading to negotiated and richly nuanced understandings of content that extended beyond the static course content originally presented.

With the support of his fellow steering committee members, Dr. Greenlaw (Professor of Economics at the University of Mary Washington) sent a follow-up survey to participants who had dropped off the analytics radar before the final week of the cMOOC. He found that most respondents had wanted to continue participating, but other priorities interfered. Some respondents indicated great satisfaction with the portions of the cMOOC they engaged with, indicating that they were happy with what they gained from the experience. This feedback mirrors a description of the "lurker" experience noted by Milligan et al. (2013): "What links all these lurkers is that a cMOOC format works for them–they have the skills to leverage what they want from the course, on their terms."

Open Learning '18

All in all, Open Learning '17 was deemed by the steering committee to be a success and a rich learning experience for participants. Despite the seed funding having been exhausted, the five faculty members (Blackmon, Campbell, Erickson, Greenlaw and Nelson) were committed to building on the success of Open Learning '17 and wanted to close the loop on the assessment of the project by making alterations in a subsequent iteration of the cMOOC. These changes were based on what was learned through the formal assessment, as well as through observations made by the steering committee members.

The four teaching faculty (Blackmon, Campbell, Greenlaw, and Nelson) and the library faculty member (Erickson) agreed to run the cMOOC again in the spring of 2018. This iteration, known as Open Learning '18 would follow a significantly reduced duration (seven weeks) and would focus more on basic components of Open Education, with less focus on an understanding of the Web and computing. I reshaped the week on information literacy to include a conversation with Craig Gibson and Trudi Jacobson, early developers of the Framework. Another conversation was planned with members of the [ACRL Roadshow "Engaging with the ACRL Framework,"](#) a traveling professional development workshop for librarians working with the framework. Both of these Google Hangouts conversations (originally live and now archived on the Hub) were intended to draw librarian participants.

Rather than designating a Connected Learning Coach in this iteration, a new optional pre-cMOOC week was designed and directed by Blackmon in order to provide orientation to, and strategies for, learning in a cMOOC. I was selected by Campbell to serve in a new role, Associate Hub Director, with the hope that this would provide succession planning should the project continue beyond its second iteration. The new role provided me with the opportunity to be more directly involved in developing the structure of the syllabus, and it required that I focus more on facilitating the overall learning experience for other participants and less on my own learning in the cMOOC. The second iteration concluded with a new week on Open Faculty Development.

Now in a leadership role, I took on greater responsibility for promoting the cMOOC course. In the months prior to the start of the cMOOC, I tapped my professional library network to bring more librarians to Open Learning '18 by posting the invitation on listservs and mentioning the cMOOC at statewide meetings and at conferences. Many of the librarians who joined Open Learning '18 expressed anxiety about sharing their experiences openly on a blog, but in their posts, they also seemed to share what I experienced during Open Learning '17 with regard to valuing the human connections made through these social media platforms. I also steered the focus of my professional development for the year toward venues that would offer opportunities to promote the cMOOC and to engage with others in the Open Learning community.

Just one month before the start of Open Learning '18, most of us on the steering committee presented at the [EDUCAUSE Learning Initiative](#) (ELI) Annual Meeting. This proved to be a useful venue for promoting the cMOOC to a

broader audience in higher education, particularly those interested in learning technologies. Our presence at ELI no doubt resulted in the influx of instructional designers participating in this iteration. The presentation received a write-up in the EDUCAUSE Review by Leafstedt (2018), further expanding its reach and capturing my pithy description of the learning experience ("the network is the classroom"), that had reverberated through the Twittersphere. During the presentation, I had explained that the learning happens in and through a decentralized network. Without the network, there is no classroom, in that participants would not have a way to engage with each other in addition to engaging with the readings and activities in the syllabus. To be sure, this "classroom" is unlike any other, with learners working independently (but ideally connecting with each other) across space and time. The Web provides the capacity for learners to connect, and the steering committee used that feature strategically to create a particular kind of learning experience.

I continued to reflect on my own cMOOC experience in Open Learning '17 in a blog post I wrote immediately following the 2018 ELI Annual Meeting. In that post, I expanded further on the importance of being vulnerable and of learner agency in this special learning environment and on the idea that, in a cMOOC, "the network is the classroom." The experiential approach magnifies the opportunity to open up to vulnerability as a learner and to connect with others who may know more or have more experience. At the same time, the experiential approach has the potential to empower the learner that is immersing deeply and sharing boldly with the community of learners. The best way to learn about open learning and connected learning is to be immersed in the network and connecting with ideas and other learners.

Open Learning '19

While the other steering committee members had to drop off due to other obligations, Campbell and I committed to running a third iteration, in which I took the lead as Hub Director fulfilling the promise of the succession planning laid out in the previous course. Blackmon also joined in for portions of the planning and the finale. The opportunity to promote this reprise came early for Campbell and I when we had a session accepted at MIT's Connected Learning Summit (CLS) in August 2018. At CLS, we presented the story of Open Learning '17 and '18, highlighting how concepts from Connected Learning were incorporated into the cMOOC. Connected Learning is most often associated with K-12 learners, so there was interest from the audience in hearing about how the principles could be infused into an experience for adult learners, particularly those working in higher education. The opportunity to promote the upcoming Open Learning '19 cMOOC to an audience of K-12 teachers, instructional designers, and graduate students was a welcome one and through the conference connections, our social networks grew to include educators beyond academia.

For Open Learning '19, the syllabus was further reduced to three weeks out of necessity to keep it manageable. We included the optional pre-cMOOC week that had been designed for Open Learning '18. We wondered, would participants' engagement persist with this shorter duration? For some, it did, but this iteration also saw a similar drop off to the prior ones, despite having invited a few past participants to serve as "greeters" during the pre-cMOOC and first week to welcome new participants. Contrary to Jordan's (2015) findings, the Open Learning cMOOC appeared to follow a similar engagement pattern, regardless of duration. In *When*, Daniel Pink (2018) writes about midpoints explaining that they are either points of slump or spark, where one either loses steam or ramps up activity (p.116). It seems that in most MOOCs, even our short 2019 cMOOC, participants slumped at the midpoint.

In his earlier work, *Drive* (2011), Pink provides insight into motivation, specifically on intrinsic versus extrinsic motivators. Pink argues that in today's world, we are motivated by intrinsic factors and that we are driven by three main factors: autonomy, mastery and purpose. In a learning setting such as the Open Learning cMOOCs, learners have the autonomy to choose an individualized path by selecting readings, viewing archived videos, participating in synchronous activities (Google Hangouts and Twitter chats), and engaging in social activities such as blogging and tweeting. As learners progress through the cMOOC experience they gain mastery through participating in connected learning activities. The experiential emphasis in this learning experience enhances the understanding of what the

learner is reading and viewing because the experiences are directly tied to the content of the course. The Open Learning cMOOC provides a way for learners to tap into a higher purpose by being connected to a larger movement, in this case the Open Education Movement. Perhaps Pink's ideas about the importance of timing and what spurs intrinsic motivation could be combined to address the drop out seen so often in MOOCs, particularly in cMOOCs that require self-directed learning. Further research is needed to understand the relationship between duration, learner motivation, and active participation in MOOCs.

Part of the intentional design of Open Learning '19 was to include more video content, most of which would be organized as synchronous events that would be edited and archived on the Hub. As a result, Campbell and I created the [Open Learning YouTube channel](#), which along with the [Open Learning Hub](#) will continue as resources for anyone interested in the topics covered. Linked from the Hub, the YouTube channel provides a warehouse for Open Learning video content created by steering committee members. Some video content was pre-recorded and edited, but most of it was initially presented as a live activity during the cMOOC and recorded for later editing and posting to the YouTube channel. The [kickoff for Open Learning '19](#) was a video conversation between Campbell and myself where we shared plans for the cMOOC and strategies for newcomers to fully engage in the experience. The final activity for Open Learning '19 was an Open Learning reunion, in which past and present participants of all three iterations of the cMOOC were invited to a [video chat](#) via Zoom to share their experiences. Generating more video content organically emerged as a focus for Open Learning '19. A somewhat unanticipated and happy result of Open Learning in its various iterations is that a large library of interviews with established and emerging experts is now available for anyone to view.

A Librarian's Reflections on a Path to Leading Open Learning

For me, the experience of advancing to Associate Hub Director for Open Learning '18 and to Hub Director for Open Learning '19 made for very different experiences than the initial participation in the cMOOC. Like taking a leadership role in any organization, it resulted in less time on the ground and more time hovering over the experience. I had fewer opportunities to engage fully in the assignments and activities in the syllabus and spent more time facilitating overall participation. It involved more hands-on technical administration of the Hub and more consideration of the presentation of information for participants' ease of use. Stepping up to Hub Director required learning new skills in managing the Hub and tackling the challenges that come with responding to changes in technology. For example, the ability to embed an RSS feed from a Twitter tag was no longer supported by the platform, and so an alternative had to be developed for this section of the Hub site. Thus in this third iteration of the cMOOC, the focus of the learning for me was on devising ways to engage participants and designing a larger learning experience beyond a single week of content. As Hub Director, my focus became thinking about the future and about what kind of legacy the work of the Steering Committee would leave behind. More recently, Cambell and I have discussed how to shape the Hub into a lasting resource and also how to attempt to re-engage the community that formed around the iterations of the Open Learning cMOOCs.

One of the most rewarding experiences for me has been the evolution of my professional network, which now includes individuals around the globe who are prominent in the Open Education Movement, as well as up and comers I will enjoy watching grow as professionals. Thanks to the Open Learning cMOOC experiences and my involvement in promoting the cMOOC and Hub at conferences, my professional network now includes K-12 teachers, gaming developers, instructional designers, educational technologists, higher education administrators, faculty and graduate students, and of course, librarians from all library types. The experience has provided direct access to people like Peter Suber, Director of the Office of Scholarly Communication at Harvard University and world-renowned open access expert, while at the same time has provided me the opportunity to influence the focus of study of a graduate student at one of the doctoral institutions in Virginia. Participation in the activities in the cMOOCs has enabled me to interact with scholars all across the globe through Zoom interviews, Google Hangouts, and Virtually Connecting sessions and has expanded my professional network to a global scale and one that goes well beyond my field of librarianship.

Successes

In terms of quantitative assessment, there were 59 blogs registered with the Hub by the end of Open Learning '17, 32 additional blogs linked during Open Learning '18, and 21 more during Open Learning '19. Clearly, the initial run of the cMOOC garnered the most interest and engagement, however since these figures indicate initial registrations only, they do not capture the number of participants who returned for another try at one of the later iterations of the cMOOC since their blogs were already connected to the Hub.

The diversity of professional backgrounds of those involved in the cMOOC enhanced the overall conversation and contributions through the blog posts, Twitter chats, Zoom conversations and through questions that were asked during the Google Hangouts with experts in a variety of areas within Open Learning.

The members of the steering committee found numerous opportunities to share our experience in developing and participating in the cMOOC. These sharing moments at conferences further expanded the reach of the cMOOC, as well as the social networks of all who are connected to it.

As an experiment, the Open Learning cMOOC has explored ways that faculty development can happen in the open, through a central innovation hub and an ever-evolving network of peers and colleagues connected to open learning, connected learning, and educational technology, including educators at all levels and professionals from other spheres that touch on areas of interest to the emerging community of learners. This type of professional development is largely self-motivated and self-directed, requiring a sustained investment of time and attention. With the Open Learning syllabi archived on the [Open Learning Hub](), a motivated newcomer could follow a structured and flexible path through topics by selecting readings and viewing recordings associated with the cMOOC.

One interesting phenomenon in the later runs of the cMOOC was that there were returning participants. These tended to be previous participants who had dropped out midway and wanted to give the cMOOC another try. [Figure 2]() shows one participant's blog post at the start of Open Learning '19.

Figure 2

Blog Post from an Open Learning '19 Participant

Opening up, one more time

900 words

#openlearning19

I am looking forward to taking part in the "open learning" cMOOC, mediated in part through http://openlearninghub.net/. It has been 2 years since my first participation in this project, in its 2017 iteration. (And, quite frankly, at that time, I was obligated to drop out about halfway through the semester-long process.)

It is a shorter and more intense iteration this time. I'm bringing different strengths and weaknesses to it this time around. But I'm hopeful that I'll be a better and more productive participation this time.

Note. Blog post from an Open Learning '19 participant who returned from a previous iteration of the cMOOC (rrdaniel2, 2019a). Image description is available in the Appendix.

Even more rewarding than the return to the Open Learning '19 cMOOC itself was this participant's later post on how he had continually reflected on the value and complexity of Open through his teaching. He was continuing to reflect on the experience a full four months after the end of Open Learning '19 in a blog post on July 10, 2019. This sustained reflection suggests that the impact of experiences like the Open Learning cMOOC live on and that there would be value in attempting to reconnect learners in the network from time to time. Early research on MOOCs indicated that the connections made in a cMOOC could be lasting:

"The results of a MOOC collaboration may extend far beyond the MOOC itself: the network negotiated is just as important as the topic covered, if not more so. Participation in a MOOC is emergent, fragmented, diffuse, and diverse." (McCauley et al., 2010).

For librarians, participation in a cMOOC can provide an opportunity to expand technical skills and at the same time to expand one's professional network beyond libraries and geographical boundaries. Librarians might also recognize their expertise as they interact with others who are focused on different areas of knowledge and skills. They might see, as I did, how their work fits into a larger educational experience and where natural affinities lie with people who work in other areas of education. Librarians have much to bring to a cMOOC and also much to draw from the experience.

Next steps

The steering committee accomplished its goals of creating a dynamic learning experience and closing the loop on

assessment through multiple iterations of the cMOOC. There are no plans to run the cMOOC again. However, Campbell and I plan to continue using the hashtags previously used for the cMOOC (#OpenLearning17, #OpenLearning18, and #OpenLearning19), as well as #OpenLearningHub, a new hashtag that will attempt to connect followers with the [Open Learning Hub site](#). We may add content to the YouTube channel and the Hub as we create and encounter resources that are relevant to the community of learners. Anyone on social media can continue to use the hashtags and, as long as the technology holds, their blog posts will be syndicated to the Hub. We are also considering creating asynchronous events or Twitter "happenings" annually during Open Education Week.

I hope that the publication and open distribution of this chapter will provide even further reach of the Hub and the Open Learning cMOOC story to an even broader audience. I encourage readers to follow the Twitter hashtags associated with it (#OpenLearning17, #OpenLearning18, #OpenLearning19, and #OpenLearningHub) and to follow @SueErickson10 and @GardnerCampbell on Twitter to see how the learning continues.

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Contact Information

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix

Full text description of Figure2

Opening up, one more time

March 16, 2019 – RRDANIEL2
900 words
#openlearning19

I am looking forward to taking part in the "open learning" cMOOC, mediated in part through http://openlearninghub.net/. It has been 2 years since my first participation in the project, in its 2017 iteration. (And, quite frankly, at that time, I was obligated to drop out about halfway through the semester-long process.)

It is a shorter and more intense iteration this time. I'm bringing different strengths and weaknesses to it this time around. But I'm hopeful that I'll be a better and more productive participant this time.

Invitation to Innovation: Transforming the Argument-Based Research Paper to Multimodal Project

DENISE G. MALLOY AND SARAH SIDDIQUI

Authors

- [Denise G. Malloy, J.D., Ed.D.](#), University of Rochester
- [Sarah Siddiqui](#), University of Rochester

Project Overview

Institution: [University of Rochester](#)

Institution Type: private, research, undergraduate, graduate

Project Discipline: Academic Writing

Project Outcome: public student research presentations

Tools Used: ACRL Framework, Design Thinking, LibGuides

Resources Included in Chapter:

- Course Learning Objectives
- Course Description
- Course Syllabus and Schedule
- Lesson Plan
- Images
- Video

Introduction

At the University of Rochester, all students must satisfy the Primary Writing Requirement (PWR). Although a small number of students request to substitute or transfer a course to fulfill this required course, the vast majority of students take one of the four-credit, theme-based writing courses (WRT 105), typically during their first year of college. The WRT 105 course is offered through the Writing, Speaking, and Argument Program (WSAP) in the fall and spring semesters. Each course theme is unique and developed by the instructor. As a part of developing the course, instructors curate the readings and develop both informal and formal writing assignments to scaffold writing skills. New hires in the WSAP and graduate students who will be teaching in the program are required to take the summer Writing Pedagogy course to provide structure and feedback in the course development process.

Regardless of the theme, each course must meet the [PWR Learning Objectives](#) (see [Appendix A](#) for full text of PWR Learning Objectives) which include effective writing process, critical awareness of one's own rhetorical situation, strength of argument, working with sources, and writer's textual choices. All sections require students to develop their own authentic research question within the course theme and conduct scholarly research. During the semester, students also engage in reflection about the writing process and give, receive peer feedback for drafts of papers, and revise and edit work for a final polished draft. All sections work towards the shared goal of an 8-10 page, argument-based research paper. During the semester, students in WRT 105 produce a total of 18-20 pages of polished writing.

While students demonstrate their research and writing through their written formal assignments which are uploaded on Blackboard, their work is ultimately for a singular audience—the instructor. By transforming their papers into interactive, multimodal presentations, students are able to disseminate their knowledge to a wider academic community. Through generating a unique, student-driven interpretation of their research, students engage more deeply not only with their content, but the academic community as a whole. This allows for students to not just be consumers of information, but also creators of knowledge.

WRT 105 course: Creativity, Innovation, and Imagination

The Four-Paper Model Writing Course

The WRT 105 course Creativity, Innovation, and Imagination was developed to explore a broad array of issues, ideas, and debates related to creativity, innovation, and imagination. The catalogue description, in part, outlines the course as follows:

> *Humans have long been fascinated by the process of creating works of art, writing prose and music, or developing innovative solutions to complex business, scientific, and technological problems. Although unrelated by topic, they share the common theme of harnessing the power of creativity, innovation, and imagination. But what is creativity? Who has it? And who really needs it? ... Formal papers will be developed through a process of self-reflection, peer response, and revision, as you work toward your 8-10 page, argument-based research paper.* ([Appendix B](#)—full course description)

This course was first offered in the fall semester of 2017 and has been offered during the fall and spring semesters as part of the theme-based writing courses in the Writing, Speaking, and Argument Program at the University of Rochester. In the first three semesters of this course, the instructor utilized the four-paper model for the semester, which is framed by four formal writing assignments. The skills developed in each of these assignments built upon one another leading up to the final paper, which was the 8-10 page, argument-based research paper. To further scaffold student learning, 10 informal writing assignments were part of the assignment progression.

For each formal assignment, students turned in a first draft for feedback, but not for a grade. Students worked with

a peer, assigned by the instructor, for one feedback cycle for each paper. In addition, the instructor provided detailed feedback. After the peer and instructor feedback, writers then had the opportunity to revise their work before turning in the final paper for a grade. Students also engaged in reflective writing on their process for each draft and final version of their formal assignments. (See Appendix C for links to Fall 2018 Syllabus and Course Schedule for the four-paper model.)

Transforming the Course to the Three-Paper Model and the Pop-Up Research Presentation

After visiting the WRT 105 pop-up research presentations in Evans Lam Square, located on the first floor of Rush Rhees Library, the instructor decided to explore the possibility of revising her course to the three-paper model. This would allow for collaboration with research librarians and a research presentation opportunity for students. The open floor plan of Evans Lam Square, with mobile furniture and three digital screens, allows flexibility for hosting events and makes Lam Square a perfect spot to hold "pop-up" events (see Fig. 1). Pop-up programs are designed to be unexpected, timely, seemingly spontaneous, time-limited, and focused on a specific purpose. The events are meant to capture the attention of their audiences in new and different ways, leaving attendees with the feeling that they have been a part of something unique.

Figure 1

Pop-Up Session for Class Held in Lam Square—April 25, 2019[1]

The content of the pop-ups relates to a variety of topics, but is aligned with curricula, resources, collections, and library collaborations. Therefore, while the theme may be about a course assignment, the event is open to anyone who happens

1. All student images, media, and video in this chapter were used with express student permission.

to be passing by the area at the time. The increased exposure benefits the library, faculty, and students. As of Fall 2018, the pop-ups organized ranged from informational interviews and conversations about academic honesty to academic "comic cons," showcasing the research done by students for a comics and culture writing class.

In brainstorming sessions with research librarians, the instructor noted that with the four-paper model of Creativity, Innovation, and Imagination, students had wide latitude in the choice of topics that related to the course theme for the 8-10 page research paper. However, the option to transform the research paper into a new modality did not exist. While a short, in-class research presentation gave students the opportunity to share their ideas with their classmates—typically as a PowerPoint slide show—it did not allow them to reimagine their research papers in a new and unique, student-designed format. This reimagination would demonstrate students' understanding of their research paper for a wider audience. By engaging in the process of reimagining their work in a new interactive format, students were able to demonstrate the depth of their understanding and serve as creators of knowledge in alignment with the principles of open pedagogy.

iZone Planning

During the brainstorming sessions, the research librarians also suggested incorporating a class session in the iZone to support, scaffold, and create space for the transformation of student research papers into multimodal projects. The Barbara J. Burger iZone in Rush Rhees Library is an innovation hub and co-working space where students go to explore and imagine ideas for social, cultural, community and economic impact. It is divided into several sections such as large, open spaces for workshops, booths for smaller groups, and closed "project rooms" for medium-sized groups wanting to work in private. At different points during the semester, the staff in iZone organize a variety of talks and brainstorming sessions relating to design-thinking, prototyping, **screw-up nights** and more to inspire innovative thinking and ideation.

The consequent ambience in iZone seemed to be a perfect match for the course theme of Creativity, Innovation, and Imagination. The course instructor and librarians met the iZone staff at the beginning of the semester to plan the session and content.The objective was to introduce the students to the iZone and the concept of pop-ups. In addition, the instructors wanted to involve students in planning for the pop-up event, the setup of Lam Square, the formatting of their presentations, and the promotion of the event.

The goal was to give the students autonomous support for the projects which corresponds with the principles of the Self-determination Theory (SDT). By making students feel that they have a say in what the end product would look like, one can get "higher quality engagement, performance and positive experience" (Ryan & Deci, 2016). This can be achieved by motivating students intrinsically to willingly and actively participate which, per SDT, is sustained by satisfaction of the "basic psychological needs" for "autonomy, competence, and relatedness" (Niemiec & Ryan, 2009).

Giving students the opportunity to transform their research papers into a unique, interactive project fits perfectly with the course themes of creativity, innovation, and imagination. The opportunity to actively reimagine their work gives students ownership and agency over their learning. This transformation was framed by the principles of open pedagogy. According to Conole (as cited in Hegarty), there are five main guiding principles: collaboration, communication, developing collective knowledge, creating new scholarship, and innovation of ideas (Hegarty, 2015, p. 3). Transforming the course in this manner enabled students to actively engage in these five principles as they developed their own research in a new modality.

Several factors played a key role in transforming this course into the three-paper model. In addition to creating the space for students to reimagine their work in a non-textual format, another key consideration was having two rounds of feedback (from their peer team and the instructor) to inform the revision process. The instructor was interested in assessing whether multiple feedback cycles would be more effective in transforming writer-based prose into a reader-based final product. The ten informal assignments from the four-paper model were still utilized in the course to scaffold student learning and skill development. An experiential, hands-on class session in design thinking and prototyping was planned to be held in the iZone in April 2019. During the iZone session, students envisioned and implemented plans for

the pop-up presentation. Students also had the chance to develop multiple iterations of their multimodal projects with time for prototyping. (See Appendix D for links to Spring 2019 Syllabus and Course Schedule for the three-paper model.)

Collaboration with Librarians

In addition to the revisions made to the syllabus (such as holding sessions in iZone), the two collaborating librarians were added to the course Blackboard as Course Builders. This was useful for keeping up with any modifications made to the class schedule/syllabus, and the librarian(s) could post announcements regarding the class preparations in advance. These two librarians were assigned specifically to this instructor and all three sections of her WRT 105 course. The librarians' names, contact information, and links to their respective library pages were also included in the syllabus. A library resource guide, or "libguide" was also created for the class and linked to Blackboard. Having worked with this team in previous semesters, the instructor regularly emphasized the value of consultation with the course librarians during the research process.

   Prior to the first library session, the students had identified one or more areas they were interested in researching. During the class, they were introduced to methods for finding and evaluating relevant resources for their topics using the library website and databases. The two librarians assigned to the class shared various strategies, stressing that research is an iterative process and that based on their search results, the students would be revising their statements into research questions. This ties into the Association of College and Research Libraries' Framework for Information Literacy (American Library Association, 2015), in particular to the concepts of "Searching as Strategic Exploration" and "Research as Inquiry." The complete lesson plan is included in Appendix E, Lesson Plan for Library Day. With the tips learned in this session, the students had some time to think and build on their research before the next session held a month later in iZone. During this period, some students had one-on-one consultations with either librarian to further refine their searches.

Preparing Students for iZone/Scaffolding of Transformation into Multimodal Assignment

After the class started formulating and finalizing arguments for their research papers, discussions related to the transformation of their research into a multimodal presentation for a new audience began. The purpose of the multimodal assignment was for students to contextualize their research in a fashion that would most effectively communicate their argument in a primarily non-textual format. In-class brainstorming sessions allowed students to develop a preliminary working list of possible ideas for transforming their work. During the brainstorming session to conceptualize the non-textual possibilities, students suggested the following: infographics, podcasts, short films, drawings, 3D representations, creating a game, writing and performing a song, and poetry. While the list was not exhaustive, it did provide a framework for student thinking and served as a springboard for ideas for the transformation project. After that session, students were asked to complete an informal writing assignment articulating three possible ideas for transforming their research. In addition, they were asked to write a short argument for each possible choice explaining why that particular modality was best for conveying their argument. In developing their ideas, students were also asked to consider needed materials and the time frame to complete and present the project. The informal writing was to prepare students for the iZone session where they would explore their choices and develop a prototype.

The iZone Session

Figure 2

*Student Teams Working at the Whiteboards in iZone*

After one pre-semester brainstorming meeting with the collaborating librarians and iZone staff, another meeting took place to finalize plans for the iZone class session in April. During the second meeting, the lesson plan was developed. As part of the plan, the group created a facilitation plan for each lesson segment (see Appendix F, Lesson Plan for iZone Class). This approach allowed the iZone staff and the librarians, Kim Davies Hoffman and Sarah Siddiqui, to alternate leading the activities with the instructor circulating through the groups.

On the day of the iZone session, the students were first introduced to a "yes, and" activity by an iZone staff member. This activity is rooted in a design thinking approach; warming up in this way helped the students enter a state of mind that is open to wild ideas and builds off of one another's unique perspectives. This fosters idea generation and creative thinking. At this point the course librarians introduced students to pop-ups and encouraged them to apply the activity to designing a pop-up for showcasing their projects (see Fig. 2).
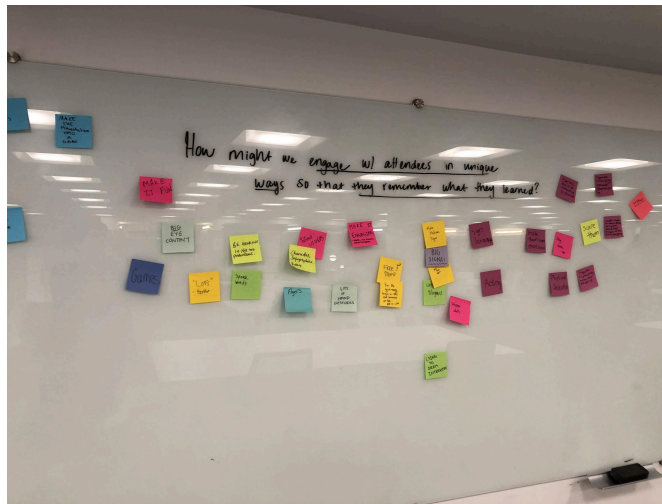
Figure 3

Student-Generated Responses During iZone Session
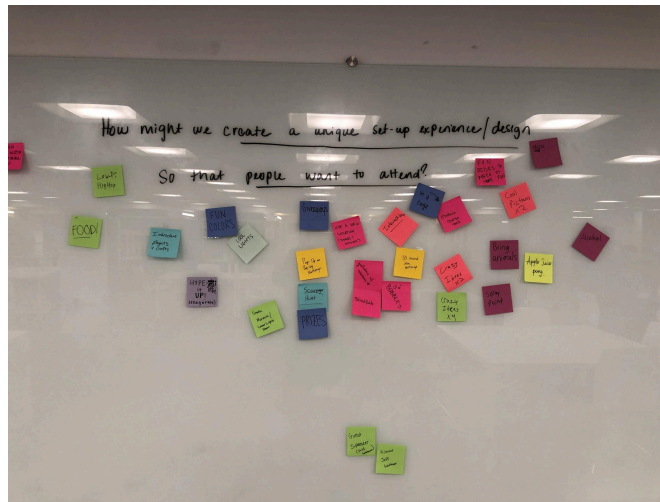
Note. "How might we create a unique setup experience/design so that people want to attend?"

Note. "How might we market our pop-up so that different University of Rochester community members attend?"

Note. "How might we engage with attendees in unique ways so that they remember what they learned?"

Students examined three facets of the planning process which included marketing approaches, setup and design of space, and ways to interact/engage with the audience (see Fig. 3). Students generated ideas on these topics in small groups in a series of timed activities. Next, students turned their attention to their own research and engaged in a series of activities that would explore ideas in five categories of multimodal expression: music, visual arts, physicality, video, and data. Subsequently, the students utilized materials to explore their ideas and develop a prototype (see Fig. 4). With their individual projects in mind, students then revisited the idea of the pop-up to determine what aspects would allow them to showcase their work. The multiple categories of expression gave the students an opportunity to explore new formats for their final presentations and the choice gave ownership. An important aspect of developing the multimodal project was also considering the materials or technology necessary to create the project along with a realistic time frame for doing so. Given the relatively short time frame to go from an idea to a realized project, it was important for students to be realistic in their endeavors to avoid frustration, undue stress, or disappointment. In considering what might be realistic in terms of a timeframe, students were asked to think about the actual scope of their project as well as their individual school and work schedules. Once these issues were considered, students were encouraged to set achievable goals. In terms of project creation, students were asked to consider the cost and availability of materials needed for their projects.

Figure 4

Prototypes for Multimodal Presentations Created During iZone Session
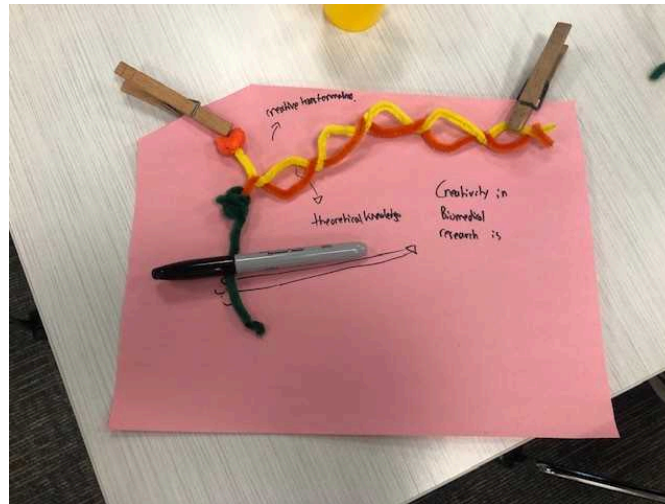
In this way, student knowledge was enhanced and *constructed* based on their expertise; thus the agency or ownership from SDT is combined with the constructivist theory (David, 2015) for autonomous, engaged learning. Giving students the opportunity to choose their own topics allowed their enthusiasm for research and writing to unfold naturally and their intrinsic motivation to flourish. The students were passionate about their topics, and several final presentations during the pop-up were inspired by the session.

The Pop-Up Session

In addition to the content of the pop-up presentations, the student ideas for marketing and space design during the iZone session were also implemented. Based on student input, a colorful flyer announcing the pop-up event was designed by library staff (see Fig. 5). The course librarians shared notes and photographs of student suggestions with a staff member from the Art and Music Library (located in Rush Rhees) who also designs promotional material for library events. The flyer's electronic version was shared with River Campus Libraries' (RCL) digital signage team who added it to the rotating screensavers of upcoming events on public computers across campus. In addition, the flyers were also hung

across campus and the event promoted via RCL's social media (Facebook, Instagram, and Twitter) accounts. Students were also encouraged to share the events with their peers.

Figure 5

Design of Flyer Based on Student Input Development at the iZone Session
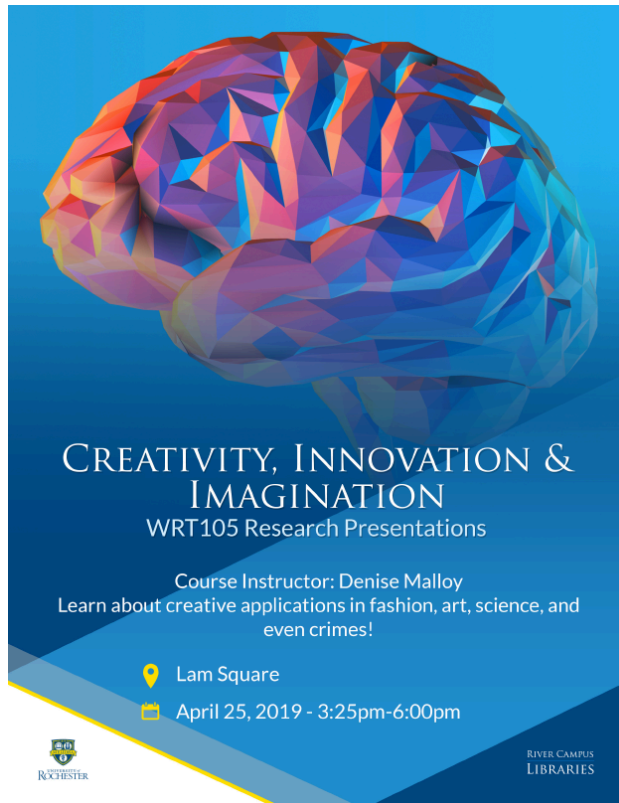
For the event setup, students decided to continue the theme of a colorful presentation to attract visitors, so the tables were laid out with colorful mats and candy. This also served to distinguish the pop-up presentation area and create visual interest. Since most of the students had classes before the pop-up, the librarians and the instructor prepared the space in accordance with the student ideas. More importantly, however, the various formats and rich content of the students' presentations was the big attraction. As seen in the pictures in the next section, many students were inspired by the ideas generated in class and displayed their works with infographics, music videos, posters, games, as well as interactive artworks. Along with tables of different sizes, the setup also included whiteboards, poster stands, and large digital screens.

Selected Student Multimodal Presentations

Figure 6

Selected Student Multimodal Presentations

Note. Maggie Dix's presentation. *Research paper*: Fake for good: The role of creativity prosthetic development and innovation

Note. Michele Martino's presentation. *Research paper*: The effects of creativity on capitalism

Note. Detailed view of Martino's work

Note. John Maqui's presentation. *Research paper*: Battling Societal Stereotypes Through Creative Choices Made in Fashion
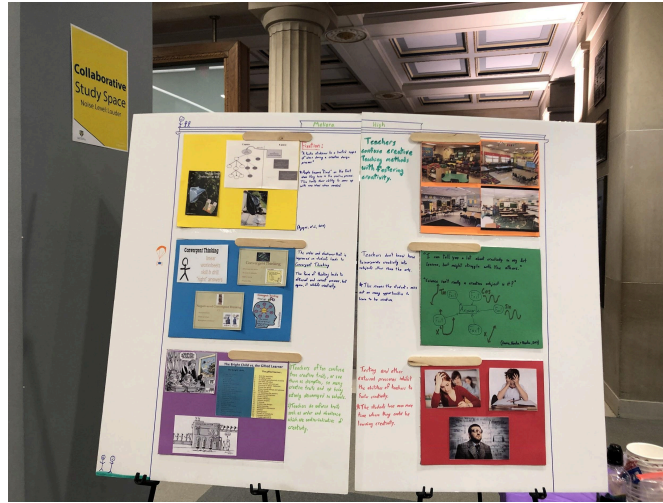
Note. Zach Muench's presentation. *Research paper*: Education: Helping or Hindering Creativity?

Reflections

Student Reflection

With each formal assignment, students are asked to submit a writer's reflection with the first draft and the final version of each paper. These reflections are in response to specific prompts which ask the student to address their rhetorical choices and the research process. At the end of this semester, the instructor asked each member of the class to prepare a written reflection specifically about the process of developing their multimodal assignment. John Maqui volunteered to share his perspectives in a video about his project development (see Fig. 7).

Figure 7

Video with Student Reflection

A YouTube element has been excluded from this version of the text. You can view it online here:
https://opentextbooks.uregina.ca/openpedagogyapproaches/?p=135

Instructor Reflection

Revamping a course over the winter break was challenging and somewhat stressful. However, the impact of the 3-paper model on student writing was dramatic. First, having two drafts gave students the opportunity to deeply explore the differences between writer-based and reader-based writing. Multiple drafts provided the chance to develop ideas thoroughly and meaningfully and bridge the gap to reader-based prose more effectively than one revision alone. Arguably, students should be creating multiple drafts regardless of the format. However, in reality this is not always the case. Having a built-in mechanism to require multiple drafts made a meaningful contribution to the quality of the final version of student work. In addition, this framework gave the instructor a window into how students think about their research and writing process. This allowed the instructor to pivot and adjust the lessons in class to provide supplemental instruction and mini-lessons as needed for tasks such as writing the thesis statement, developing arguments and counter-arguments, or writing introductions and conclusions.

At first, students expressed apprehension about creating a multimodal project. Some students stated that while they were interested in creativity, they "weren't creative." Other students stated that they feared they would not find an interesting way to transform their research. The main concern, however, seemed to center on the fear that the multimodal dimension of the assignment would have a negative impact on their grade. However, after the brainstorming sessions, the iZone class, and subsequent in-class peer team feedback sessions, students were enthusiastic and embraced the process. Several students came up with multiple possibilities and ideas and then expressed that it was difficult to choose. The instructor explained that the assignment would be graded holistically. However, in future

semesters the instructor will ask students to complete a self-assessment of the multimodal project and the instructor will grade the written supplemental memo.

Two issues that will need to be addressed in future semesters include the timing of the iZone session and keeping the multimodal presentations shorter for the pop-up session. During the spring semester, the iZone session was planned for April. This timing was not ideal for having students operationalize their ideas for marketing the pop-up session. Next, while students developed a variety of multimodal presentations that were effective in communicating their research, many were far too long for a 75-minute pop-up session. Ideally, visitors should be able to circulate through the pop-up session during the class period and interact with the majority of the students. As a result, each presentation should be three to four minutes maximum. This experience will inform planning and implementation of future brainstorming and iZone sessions.

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Feedback, suggestions, or conversation about this chapter may be shared via our Rebus Community Discussion Page.

Appendix A

Primary Writing Requirement (PWR) Learning Outcomes

From the University of Rochester's Writing, Speaking, and Argument Program website

WRT 105, WRT 105E, WRT 105 A & B

Across all academic communities, writing, speaking, and argument enable us to discover, develop, test, and communicate our ideas. To help students develop as academic communicators, the Primary Writing Requirement courses build rhetorical knowledge, which involves "the ability to analyze and act on understandings of audiences, purposes, and contexts in creating and comprehending texts" (http://wpacouncil.org/framework).[2] The objectives below explicate the processes, knowledge, practices, and textual features central to effective academic writing. Our aim is to help students develop as thinking, flexible writers.

Effective Writing Processes

The writer, through a variety of assignments,

- Recognizes that all writers–even the most experienced writers–begin with a "working" draft and rely heavily on revision
- Develops a range of strategies for the composing process (e.g., brainstorming, freewriting, mapping, talking, getting feedback from readers, etc.)
- Drafts, reviews, and revises to discover, develop, and refine the writer's ideas
- Draws on reflection and feedback to consider how well the text communicates the writer's intended meaning
- Revises and edits to meet the expectations of the rhetorical situation

Critical Awareness of One's Rhetorical Situation

The writer, through a variety of reflective activities (e.g., written reflections, genre analysis, discussing writing choices in class or in conferences),

- Considers the audience's knowledge, needs, and expectations
- Demonstrates awareness of their strengths and weaknesses as a writer
- Reflects on how writing choices may or may not transfer across disciplines and to different rhetorical situations

The composition

- Is accompanied by written reflection that helps the writer make purposeful choices and manage revision

Strength of Argument

The writer

- Understands academic argument as a process of critical inquiry
- Uses argument to develop a perspective on an issue in the context of the larger academic conversation

2. Council of Writing Program Administrators, 2014.

The composition

- Poses an authentic question or problem
- Develops a debatable thesis that responds to the question or problem
- Uses argument and counterargument to develop, evaluate, and revise the thesis
- Supports argument and counterargument with credible and relevant evidence and sources

Working with Sources

The writer understands the importance of and has gained practice with

- Citing **all** sources used in the composition
- Using all sources honestly and ethically (e.g., scholarly texts, Wikipedia, TED talks, blogs, screenshots, performances, peer contributions, faculty lectures and course materials, etc.)
- Identifying, evaluating, and selecting sources appropriate to the rhetorical situation
- Developing strategies for keeping track of sources and source ideas so that they can be fairly represented and properly cited
- Identifying and using resources that support the research process (e.g., outreach librarians, databases, source management systems)

The composition

- Draws on sources to help motivate and develop a question or problem
- Contributes to an academic conversation through synthesizing, evaluating, and building on others' ideas, while ensuring that the writer's perspective guides the text
- Based on the rhetorical situation, appropriately balances summary and critical analysis of source material
- Uses clear *signals* (e.g., in-text citations, signal phrases) to differentiate the writer's ideas from the source material
- Provides the *pathway* to **all** sources used in the composition (e.g., through citation and bibliographic information)

Writer's Textual Choices

The writer

- Recognizes that writers have choices
- Recognizes that all choices shape the writer's meaning and reader's understanding
- Through reading and writing, has practice identifying, using, and evaluating different rhetorical choices (e.g., organizational structure, language use, genre, and mode)

The composition demonstrates effective rhetorical choices in

- Composition structure (e.g., organization/ordering of sections, paragraphs and sentences; logical flow and topic development; relationship between given and new information; arranging media elements)
- Language use (e.g., personal voice, academic voice, degree of conformity to standard edited English, code-meshing, amount of technical language)

Appendix B

WRT 105: Creativity, Innovation, and Imagination (full course description):

Humans have long been fascinated by the process of creating works of art, writing prose and music, or developing innovative solutions to complex business, scientific, and technological problems. Although unrelated by topic, they share the common theme of harnessing the power of creativity, innovation, and imagination. But what is creativity? Who has it? And who really needs it? In this course, we'll write about questions surrounding creativity, innovation, and imagination through the lens of multiple perspectives – from the arts to engineering. Through readings, TedTalks, and podcasts by Sir Ken Robinson, Mihaly Csikszentmihalyi, Elizabeth Gilbert, and others, we'll look for interdisciplinary themes in creativity. We'll also use writing to explore how others have used the creative process – from The Beatles to Steve Jobs. Formal papers will be developed through a process of self-reflection, peer response, and revision, as you work toward your 8-10 page, argument-based research paper.

Appendix C

- [Syllabus Fall 2018](#)
- [Course schedule Fall 2018](#)

Appendix D

- [Syllabus Spring 2019](#)
- [Course Schedule Spring 2019](#)

Appendix E

- [Lesson plan for library day (Google Doc)](#)

Madeline Hunter Lesson Plan Template

Professor Name: Denise Malloy
  Date/Location: 2/12/2019
  Course: WRT 105
  Number of students: 14/15
  Librarian(s): Kimberly Davies Hoffman, Sarah Siddiqui

Objectives

Students will:

1. Connect main concepts within a research question using Boolean and wildcard logic IN ORDER TO effectively retrieve resources from topically-relevant database(s)
2. Evaluate discovered resources using criteria for scholarly, peer-reviewed and popular resources IN ORDER TO understand the variety of quality and useful materials within the publication and information landscape
3. Combine the themes of various sources to create a summary or topic statement/question IN ORDER TO recognize that scholarship is a conversation between different scholars on a given topic through their publications (your sources)
4. Revise an original research question based upon newly discovered resources IN ORDER TO adopt an iterative approach to the research and writing process

Review

(What students already know.)

Anticipatory Set (5 minutes)

KIM: Upon entering the room and being signaled by instructions on the screen, students will add their current research question/topic into a google doc (an example).

- https://tinyurl.com/Malloy1F2019
- https://tinyurl.com/Malloy2F2019
- https://tinyurl.com/Malloy3F2019

Picking a Topic is Research

So, you already have a research question in mind, but during today's class, we'll dig into some of the sources that might help you support and perhaps even tweak and narrow that question.

Body/Procedure

Model (How will you demonstrate skills?)
   Check for Understanding

Guided Practice (5min)

1. Let's start finding some relevant material for your tentative topics
2. And then we can consider the quality and rigor of the sources you chose.

Introduce 2 methods based on your starting point. Are you still really broad and searching around for a concrete research question or are you pretty clear on the direction where you're heading? Look at our session today as

exploration. Maybe you'll find an idea as you look through a few sources that tailors your question even more than what you walked in with.

    Browse method and targeted topic method
    SARAH: DEMO Article & Books–creativity healing (5 min)
    Limit to articles, peer-reviewed, subject = psychology or medicine, publication date
    KIM: Concept map strategy–video (we will likely demo the concept map live) (10 min)
    Time to search–check off or keep in tabs resources that look good to you. (15 min Time Search)
    Add sources here:

- https://tinyurl.com/Malloy1F2019
- https://tinyurl.com/Malloy2F2019
- https://tinyurl.com/Malloy3F2019

SARAH: Based on what's in your google doc chart, let's begin to evaluate our sources for their quality and rigor. Students look at sources that their successor identified. Using the guide beside you, see if you can figure out if the sources are scholarly and determine some reasons to back up your claim. (Mention this relates to the research journal they are keeping for the class). (10 min eval, depends on how many resources each evals)

Questions before moving on? (5 min discussion)
    SARAH: 2 questions in google doc
    Student fills in last two columns in the google doc for their own topic (10 min)
    With a partner, each student takes 5 minutes to discuss the topic, clarify, and perhaps add more and/or narrow the topic (10 min)

Closure (5 min)

Take away–based on what you found today (only the beginning!), has your research question shifted at all? If so, write down a new question that will get you closer to achieving the next assignment. HOMEWORK–enter newly written topic into google doc beyond class time

Independent Practice

Materials, Resources, & Physical Space

- WRIT 105 LibGuide

Reflection

Appendix F

[iZone lesson plan](iZone-lesson-plan)

Note. Julia's section covered by an iZone staff member, Zoe Wisbey

Table 1

Planning for Pop-Up

Timing	Content	Lead
3:25-3:30 pm (5)	Welcome students to the iZone and provide context for what pops ups are (their purpose, how they function, how they're different).	Kim, Sarah

3:30-3:40 pm (10)	Activity: warm up to YES, AND
	    "When we're getting ready to brainstorm, we need to put ourselves in a state of mind where we are open to wild ideas and where we are building off of one another's unique perspectives/ideas. The #1 rule of brainstorming is: never say no (assume we'll figure out a way to make it work) and build on the ideas of each other."
	    "Summer vacation trip." Kim/Zoe
	    (Problem: Connecting audience to research, with and without constraints)
		iZone staff

3:40-3:55 pm (15)	**Activity: In 3 groups of 5, students will start at one whiteboard, each indicating a key element to pop-up design.**
	    Three whiteboards each with a different prompt:
	
	• How might we market our pop-up so that many different University of Rochester community members attend?
	• How might we create a unique set-up experience/design so that people want to attend?
	• How might we engage with attendees in unique ways so that they remember what they've learned?
	
	"Using that 'yes and' mentality, we're now going to brainstorm creative, out-of-the-box ideas for our pop-up event. When we ring the cowbell that means it's time to rotate to the next whiteboard. Then, your job is to build on the ideas of the team that went before you."
	    Constraints:
	
	• What if we can't use any technology?
	• What if everything had to be silent?
	
	8 minutes for first round; rotate
	    4 minutes for second round; rotate
	    2 minutes for third round
		iZone staff w/help from all

Table 2

Prototyping: Research Transformation to Multimodal

Timing	Content	Lead

3:55-4 pm (5)	Goal of next activities presented, PowerPoint with fill-in-the-blank:
	    "OK, now we're going to shift from thinking about the event itself to thinking about your own ideas for communicating your research. Before we start brainstorming, we each need to individually develop a challenge question/statement to help frame our brainstorming."
	    How might we create a multimodal experience or presentation that helps____*your audience*____ CONNECT with ____*my research topic*____?
		iZone staff

4-4:15 pm (15)	Students are introduced to five categories of multimodal expression • Use of music • Use of visual arts • Use of physicality • Use of video • Use of data **First round**, students get to choose their "go to," the category that speaks to them the most (whether by individual talent or logical connection with the research topic). Begin to develop a prototype. Students within the category are encouraged to brainstorm with each other.	Kim
4:15-4:25 pm (10)	**Second round**, students choose a card from a basket that limits them to a new mode of expression (if they have already worked with this mode, they need to choose again). Begin to develop a prototype. Students within the category are encouraged to brainstorm with each other.	Sarah

Table 3

Sharing and Planning for Pop-Up

Timing	Content	Lead
4:25-4:30 pm (5)	A few students share their ideas	Sarah
4:30-4:40 pm (10)	We revisit the YES, AND planning for the pop-up. Now with some ideas of what the activities could look like in the pop-up (student research turned into multimodal expression), can we re-evaluate the Post-it notes to narrow down specifics of the pop-up?	Kim

[iZone design thinking guide](#)

"What If We Were To Go?": Undergraduates Simulate the Building of an NGO From Theory To Practice

KIMBERLY DAVIES HOFFMAN, ROSE-MARIE CHIERICI, AND AMANDA SPENCE

Authors

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Project Overview

Institution: [SUNY Geneseo](#)

Institution Type: public, liberal arts, undergraduate, postgraduate

Project Discipline: Anthropology

Project Outcome: mock non-governmental organizations (NGOs), student-built websites

Tools Used: WordPress, Weebly, ArcMap

Resources Included in Chapter:

- Course Syllabus
- Course Schedule
- Student Work Examples
- Videos

At the start of this project, I had very little understanding about development work and how many responsibilities we would have in the 10 weeks we were given to organize an NGO. Sitting in a

room full of strangers the first day, none of us really knew how many challenges we would be facing in the upcoming weeks. At that point, the problem seemed simple; we would pick a problem, a country and send a group there to fix it. However, we quickly realized that being a development worker isn't just about taking care of one small problem and moving on; it is about digging deeper than what you see on the surface. As an NGO we decided to learn as much as we could about the people living with the problems we wanted to tackle, understanding the daily challenges they face in everyday life, and asking them what they wanted us to do to help. Throughout the project there were many ups and downs and new questions we had to answer at every step of the process and I learned to differentiate between theory learned in class and actual practice in the field. Working with PROSPER has been an incredibly eye opening experience and I look forward to using the skills I have acquired many times in the future.

—Nazanin Moeini, PROSPER 2014

In 2012, an anthropology professor, Rose-Marie Chierici, and her departmental librarian, Kimberly Davies-Hoffman, embarked on a new kind of course design at the State University of New York (SUNY) at Geneseo.[1] Just as students entering the course were apprehensive about what the semester would bring (as the above student quote suggests), so too were the course instructors. Previous years of trial and error, combined with a pivotal moment in January 2011, prompted the teaching team to take greater chances in course design to facilitate more engaged and authentic student learning, ownership over the content, and motivation to explore uncharted territory—all key elements of open pedagogical design (Open Pedagogy Notebook, n.d.; Sinkinson, 2018). The 2012–2014 course design addressed sound pedagogical theory, assessment of learning, and internal motivations of the instructors to integrate classroom theory with real-world practice.

The ensuing chapter will detail the history of how the anthropology course Third World Development took shape in the spirit of open pedagogical design and practices, pulling from the distinctive but collaborative and complementary teaching approaches of the professor and librarian team. Amanda Spence, a 2014 SUNY Geneseo graduate who enrolled in the course, will reflect on her experience taking the course and how her simulated non-governmental organization (NGO), Mothers Advocating for Reproductive Knowledge (M.A.R.K.), built their project. It is important to all three authors to have this opportunity to document the logistics of the latest iteration of Third World Development (from 2012–2014) as a way to leave their mark on a course that is no longer in existence[2] but can inspire readers of the power that open pedagogical practices can bring to learning design.

1. SUNY Geneseo is regularly celebrated for its excellence in public higher education (e.g., *The Princeton Review*, "Best College" for undergraduate education, 2019; *U.S. News & World Report*, topping "Best Undergraduate Teaching" rankings, 2019; *Kiplinger's Personal Finance*, Top 400 Best College Values, 2019) and Milne Library mirrors that same prestige with its own national awards (e.g., Association of College & Research Libraries (ACRL) Excellence in Academic Libraries Award, 2018; ALA Library Instruction Round Table (LIRT) Innovation in Instruction Award, 2016; ACRL Instruction Section (IS) Innovation Award, 2011).
2. As Third World Development came to a close at the end of Fall 2014, Dr. Chierici was already into her retirement and Davies-Hoffman had accepted a position at the University of Rochester. The course ran one last time in Fall 2015 but not under the direction of the original teaching team.

Prior to the NGO project and related course design

Chierici and Davies-Hoffman had been working together on curricular initiatives that incorporated information literacy skills into course content since the early 2000s. In early January 2011, their focus on content delivery radically changed to be more open-ended and student-driven. Chierici, a Haitian native who has applied her anthropological expertise to community-based development work in Borgne, Haiti, had just returned from a field visit when the 2011 earthquake struck, just days before the start of the spring semester. Chierici decided to scrap the original syllabus for Third World Development in favor of using the disaster as a unique opportunity to engage students in a "real-life," evolving emergency. With input from students, she dedicated her teaching efforts to evaluating the impact of the disaster and potential responses. Chierici and Davies-Hoffman broke the class into teams that each focused on researching specific aspects of disaster response, evaluating relief organizations' efforts, and, based on the students' findings from literature reviews on disaster management, suggested potential, culturally sensitive solutions. This was Chierici's and Davies-Hoffman's first taste of transforming a classroom into a simulated experience with real-world impact. Targeted library instruction sessions introduced the class to search tools that connected the students to sites where information could be accessed in real time (e.g., Twitter, local headline news). The closer collaboration between professor and librarian led the pair to expand this original experience into an ongoing productive partnership and deeper learning for students. It became the catalyst for the NGO course design focused on in this chapter.

The professor's approach

Teaching Applied Anthropology and Development provided Chierici the opportunity to bring her field experience into the classroom and share her work with students. For Chierici, teaching is a two-way process and the classroom a laboratory where knowledge is created when teacher and students engage with the class material together. She used an **experiential** approach in all her classes as a way of demystifying "theory" and demonstrating for students the dynamic interplay between theory and practice (i.e., models and theory guide how we make sense of phenomena, and lived experience, in turn, sharpens theoretical perspectives). This experiential approach was based on the concept of **praxis** developed in Paulo Freire's *Pedagogy of the Oppressed* (1993). Freire's notion of praxis is that critical evaluation of a situation or a problem should be guided by theory as critical before undertaking action and applying findings and solutions. This fits well with an experiential approach to learning that stresses the empowerment of students as critical, informed learners and actors. Nancy Scheper-Hughes developed this notion further in *Death Without Weeping* (1993), where she states that "action without reflection is wrongheaded, reflection without action is self-indulgent" (p. 171). The earthquake in Haiti offered a unique opportunity to make this explicit for students and instructors and test a model of teaching that challenged the traditional "sage on the stage" professor, inviting students to become active participants in the classroom. It was a dynamic yet imperfect experience as the class followed events on the ground in real time, used anthropological theoretical models to understand those events, and suggested solutions to emerging problems.

The librarian's approach

Davies-Hoffman developed her style of and approach to instruction through two pivotal experiences while at SUNY Geneseo. The first involved a graduate-level seminar designed and customized by an education professor who was invited for the specific purpose of training the library's newest hires in 2000 (Argentieri et al., 2003). The group focused on three main pedagogical theories—**behaviorism**, **cognitivism**, and **constructivism**. Davies-Hoffman became particularly impassioned by the latter two theories and leveraged her capacity to take risks in the classroom for the sake

of increasing student engagement and learning. She subscribed wholeheartedly to the idea that each student entered class with rich and diverse learning backgrounds and abilities, and, when placed in a group of peers with a problem to solve, could contribute their strengths and past experiences to learn from each other. Cognitive theory encouraged the librarian to scaffold the various steps students would need to take to solve a given problem, in the form of skills, resources, and adequate time to practice, course-correct, and reflect on the learning. The second major influence to Davies-Hoffman's teaching approach was instilled as she participated in, and later led, a summer camp experience at the college (Davies Hoffman & Norman, 2008). The original camp simulated a crime scene investigation based on stolen artwork, which became the participating instructors' first taste at what **open pedagogical design** could look like. The teaching team was drawn to the idea of leaving the final answer of who committed the theft up to the student groups. Opening up the final answer allowed students to create their own path, invest themselves in the most relevant research and investigation, and, in the end, resolved the instructors' worry that the middle- to high-school students would either "win" or "lose." The ultimate objective was not about getting the right answer, but instead investing oneself into the process of learning, constructing meaning, and defending conclusions.

Course Design

In summer 2012, a seemingly simple question resulted in a course that incited excitement, passion, and internal motivation in both instructors and students. Chierici asked her librarian, "How can I get my students to truly understand the process of development work?" Davies-Hoffman answered with the suggestion, "What if we made them into development workers?" The pair worked through the summer to design a course structure that would require faculty guidance and scaffolding yet be open enough to allow students to find their own path to learning. The original idea of requiring the student teams to focus on a specified list of factors (e.g., medical, financial, educational) gave way to a more authentic process where student teams would decide for themselves the key elements they would need to research in order to propose a final solution. Based on the Spring 2011 experiential coursework related to the Haiti earthquake, the idea of placing students into real-life scenarios required just a small leap of faith from two instructors ready for a new teaching adventure. The idea was that students would collaborate, research, solve problems, make decisions, and create an authentic end product—all the while guided by development anthropological theory. The instructors would figure out key elements of the course design ahead of time, but for the duration of the course the students would ultimately be in charge of their projects.

To simulate the experience of development workers (especially as there was no immediate catastrophe as was the case in 2011), the course centered on the creation of two non-governmental organizations where the approximately 30 enrolled students were split into two groups. (See [Appendix A](#) for the syllabus with course learning outcomes. See [Appendix B](#) for project milestones.) The groups were not assigned a location in the world where they would conduct their research-based work nor were they handed an NGO with a name or mission. All details regarding the formalization of their NGO were left to the student groups who then had the semester to make decisions about the organization they would create. In the words of STEM team leader Melissa Royal, the new NGOs began with a group of "strangers with little idea of where to start" (STEM, 2014). Kristine Hale, a student leader for the PROSPER: Programs for Sustainable Progress through Environmental Recovery NGO (2014) further reflected, "The first day that we were assigned our groups I really had no idea how we were going to make it work. We all sat down and looked at each other with puzzled looks on our faces and just started. We did not even really know what exactly we were looking for but we dove in headfirst. We were given a minimal amount of direction and while at the time that frustrated everyone, I completely understand it and am grateful for it now. It allowed us to grow with our organization and mold it to be exactly what we wanted."

For three sequential fall semesters, the class make-up had a similar profile—a fairly equal balance of upper-level students studying Anthropology and International Relations, with a few students from Biology, Geography, Business, and Languages. A survey on the first day of class routinely highlighted students' life experience in study abroad—those who came to the US to study as well as American students who traveled abroad—previous experience with development work,

and firsthand, personal knowledge of health, economic, and social issues challenging the developing world. Personalities ranged from quiet and reserved to boisterous and dominant. All of these student characteristics were taken into account when assigning students to the two NGOs as they would have to work very closely together for an entire semester. There was no guarantee that all the team members would work well together, but the instructors did their best to balance diverse perspectives, experiences, and personalities. Drawing from past experience with students from her other classes and summer fieldwork, Chierici was able to identify two team leaders per NGO who she believed could get the project started, keep the momentum going, and report weekly to the instructors on challenges, breakthroughs, and successes.

Theory to Practice

As mentioned above, Chierici viewed praxis as critical to teaching Applied Anthropology because it stresses the dynamic interplay between theory and practice and between discussion and active engagement in the formulation of solutions to real-life problems. This idea informed the structure of the course—75-minute sessions on Tuesdays consisted of an even mix of lectures and discussions of theories of development and relevant case studies, and the other 75-minute class meetings on Thursdays allowed for application of theory through "boardroom" experiences. Tuesday sessions took place in the typical classroom setting with Chierici independently leading discussions, while Thursday sessions happened in the library, under Davies-Hoffman's coordination, in a variety of locations based on that week's scheduled activities.[3] The goal was to guide students through obtaining the critical thinking skills they needed to evaluate and make sense of information they gathered through their research. Chierici felt that this model best reflected the reality of doing meaningful development work and prepared students to deal with the often murky situation of professional work.

While required readings incurred small costs for the students,[4] the practical work of research, communication, and webpage design provided an open-access format where resources were free of cost to the NGOs. The first few Thursdays were organized in a more formal fashion so that students could grasp the challenges ahead of them and learn about the variety of resources and skills that could help them come to conclusions. All 30 students would enter a library classroom equipped with desktop computers[5] to engage in brief lessons that encouraged critical thinking and set the stage for various project milestones.

When the NGOs did not have scheduled library sessions, they were holding "boardroom" meetings, with each NGO in a separate location within the library and one instructor per room serving in an observational role. These sessions were run entirely by NGO members, and while the team leaders came prepared with a general agenda, communication among the group was balanced in terms of hearing from a variety of voices. Students quickly learned how to successfully collaborate and organize themselves. Each team set roles, schedules, topics of research, and identified individual skill sets. They found themselves creating something from the bottom up: a simulated non-governmental organization without the direct interference of an authority figure.

3. See Appendix B for the schedule of library lessons that related to project milestones, as well as time spent in the "boardroom" where students could deliberate on their process.
4. See the course syllabus in Appendix A for titles required to purchase; approximately $23 cost per student in paperback texts.
5. At the time when the course ran, Geneseo students were required to have their own laptop/mobile device so the desktop computers were not essential.

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> Not many believe in, or think to run a business without a traditional boss on scene. However, in this class, that is exactly what we do. As a group we're forced to develop trust among each other. It is effective in the sense that it allows team members to be innovative, communicate face to face, and reduces individual stress levels. There's little to no checks and balances, which sometimes minimizes work yet maximizes control. Fortunately we've been working well together and have not experienced any sort of power struggle.
>
> —Amanda Spence, M.A.R.K. 2013

Becoming M.A.R.K.

> It seems to me that [M.A.R.K.] has an interesting dynamic. Everyone in the class consistently puts forth so much effort, and because of that it is easy to forget that this NGO not actually going to be implemented in Guyana. We often have had to stop in the middle of a discussion to remind ourselves not to get caught up in the tiniest of details, because we were focusing on things that may be necessary to focus on for a real NGO, but possibly not entirely necessary for the purpose of our project.
>
> —Jessica Kirkpatrick, M.A.R.K. 2013

Mothers Advocating Reproductive Knowledge (M.A.R.K.) was one of the student-led groups developed during the second-year iteration of Third World Development. In order to create an NGO with limited experience and knowledge,

students had to ask themselves: first, where would we go?; second, what would we focus on?; and then later, what would it be like if we were to go? Students examined a large body of potential issues faced by a wide array of countries—and smaller regions within them—and had to decide, among a multitude of factors, which narrow focus they would pursue. This broad scope of investigation gave students a glimpse at human struggle across the globe and how inequities between countries and within specific regions of countries can cause problems. As teams narrowed in on specific regions, they were careful not to tackle issues of widespread and complex political structures (e.g., human trafficking, universal schooling for girls). As discussed in the Tuesday class sessions, students would want to focus on an issue that a single NGO and its local community could solve together. Through their research toward course milestones for locating a region and identifying an issue to tackle, M.A.R.K. discovered that women in Potaro-Siparuni, Guyana were experiencing high maternal mortality rates, yet medical facilities with the necessary equipment needed for birthing were not within a commutable distance. Furthermore, the location was not receiving much attention from foreign donors. The team's vision veered toward improving maternal health care among women of reproductive age in Potaro-Siparuni, Guyana.

Students determined that research is a matter of knowing how to ask the right questions in order to gain the information desired. When the scholarly literature and published news reports did not satisfy their research needs, M.A.R.K. reached out to personal and professional contacts (via e-mail, Twitter, etc.). The team identified individuals who were doing development work in Potaro-Siparuni, Guyana. Engaging with contacts from Peace Corps and local NGOs gave students the on-the-ground perspective they needed to address the issue they had chosen to research.

After taking a wide-angle view, students defined parameters to determine which services they would provide for their selected communities. Taking a grassroots approach, M.A.R.K.'s proposed solution was to collaborate with local nurses to learn more about the health issues faced by women of reproductive age and to train volunteer community health workers on relevant topics such as vaccination, nutrition, maternal sanitation, and best practices for a healthy pregnancy. M.A.R.K. also suggested offering individual and group counseling for mothers, as well as reproductive health screenings and medical checkups.

During the NGO project, particularly the "boardroom" experience, students were placed into situations where strong communication skills were essential. They found this to be true not only within the classroom but also in the simulated field of development work. International student Miriam van Voornveld from M.A.R.K. wrote, "Just like class, development is about participation. It's about listening to others, trying to understand where they come from and work together on a solution. Not [only] did I learn [this] in this course about 'Third World Development', I learned the importance of group work and communication, about taking different perspectives and learned how interaction could lead to a wonderful outcome" (M.A.R.K., 2013). With few interjections from Chierci and Davies-Hoffman, M.A.R.K. naturally began to delegate tasks to their peers, forming subcommittees for projects including transportation and logistics, digital mapping, and developing a website to track the group's semester-long progress. M.A.R.K. explored the unique, local challenge of geographic hardship. The group found that few maps existed for Potaro-Siparuni, Guyana and the area was often inaccessible by public transportation. These particular challenges led students to seek creative solutions. Student Michelle Graham stated, "I am currently pursuing a double major in anthropology and geography, and being in charge of creating a site map for M.A.R.K. was a great experience because it allowed me to unite both of my interests. I used ArcMap, a geographic information system, to create a map of Potaro-Siparuni, as well as perform a spatial analysis to determine the towns that M.A.R.K. has the potential of working in. Because M.A.R.K. has yet to actually visit Guyana and Potaro-Siparuni, using a geographic information system provided us with insight and information we otherwise would not have" (M.A.R.K., 2013).

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https://opentextbooks.uregina.ca/openpedagogyapproaches/?p=137

A large part of the assignment involved building a customized NGO website. For M.A.R.K., students knew whatever they posted must be reflective of their vision statement—to improve maternal health care among women of reproductive age in Potaro-Siparuni, Guyana. The group understood that the information on their website must also be digestible, informative, and of interest to their audience. Knowing that experts were just a tweet away, the team contacted local NGOs, including current and past Peace Corps members, for input on how they should deliver their message on their website.

Many students reported never having researched or read so much within their college careers and that finding relevant and culturally sensitive information for a worthy cause was a huge motivating factor. For some students, working in WordPress was a new and intimidating experience, but they succeeded in their efforts.

> *Working with this specific site was new to me and upon starting to form the website I realized it had so many nuances and options! It was exciting to be able to customize and tailor the website with my partner to make it visually appealing while informationally relevant. Going further, however, I realized there was so much I didn't know! Overwhelmed and a bit intimidated (I didn't want to fail my group after all!) I spent many hours working with a phenomenal reference librarian that helped me learn how to navigate the site. After a few of our sessions I was able to have a firm grasp on editing, posting, tagging and many other features that made our site unique and easily navigated. Being able to put the group's hard work into tangible and organized website has been wonderful and an exciting learning experience. Learning these skills in an age where the internet is essential is just another experience I will take with me beyond Geneseo.*
>
> –Jordan Laux, M.A.R.K. 2013

The students' efforts resulted in a website divided into five sections: About, Our Work, Area Profile, The Project,

and Resources/Bibliography. To learn more about M.A.R.K. and its semester-long progress, their website is located at [M.A.R.K.: Mothers Advocating Reproductive Knowledge](). Further, students from M.A.R.K. and The Epula Project (also from 2013) presented their work at the 3Ts conference in March 2014 (see [Appendix C]()).

Assessing Student Learning and the Final Presentation

Student learning was assessed throughout the course via short written assignments based primarily on the core class readings and through peer assessment as related to the NGO project, and culminated in a simulated final group presentation where NGOs delivered their findings to several "grant funders."

To engage their final audience and bring life to their presentation beyond spoken words, ideas emerged that took students outside of their comfort zones. In a class session prior to the final presentation, students were asked to draw out their NGO journey from a "seed of an idea" to its current state, encouraging students to think about ways they could represent their work using **multiple intelligences**. M.A.R.K. chose to begin their presentation with local music and dance from Guyana. The group also incorporated two case studies in which they role-played the group and individual sessions offered to members of the Guyanese community.

Another faction of the group led the audience in singing the ABCs song, representing the length of time one should wash their hands for proper hygiene.

For all work completed in Third World Development, team members rated each other's performance based on three areas: contribution to research, participation in group discussions, and attendance. They also received individual ratings from team leaders who were then evaluated by their professors.

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In each instance, students were working beyond the typical As and Bs and gaining much more valuable, internalized, and lifelong skills that could influence them beyond college.

Further student reflections of these experiences and skills gained through the process of development work are found within each NGO website.[6] For professor and librarian, it was essential to know students' inner thoughts throughout the process of theory-to-practice, so they required each student to reflect on the experience as part of the final NGO website.

Lessons Learned and Possible Adaptations

The instructors were pleased with the internalized learning that students exhibited throughout the course and into their professional careers. As students reported in their reflections, the structure of this course was unlike any they had ever experienced and it took some getting used to. With patience and trust in their instructors, the students not only grew as scholars in their knowledge of issues facing the developing world, but also matured personally and professionally as they began to understand the world through others' perspectives, share their concerns and ideas with each other, debate the merits of one solution over another, and learn to do so in a respectful and collegial manner. They held themselves accountable for the work that needed to get done and delegated responsibility among the group to be sure they were all staying on task. Knowing that the instructors could step in when needed, students became comfortable with the structured ambiguity of the course. Students learned a lot about themselves in relation to how they worked within a larger group (e.g., a student with a strong voice reflected that with time in her NGO came an awareness that she was not the only student who had something to say and she could learn from her peers) and international students, in particular, learned that education does not have to be a one-way process. They were truly struck by the democratic process the course adopted and realized that they had agency as equal partners in the class.

The structure of this course was unique in that it allowed a certain level of creative freedom for students to deliver a project reflective of the group's research and value set. For example, is the site easily accessible? Is there a need? Does the location have an over-saturation of foreign aid? In asking these questions, students had to communicate, agree, and prioritize where they would like to execute their topic of interest. Students also gained valuable project management skills including leadership, communication, critical thinking, and member management. These skills were tested during instances when students had to determine how they wanted to execute their project, such as how to manage the logistics of meetings outside of the classroom. How should they document their research? And what would be the best method of communicating? Some chose the popular free texting service, WhatsApp. Despite some concerns regarding what information was available to them on the web, students confirmed that they learned how to research more effectively during the course. Using keywords, special characters, and advanced search features, students learned how to obtain specific information from various search engines. Some students were able to further their research by contacting individuals from organizations that were pertinent to their projects.

The ideas of open pedagogy and open student work were only starting to gain steam at the time of the 2012–2014 iterations of Third World Development. These were not concepts that the instructors were following closely or were even familiar with. Designing the course structure took an organic approach based on the instructors' past teaching experience and their attempt to simulate the creation of a new NGO (e.g., requiring a publicly available NGO website with vision, mission, and proposed solutions to identified problems). At the time, Chierici and Davies-Hoffman were unaware of the required permissions through the Family Educational Rights and Privacy Act (FERPA) or the choice for students to opt in or out of their work being shared on the web. If this course were to run again, these considerations would definitely be built into the process. However, because the NGO milestones incorporated contributions from the

6. 2012 NGO sites not included in the bibliography; 2013 NGOs—M.A.R.K. and Epula; 2014 NGOs—PROSPER and STEM.

whole team, individual efforts became part of the greater good. Grading was more focused on expression of learning through individual assignments, contributions to the team with a variety of roles to choose from, and final, in-class group presentations. Students were given options as to which web-authoring tools they could use, how they could layout the website, what content they could add, and how they could represent themselves publicly. Any information and personalized reflections expressed on the NGOs' websites were vetted by the team. The choice of adding names and photos to the collective reflections on the learning process was entirely up to each team. It is clear through their web design and the openness of their online commentary (and most recently, their expressed permission to emphasize their words in this publication) that students were proud to have accomplished the work of a burgeoning NGO trying to resolve real-world issues through community-based and culturally sensitive approaches.

As professors and librarians become inspired to develop class experiences through open pedagogical design, Chierici and Davies-Hoffman recommend thinking carefully about the professionally relevant skills, experiences, and end products that will remain meaningful to students beyond their college careers. For the first iteration of the course (2012), the final assignment included a group presentation at SUNY Geneseo's annual day of student scholarship, GREAT Day (i.e., students presenting to students). Subsequent final presentations simulated a "pitch" to potential donors to fund ideas leading to solutions in the developing world. Consider what typical written and experiential work looks like within a particular discipline: lab reports and communicating research findings to the layperson in the sciences; legal briefs and courtroom debate in law; policy papers and legislative hearings in political science and government; lesson plans and classroom delivery for educators, and so forth. Without deliberate training and practice, students will rely on the written research reports they have been asked to develop since grade school. When students are immersed in experiences like the ones described in this chapter, they have room to try, err, and hone their skills and capacities to succeed in the real world.

A further best practice that Chierici and Davies-Hoffman recommend is to add structure to a course's design but to remain flexible with the course schedule, especially when trying out an openly designed course for the first time. Expect the unexpected and lean into ideas and directions where students may want to guide the learning. In Fall 2012, and subsequently, Chierici wrote out and shared her syllabus for the first 8 weeks of the semester, leaving the second half of the semester to be determined by the students' progress with their projects. Transparency in the process of experimentation with course design can help set students' minds at ease, especially when they are clear about their graded expectations (e.g., more about personal contribution, reflection on the learning process, attendance).

Conclusions

It seems fitting that Third World Development, in its most current state (2012–2014), reached its pinnacle at a time when Chierici and Davies-Hoffman were leaving SUNY Geneseo. The teaching journey these two instructors took from the early 2000s to the end of 2014 culminated in an experiential course that benefited from all past iterations of their classroom collaboration. Each was committed to the application of theory and an idea that scaffolded practice reinforces and advances learning. Without the content expertise and topical inspiration from a professor's course structure, librarians would not have the opportunity to mix in lessons of information and digital literacies, helping students reach success with critical thinking and communication skills within their assignments. Without the unique expertise and flexible teaching approach of librarians, a professor would be limited in seeing the wide array of resources that can cross interdisciplinary research questions and real-time applications that assignments may require. When both professor and librarian work together—playing off of each other's expertise and diverse teaching backgrounds while providing space to allow brainstormed ideas to ferment—creativity, intriguing topics, and an organized course structure meld to inspire courses that students can get excited about.

With student learning at the center of their efforts, Chierici and Davies-Hoffman departed SUNY Geneseo knowing that the graduates of their classes were equipped to take on the next phase of their careers. The internalization of the lessons they learned will remain and continue to build with each new experience gained, beyond what students could

produce in writing on a resume. Directly related, some of the NGO students pursued development work after they graduated–finding themselves teaching English in China or joining the Peace Corps. Former student Amanda Spence, a contributor to M.A.R.K., decided to engage in public health work, serving as a Peace Corps member in Guinea, West Africa. Her work as a public health educator in maternal and child health focused on topics such as nutrition, malaria, and sanitation. She explains that her participation in the development of M.A.R.K. helped prepare her for work in global health:

> *This class definitely helped prepare me for some of the issues I faced during my time as a public health educator. Guinean culture is one that encourages polyamory and the birth of many children. Men who have numerous children are believed to have been blessed by God. Of course, with more wives, that puts the husband and his partners at a higher risk of contracting an STI/STD and, with many children, there is less money to purchase the food that is critical to a child's development. This was difficult to witness in person but Chierici's class helped by teaching cultural competency.*

Furthermore, the authors conclude with a video from Jordan Laux (M.A.R.K., 2013)–a student who also immediately applied the skills she gained in Third World Development to one of her first professional experiences as a college graduate–and the uplifting words of an international student from the Fall 2013 course.

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https://opentextbooks.uregina.ca/openpedagogyapproaches/?p=137

> *With the amount of work that [our team] has put into developing M.A.R.K. without even anticipating to physically go to Guyana is astounding. The best part is that we are part of a generation that has not emerged onto the global scene just yet, but we have more potential than any other generation. Just think about how much we can do if we put in as much effort into*

developing real solutions, and not just for grades, but for the greater good. I know it sounds too idealistic, and normally I would be the first to dismiss that idealism, but I truly believe that we are part of a generation that will strive to solve problems that are plaguing people in places we can't even imagine. We are a generation that does not look to the past for answers but rather focuses on the present and plans for the future. It is our time to step up to the plate and strive towards a better future; not just for us, but for everyone.

–Krzysztof Szafranski, <u>M.A.R.K. 2013</u>

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Feedback, suggestions, or conversation about this chapter may be shared via our <u>Rebus Community Discussion Page</u>.

Appendix A

ANTHROPOLOGY 307

THIRD WORLD DEVELOPMENT: THEORY AND ANALYSIS

Tuesday and Thursday 10:00–11:15
Bailey 201

Human development, as an approach, is concerned with what I take to be the basic development idea: namely, advancing the richness of human life, rather than the richness of the economy in which human beings live, which is only a part of it."

–Amartya Sen
Professor of Economics, Harvard University
Nobel Laureate in Economics, 1998

Teaching Team:

- **Instructor**: Professor Rose-Marie Chierici
  - **Office**: Bailey
  - **Office hours**: T-Th: 1:00- 3:00 pm
  - **Email**: chierici@geneseo.edu
- **Librarian:** Kim Davies Hoffman kdhoffman@geneseo.edu
- **Teaching Intern**: Tushara Surapaneni ts7@geneseo.edu

COURSE DESCRIPTION

What is development? What is the Third World? What are the dominant paradigms and ideologies, relationships or assumptions reflected in the oppositions between First World: Third World, Global North: Global South, developed: developing world? What are the political, economic or cultural implications of these oppositions? What is the "cost" of development for developing nations? What roles can anthropologists play in development programs? What is

globalization really about? These are some of the themes that will be explored during the semester. Case studies as well as analyses and critiques of development programs will be used to sort out the dynamics between dependency, gender, politics, economic models, power relationships, and poverty. Students will apply what they learn through the readings, lectures and discussion on a semester long group research and creative activity. *Development work is collaborative by nature; therefore we emphasize this strategy in this class.*

LEARNING OUTCOMES

- Students will learn and demonstrate their *writing competency* through written s based on readings, lectures and individual research focused on the process of development and the effects of globalization on developing countries.
- Students will be able to *analyze and interpret* issues facing developing and underdeveloped countries and the dynamics between wealthy and poor nations using Development Anthropology in essays, reports and oral presentations based on readings, lectures, group and individual research projects.
- Students will understand *theoretical perspectives and models* of Development Anthropology in essays and class discussions using materials from readings, lectures, group and individual research projects.
- Students will demonstrate *critical thinking* in their evaluation of the relevance of Development Anthropology relative to other models of development in essays drawn from readings, lectures and individual research projects.
- Students will demonstrate *oral competency, library competency and writing skills* relative to the study of third world development in the presentation, discussion and classroom defense of their research projects.

REQUIREMENTS

This course uses an experiential and collaborative approach to learning. Half of your grade will come from team work and half from individual work. Therefore, class participation, individual and group work, and research are stressed. In order for you to get the most from this class, it is important that team members share the work equally and complete their share of each assignment. It is as important that each of you participates in class discussions and completes readings on time. Take it as a given that your contributions are valued and that your opinions will be respected.

A *detailed outline of the group project with milestones due dates will be posted in the Course Materials section of the myCourses page for this class. You will be responsible to follow them and meet each deadline.* Time will be set aside for group work during regular class periods.

Portfolio and Project Evaluation (50%).

Students will work in teams throughout the semester on a substantial project which includes a case study of a region that the group will select and an evaluation and critique of development strategies. Teams will design their group's own NGO and projects, and a rationale for choosing the model and strategies that this virtual NGO will adopt.

Breakdown of Portfolio and Project Evaluation (on team website) grade:

- **50% for team work**
- **25% for group work**
- **25% for participation**

We will discuss this project at length and will guide you throughout the semester. Specific guidelines will be posted on myCourses.

Individual Paper: Critique of Development models and approaches (30%).

This is a formal, 6-7 page double-spaced paper plus bibliography.

   You will review and evaluate the approaches to development that the readings for this class offer. Your evaluation of these works should reflect your understanding of development theory and your ability to analyze class material. The paper should include: a definition of development from your own perspective; a summary of the main arguments developed by each author and your evaluation of their contributions; and what you believe is/would be the best model and why. To make this a richer paper you will support your analysis with appropriate references to class readings and four **additional** readings from scholarly sources. No more than two of these additional sources can be accredited web sites. You can add articles from major newspapers or magazines but these will not count as additional sources. Make sure that you cite all your sources; consult a style guide if you are not sure of the format you are using. While I prefer the Chicago style, I will accept others as long as you follow a format.

Individual Submissions (10%)

Once a week, you will post comments on the readings and other assignments for that week. Your entries should be about 200 words and address a topic/ an aspect of the readings or discussion that you find particularly challenging or thought provoking. This is an opportunity to express your opinion or suggest a different way of addressing an issue. To receive full credit, you will need 10 entries. Drop your entries in the folder entitled Individual Submissions on myCourses.

Participation (10%)

This includes participation in class, in discussions, and on projects. Regular attendance and preparation are good indicators of your level of participation.

   Extra Credit option: You can earn 2 extra credit points by attending four (4) events related to the topic of this class and writing a 200 words description of each event and what you learned from it.

   Accommodations: SUNY Geneseo will make reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities. Accommodations will also be made for medical conditions related to pregnancy or parenting. Students should contact Dean Buggie-Hunt in the Office of Disability Services (tbuggieh@geneseo.edu or 585-245-5112) and their faculty to discuss needed accommodations as early as possible in the semester.

   Plagiarism policy: Plagiarism will not be tolerated and may result in failing the class. Read Geneseo's Plagiarism Policy on the College's website.

REQUIRED TEXT

- Abhijit V. Banerjee and Esther Duflo, eds. *Poor Economics: A Radical Rethinking Of The Way To Fight Global Poverty*. Public Affairs, 2011
- Jessica Alexander. *Chasing Chaos : My Decade In And Out Of Humanitarian Aid*. Broadway Books, 2013.
- You will find all other readings under Class Materials on myCourses.

Keep up on development news and job opportunities on <u>Devex</u>, an international development website.

COURSE SCHEDULE

Week 1

8/26

- Introduction of the course and themes for the semester: Sustainability and empowerment.
- Define the Third World and its characteristics
  ◦ The face of poverty: <u>"In One slum: Misery, Work, Politics and Hope"</u>
  ◦ Check this site and think about the implications of these figures from the <u>Population Institute</u>

8/28: Milne 104

- Discuss group work and form groups
- Why team work? Check this site
- Introduction of Librarian Kim Hoffman who is going to assist with this class
- Form teams and get to know your partners and team leaders.

Week 2

9/2

- **DEVELOPMENT ASSISTANCE AND THE THIRD WORLD**
  ◦ **Reading:** Isbister, A World of Poverty from Promises Not Kept
- **Evolution of thinking about development and development models:**
  ◦ **Watch** this podcast from the Institute for Policy Studies: John Cavanagh and Emira Woods on "<u>What are the IMF and the World Bank?</u>"
- **General discussion:** Working in small groups, consider the following questions: How do you feel about the term "Third World" to describe certain countries? Why? What are alternative terminologies? What do you think about them? Reflect on the impact of these labels and find some examples on how they are used in newspapers, journals, the web, etc.
  ◦ **Summarize your group's discussion and Drop** your comments in the folder "Questions and Comments".

9/4: Milne 104

- **Team Work** – This week, teams will work on selecting a country/region and assign tasks and areas of research to

their members.

Week 3

9/9

- **MACROPERSPECTIVES**
- **THE POLITICS OF DEVELOPMENT**
    - **Readings**: Complicated vs Complex Systems
    - Banerjee and Duflo, Chapters 1 and 2
    - Food, population and the post-2015 development agenda By *Robert Walker*17 July 2014
- **Team work**: For next week, small groups will bring an article about their country/region that highlights some of the issues we have discussed so far. They will summarize their article and prepare a question for class discussion next Thursday September 18.

9/11: Milne 104

- ***Milestone 1: Country selection**

Week 4

9/16

- **Reading**:
    - Jeffrey Sachs, "A Global Family Portrait" and "The Spread of Economic Prosperity" **(Reserve)**
    - Goldstein, "Is It Nuts to Give to the Poor without Strings Attached?"
- **Discussion:** these readings suggest various ways for the poor to get out of the poverty trap. What do you think? Outline pro's and con's.

9/18

- **Milestone 2: Draft your NGO's Mission Statement**
    - Begin shaping your NGO and its goals and objectives
- **Team work**– Consult the calendar that Kim prepared to know where your team is supposed to be. When uncertain, contact your team leaders.

Week 5

9/23

- **ECONOMY**
- **Reading**
  - Bodley, excerpts from "Poverty and Conflict in the Global Culture"
  - Banerjee and Duflo, Chapter 10
- **Film**: The Price of Aid

9/25

- Banerjee and Duflo, Chapters 4 and 5
- **Team work at Milne Library**

Week 6

9/30

- **HUNGER AND DEVELOPMENT**
- **Reading**:
  - Robbins, "Hunger, Poverty, and Economic Development"
  - Marks, "Human Rights in Development"
- **Discussion:** Bring questions on readings and films from the previous 2 weeks. How do the alternatives presented in the readings for today reflect issues and concerns outlined in the material discussed thus far and how do they reflect what you are learning about your own region. Drop your questions and short answers in the folder "Questions and Comments"

10/2

- **Team work at Milne Library**
- **Update on Projects** I will meet with each group to review progress on your portfolio. Come prepared to give me a good overview.
- **Milestone 3 due: identify gaps in information**

Week 7

10/7

- **A CASE STUDY**
- **Discussion** of Banker to the Poor (Excerpts)

- What are the basic premises of the book? How does this particular case study illustrate the struggle of the poor to get out of poverty; the constraints and barriers to individual development; and the potential for solving global problems? Do Yunis and Sachs have a common goal? How do they envision solutions to poverty?
- Banerjee and Duflo: Chapters 8 and 9
- [Microcredit](#)
- **Individual assignment:** Formulate a thoughtful question based on these readings and analyze these questions in a short reaction paper (500 words)
  - ***drop your reaction paper in the folder entitled "Individual Submissions" on myCourses by Thursday Oct 16, no exceptions.

10/9

- **Milne 104, begin building your website**

Week 8

10/14

- **FALL BREAK**

10/16

- **DISASTER AND RECOVERY: RESPONSES AND STRATEGIES**
- **Reading**: Alexander, *Chasing Chaos*, Read about a third of the book and be ready to discuss the first 4 chapters.
  - Can you make a distinction between disaster relief and development? Is Alexander helping you to understand the complexity of "doing" development? What does that work involve?
- **Team work at Milne Library**

Week 9

10/21

- **Reading:** Alexander, *Chasing Chaos*, the second third and be ready to discuss the chapters that deal with India, North and South Darfur and Sri Lanka.
- What is Alexander experiencing? What is she saying about development? How does she see her role and contributions? What is she learning?

10/23

- **Team work at Milne Library**

Week 10

10/28

- **Reading**: Alexander, Chasing Chaos,~ Finish reading the book and come prepared to discuss it and explain what Alexander's message is to you.

10/30

- **Team work at Milne Library**

Week 11

11/4

- **Discussion:** Today we will try to put Alexander's book in the larger context of disaster relief work. The following links offer some interesting perspectives, what else can you find on line about current disasters and humanitarian responses to disasters (identify at least 3)?
- Bring challenging questions for class discussion
- [World Disasters Report](#)
- [Humanitarians in Action](#)
- [Earthquake Relief Where Haiti Wasn't Broken](#)
- [What it's like to be an aid worker in Gaza now](#)
- [A career in emergency response: Is it for you?](#)
- **Start thinking about your essay which is due November 25.** Check the description on pp. 1-2 of this syllabus.

11/6

- **Team work at Milne Library**

Week 12

11/11

- **Discussion** From Dambisa Moyo's Dead Aid: A Brief History of Aid, Aid is not Working, and The Silent Killer of Growth
- [Dambisa Moyo on Foreign Aid, China, and Celebrity](#)
  - What is Moyo's thesis? How realistic are her premises? What are the strengths and weaknesses of her argument? Where does she fit in the range of models/strategies to end poverty? What do Banerjee and Duflo say about her model?
- Polak, excerpts from Out of Poverty.

    ◦ How realistic is Polak's model? Would it be useful at the site of your NGO?

11/13

- **Team work at Milne Library**

Week 13

11/18

- **Reading**: Some additional and very relevant issues to think about:
- "[A Drop of Life](#)" by Shalini Kantayya about a water project in developing world.
- [India is Building New Toilets Every Second –but Hardly Anyone is Using Them](#)

11/20

- **Team work at Milne Library**
- **Milestone #4: completed drafts of NGO sites**

Week 14

11/25

- **Discussion**
  ◦ [A borderline where women Bear the Weight–Morocco](#)
  ◦ [Bill Gates on global health and development](#)
  ◦ [Protecting the health of mothers when they need it most](#)

****All essays are due today at start of class. Late submissions will be penalized****
    11/27

- **THANKSGIVING**

Week 15

12/2

- **Presentation of NGO**

- **Presentation of NGO**

Final Exam Period

Tuesday December 16, 8:00-11:00

Appendix B

A [mock up of course schedule](#) with in-class as tied to NGO project milestones readings.

Appendix C

A re-enactment, in short order, of the class design and learning principles as seen through a 3Ts conference session:
Graham, M., Laux, J., Maddock, D., Sovocool, M., Spence A., Trujillo, E . . . Davies Hoffman, K. (2014). *Getting to the core of development work*. Panel presentation at the 3Ts Conference: At the core of teaching, technology, and transliteracy, SUNY Geneseo, NY. Retrieved from [https://cloud.ensemblevideo.com/Watch/ HDriuhS5eUi3h0X1DtDq_g](https://cloud.ensemblevideo.com/Watch/HDriuhS5eUi3h0X1DtDq_g)

Glossary

algorithmic-decision-making

The prevalence of algorithms used to process personal data to make decisions, such as product or news recommendations, based on previous user behavior collected through digital devices. The reasoning used to make the decisions are often not clearly communicated to users.

Newell, S., & Marabelli, M. (2015). Strategic opportunities (and challenges) of algorithmic decision-making: A call for action on the long-term societal effects of 'datification.' *The Journal of Strategic Information Systems*, 24(1), 3–14. https://doi.org/10.1016/j.jsis.2015.02.001

ancillary materials

Materials beyond the core content, such as practice problems, quiz/test questions, etc.

behaviorism

Behaviorism is a systematic approach to understanding the behavior of humans and other animals. It assumes that all behaviors are either reflexes produced by a response to certain stimuli in the environment, or a consequence of that individual's history, including especially reinforcement and punishment, together with the individual's current motivational state and controlling stimuli.

https://en.wikipedia.org/wiki/Behaviorism

cognitivism

Implies that the different processes concerning learning can be explained by analyzing the mental processes first. It posits that with effective cognitive processes, learning is easier and new information can be stored in the memory for a long time.

https://edtechreview.in/dictionary/2723-cognitive-learning

constructivism

Asserts that the learner has prior knowledge and experiences, which is often determined by their social and cultural environment. Learning is therefore done by students' "constructing" knowledge out of their experiences.

https://en.wikipedia.org/wiki/Constructivism_(philosophy_of_education)

constructivist theory

Constructivism focuses on learning obtained through knowledge. Teachers lead students' learning through inquiry and continuous assessment. A tenet of constructivist learning aligns with educational theorist Vygotsky's concepts of social learning. Hence by creating lessons that allow students to learn and reflect in a group setting, students and teachers can maximize opportunities of inquiry.

copy of record

The single copy of a document, often the original, that is designated as the official copy for reference and preservation.

Creative Commons license

An alternative to copyright, which includes information about what users are allowed to do with items. Creative

Commons licenses address attribution, sharing, derivatives, and commercial use. For example, a CC-ND license would be one requiring attribution with no derivatives allowed. See https://creativecommons.org/licenses/ for more details.

Creative Commons License-2

A series of licensing designed for open access publication of materials.

Creative Commons licensing

A copyright license that allows for free distribution of the work. Different types of Creative Commons licensing indicate whether the work can be freely distributed, modified, or used commercially, and what attributions are required for redistribution of the original or adapted work.

critical

Critical pedagogy is frequently traced to the prominent work of Paulo Freire and his critique of banking modes of education. Rather than viewing learners as passive recipients of knowledge, critical pedagogy emphasizes the emancipatory potential of education and learners' capacity to redefine their worlds and their place in it.

McLaren, P. & Crawford, J. (2010). Critical pedagogy. In C. Kridel (Ed.), *Encyclopedia of curriculum studies* (pp. 148-149). Thousand Oaks, CA: SAGE Publications, Inc. doi: 10.4135/9781412958806.n88

"An educational lesson that offers the student or learner opportunities to perform, share, analyze, connect, and apply new information is experiential learning." While definitions and conceptions of experiential learning continue to evolve, founding theories may be traced to Dewey, Rogers, and Kolb.

Strong, R. (2015). Experiential learning. In J. Spector (Ed.), *The SAGE encyclopedia of educational technology* (pp. 285-286). Thousand Oaks,, CA: SAGE Publications, Inc. doi: 10.4135/9781483346397.n124

critical digital pedagogies

An approach to teaching and learning that values student agency, community, and collaboration. It demands that open and networked educational environments "be platforms for engaging students and teachers as full agents of their own learning."

Stommel, J. (2014). Critical Digital Pedagogy: A Definition. Hybrid Pedagogy. Retrieved from http://www.digitalpedagogylab.com/hybridped/critical-digital-pedagogy-definition/

Desmos

Online software that focuses on graphing and plotting. See https://www.desmos.com/ for more details.

digital redlining

Digital redlining refers to inequitable information technology policies and practices that restrict user access and control collection of user data in a manner that discriminates against marginalized groups.

Gilliard, C., & Culik, H. (2016, May 24). Digital Redlining, Access, and Privacy. Common Sense Education. https://www.commonsense.org/education/articles/digital-redlining-access-and-privacy

digital scholarship

"[T]he use of digital evidence and method, digital authoring, digital publishing, digital curation and preservation, and digital use and reuse of scholarship." (Rumsey 2011)

Rumsey, A. S. (2011). *New-model scholarly communication: Road map for change*. Charlottesville, Va.: Scholarly Communication Institute, University of Virginia.

Domain of One's Own

A Domain of One's Own grew out of an initiative started at the University of Mary Washington and was largely spearheaded by Jim Groom, Martha Burtis, and Tim Owens. The initiative is now more than five years old and includes a robust community of institutions and advocates. At the core, the initiative rests on the belief that there is enormous learning potential in granting individuals ownership of their own domain space.

Dublin Core

A set of vocabulary terms used in the library and information sciences to describe both physical and digital objects.

experiential

Experiential learning is the process of learning through experience, and is more specifically defined as "learning through reflection on doing."
https://en.wikipedia.org/wiki/Experiential_learning

experiential learning

The process by which students learn the skills required to accomplish a goal through active engagement in an opportunity, followed by reflect on what they have learned from that experience. The reflection allows them to translate the learning experience to action items that can be revisited in future use of the skill set.

five principles of open assignment design

Assignments that: develop student skills in alignment with the course; create a project "that will add value to the world"; produce something that is itself "openly available"; provide support to students; and creatively builds (rather than repeats) over time (Jhangiani 2017, p. 272).
Jhangiani, R. S. (2017). Open as Default: The future of education and scholarship. In R. S. Jhangiani & R. Biswas-Diener (Eds.), *Open: The philosophy and practices that are revolutionizing education and science* (pp. 267–279). https://doi.org/10.5334/bbc.i

GeoGebra

Online software designed for use in teaching of multiple mathematics areas. See https://www.geogebra.org/ for more details.

GNU license

An alternative to copyright, which includes information about what users are allowed to do with items. GNU licenses are usually applied to software, but could be used in some cases for online course content. See https://www.gnu.org/licenses/licenses.html for more details.

Google Sites

Google Sites is a structured wiki- and Web page-creation tool offered by Google, which allows the creation of simple web sites that support collaboration between different editors.

H5P

A free and open-source content collaboration framework based on JavaScript. H5P is an abbreviation for HTML5 Package, and aims to make it easy for everyone to create, share and reuse interactive HTML5 content.

high-impact courses

Courses that are high enrollment and/or commonly required or taught.

Hypothesis

A browser extension that allows students to annotate digital content, helping with comprehension and in developing critical thinking skills about course readings in private, group or public settings. https://web.hypothes.is/

information literacy

"Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning."
 Association of College and Research Libraries. (2015). *Framework for Information Literacy for Higher Education.* Retrieved from http://www.ala.org/acrl/standards/ilframework

JSTOR

A major database that primarily focuses on content from major journals that is 3-5 years prior to the current year. https://www.jstor.org/

Knowledge Commons

The term "knowledge commons" refers to information, data, and content that is collectively owned and managed by a community of users, particularly over the Internet.

LaTeX

A markup language used to get mathematical and scientific content to display properly when displayed online or when printed. See https://www.latex-project.org/ for more details.

Linked data

Data hyperlinked to other data to increase context and discoverability.

metadata profile

A set of guidelines to how to create metadata, what terminology is needed, and examples of metadata creation.

microsite

A branded subset of a website dedicated to a specific group, category, etc.

modules

Breaking up content into much more distinct and separate portions, or modules, allows for those wanting to integrate materials to use the specific topics they want more easily.

multiple intelligences

Developed in 1983 by Dr. Howard Gardner, professor of education at Harvard University, the theory suggests that the traditional notion of intelligence, based on I.Q. testing, is far too limited. Instead, Dr. Gardner proposes eight different intelligences to account for a broader range of human potential in children and adults.

OER

Open Educational Resources (OER) = Teaching and learning materials that are openly licensed, giving users the legal permission to retain, reuse, revise, remix, and redistribute the material.

OER-enabled pedagogy

OER-Enabled Pedagogy is the set of teaching and learning practices only practical in the context of the 5R permissions characteristic of open educational resources.

OER-enabled project

Educational materials that are free to access and openly licensed.

Omeka

An online platform used for virtual exhibitions, websites, and content management. https://omeka.org/

one-shot instruction

Typically a 50-80 minute library session where students are given support on a particular academic assignment or topic. Topics covered often include keyword identification, search strategies, database navigation and information retrieval.

open concepts

Foundational knowledge of systems that support the ethical and legal participation in the creation and sharing of OER, such as copyright, open licensing, and privacy.

open educational resources

OER "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."
https://hewlett.org/strategy/open-educational-resources/

open educational resources (OER)

Content that is freely available online. Many people more specifically see OER content as content that going beyond free access with licenses that allow for making changes and distributing.

open pedagogical design

In this case, the curriculum is designed to be open-ended, with no assumed "correct" final answer in mind. Curricular structures and supports are in place but students are given the freedom to take an individual path to learning.

open pedagogy

A student-centered teaching approach that empowers students as creators of knowledge and open resources.

open textbook

Open textbooks are course textbooks that have been funded, published, and licensed to be freely used, adapted, and

distributed. These books have been reviewed by faculty from a variety of colleges and universities to assess their quality. These books can be downloaded for no cost, or printed at low cost.

Source: Open Textbook Library, https://open.umn.edu/opentextbooks/

place-based education

An interdisciplinary pedagogical approach that supports using local communities and their resources as a framework to teach, giving students better representation of their community, environment, and history within their educational experience.

praxis

The process of using a theory or something that you have learned in a practical way.
https://dictionary.cambridge.org/us/dictionary/english/praxis

primary sources

A resource providing a first-hand account of an event, incidence or happening. Primary sources can include diaries, newspaper articles, photographs, manuscripts, and letters, for example.

racial justice

Political philosopher Christopher Lebron develops an account of racial justice in terms of the social value of black persons in a racially hierarchal society, from which he articulates three principles of racial justice: education that helps individuals positively value black identity and more deeply understand historical and social facts; education about the negative and oppressive norms about black social value; and the regulation of institutional practices in line with socially valuing black life (2013, Chapter 5).

Lebron, C. J. (2013). *The Color of Our Shame: Race and Justice in Our Time*. Oxford and New York: Oxford University Press.

radical familiarity

Making a historical literary text more accessible and familiar by connecting the text to current events, issues, media, or theory. Radical familiarity is a form of critical thinking that allows students to meet an "old" or different type of text on well-known or common ground.

Reclaim Hosting

Reclaim hosting is a web hosting company that supports numerous colleges and universities in the offering of student domains and web hosting. The company grew from the founding Domain of One's Own initiative at the University of Mary Washington.

Renewable Assignment Design Framework

A process to develop renewable assignments.

renewable assignments

Renewable assignments are an alternative to traditional, disposable assignments, which students throw away after they are graded. Renewable assignments are possible because of the permission to engage in the 5R activities granted by open educational resources (OER).

renewable assignments 2

An assignment or activity in which students are invited to openly license and publicly share the artifact that is created, which has value beyond the students' own learning.

responsive web design

Responsive Web design is the approach that suggests that design and development should respond to the user's behavior and environment based on screen size, platform and orientation.

surveillance capitalism

Surveillance capitalism is a term coined by Shoshana Zuboff to capture the dangers presented when industries extract, compile, repurpose, and resell user data for capital gains. It can be understood as a "new form of information capitalism [that] aims to predict and modify human behavior as a means to produce revenue and market control."

Zuboff, S. (2015). *Big other: Surveillance Capitalism and the Prospects of an Information Civilization.* Journal of Information Technology, 30(1), 75–89. https://doi.org/10.1057/jit.2015.5

textbook affordability

General strategies for eliminating or reducing cost of course materials. Examples include: use of OER, use of library-licensed resources, use of used and/or previous editions, etc.

Ximera

Ximera is a free and open-source platform for creating and sharing interactive online course materials. The goal of Ximera is to make it easier for authors familiar with LaTeX to create interactive online content and to provide educators and researchers with quantitative data on student performance and involvement.

zine

Self-published, small circulation works that tend to communicate information informally through original or mashed up (under fair use laws that permit limited use of copyrighted materials) text and images.

About the Editors

Kimberly Davies Hoffman

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Kimberly Davies Hoffman serves as the University of Rochester's Head of Outreach, Learning, and Research Services at the River Campus Libraries. With interests in engaging pedagogy, instructional design, assessment, and creating professional development opportunities, she has been a founding member for programs like LILAC, the 3Ts, and RYSAG. Recent projects include her participation in SPARC's Open Education Leadership Program, the ARL Digital Scholarship Institute, and a grant-based digital collection of case studies highlighting faculty's teaching with technology (DigITaL, Digital Ideas in Teaching and Learning. Kimberly earned her MLS at the University at Buffalo and a BA in French and International Relations at the University of New Hampshire.

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Alexis Clifton is a long-time open education advocate. Building from her first experiences using OER in her English Composition courses at Tacoma Community College in Tacoma, Washington, she went on to participate in the Kaleidoscope Open Course Initiative and later served as a Faculty Success lead and course developer with Lumen Learning. She acted as the founding executive director of SUNY OER Services, serving all 64 institutions of the State University of New York in the support and development of local campus OER initiatives. She serves on the board of directors for Open Education Global. As Senior Instructional Support Specialist at SUNY Geneseo in Geneseo, New York, Alexis specializes in open, accessible, and inclusive course design to expand educational opportunities for everyone.

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Robert Berkman is the Business Outreach Librarian at the University of Rochester and founder and editor of *The Information Advisor's Guide to Internet Research*, an international monthly journal for business researchers. He is also an (online) part-time faculty member of the School of Media Studies at the New Schools of Public Engagement in New York City and author of several books on research, media and technology. He has an MA in Journalism from the University of Montana.

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Eileen P. Daly-Boas is the Outreach librarian for Education and Philosophy at the University of Rochester. She earned her M.L.i.S. from Syracuse University and her M.A. in Philosophy from the University of Rochester. Her current interests regarding open education are focused on online learning and teaching, and equity and inclusion.

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Lev Earle is the Special Collections Processing Archivist with the Department of Rare Books, Special Collections, and Preservation at the University of Rochester River Campus Libraries. Their interest in open educational resources and pedagogical design is influenced by their years working in Course Reserves and their social justice and inclusive equity work, as well as the approaches to open course design as an academic extension of feminist and decolonizing praxis.

Joe Easterly

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Joe Easterly is Digital Humanities Librarian at the University of Rochester River Campus Libraries, where he assists faculty, students, and staff in the development of digital scholarship and interactive scholarly publications.

Moriana M. Garcia

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Moriana M. Garcia is the Outreach and Scholarly Communications Librarian at the University of Rochester. She has a PhD in Pharmacology from the University of Sao Paulo (Brazil) and a Master of Library and Information Science from Kent State University (Ohio). Her current professional interests span the areas of scholarly communications, visual literacy and biophilic design for libraries. She has been working on support of open access and more sustainable models of scholarship since she arrived at the University of Rochester in 2015.

Deborah F. Rossen-Knill

Deborah Rossen-Knill is the founding director of the Writing, Speaking, and Argument Program at the University of Rochester. She teaches writing and pedagogy courses, and studies real and fictional texts, drawing on work in linguistics, philosophy of language, literary studies, cognitive science, and composition. Most recently, she has brought knowledge from linguistics and dialogue studies to her interest in writing program administration and writing instruction. Her work in these areas focuses on the function of student input in writing placement conversations, the identification of dialogically-based principles of academic writing and corresponding teaching strategies. She believes that education is an act of communication and that communication is potentially an act of education. Inspired by University of Rochester librarians' passion for OER and OP, she became involved in this project because of the potential for OER and OP to bring education to all and to foster fair, charitable, informed communication.

Kristen Totleben

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Kristen Totleben is the Outreach Librarian for Modern Languages and Cultures at the University of Rochester. Her current research interests include open pedagogy, working with special collections, and open peer review.

Review Statement

Each chapter in this collection went through at least three reviews:

- An initial draft underwent close reading and response by members of the editorial team.
- A revised draft went through an open peer review.
- A further revised draft went through final editorial review and copy editing.

Each peer review consisted of at least two in-depth responses. Where possible, a chapter was reviewed by both a librarian and by a subject matter expert or open education advocate.

Peer Reviewers

Many people answered the call to share their expertise and critical insights to review and refine chapter drafts. We thank you all for your generous gift of time and thoughtfulness.

- April Akins, Lander University
- Lisa Anderson, Muskegon Community College
- Vanessa Arce Senati, Lehman College, CUNY
- Stephanie Barrett, University of Rochester
- Lisa Becksford, Virginia Tech
- Stephanie Beene, University of New Mexico
- Corrie Bergeron, Lakeland Community College
- Kyle Binaxas, Richard Bland College of William & Mary
- Colleen Boyle, Pueblo Community College
- Mary Burgess, BCcampus
- Crystal Calhoun, West Georgia Technical College
- Matt Connell, Barton Community College
- Will Cross, North Carolina State University
- Lydia Curliss, Brown University
- Tiffany Davis, Mount Saint Mary College
- Diane Dias De Fazio, University of Iowa
- V. Dozier, University of San Diego
- Lance Eaton, Brandeis University
- Jennifer Englund, University of Minnesota
- Christine Faraday, SUNY Nassau Community College
- Rosalind L. Fielder-Giscombe, Chicago State University
- Katie Ghidiu, Monroe Community College
- Sarah Grace Glover, University of North Georgia
- Brittany Hickey, Columbia College
- Amanda Kraft, College of Charleston
- Amanda Larson, The Ohio State University
- Erin Maney, SUNY System Administration
- James McDonald, University of Hartford
- Lee Miller, Barton Community College

- Jack O'Grady, Austin Community College
- Carmen Orth-Alfie, University of Kansas
- Courtney Paddick, Bloomsburg University
- Nicco Pandolfi, Northwestern Michigan College
- Hannah Park, American University
- Jennifer Pedersen, Kenai Peninsula College
- Eric Prosser, Arizona State University
- Emily Ragan, Metropolitan State University of Denver
- Melissa Randall, Community College of Denver
- Orisa Santiago Morrice, University of Rochester
- Sarah Siddiqui, University of Rochester
- Nathan Smith, Houston Community College
- Adam Q. Stauffer, University of Rochester
- Amanda Wentworth, SUNY Geneseo
- Jamia Williams, University of Rochester

Copy Editors

Another set of talented volunteers stepped up with polishing and refining each chapter towards the end of this process. We are deeply appreciative.

- Jen Anderson, Sage Colleges
- Liz Andre, University of Rochester
- Aja Bettencourt-McCarthy, Oregon Institute of Technology
- Justina Brown, Western Washington University
- Heather Bush, Eckerd College
- Phillip Edwards, University of North Carolina at Chapel Hill
- Alina Holmes, Western Washington University
- Jeffery Jones, Monroe Community College
- Jennifer Little Kegler, SUNY Brockport
- Jessica McClean, Texas State University
- Helen McManus, Northern Virginia Community College
- Susan Montgomery, Rollins College
- Sarah K. Myers, Messiah College
- Sarah M. Paige, Eastern Florida State College
- Louann Terveer, Macalester College
- Rebekah Walker, Rochester Institute of Technology
- Amanda Wentworth, SUNY Geneseo

University of Rochester Student Copy Editors

A special subset of copy editors are students from WRT 252, Principles and Practices of Copyediting, taught by Dustin Hannum in Spring 2020. In the true spirit of open pedagogy, these students completed copy editing of four chapters as their final project for the course. It is clear from the students' reports to authors that they took this work very seriously,

were considerate in their suggestions, relied on their assigned partner to confirm editorial choices, and learned a great deal from this real-world project.

Hannum summarized the student experience by stating, "every single student indicated that their work on this project was one of the most valuable experiences they had in the class (and at least one student expressed that, as far as school was concerned, it was the highlight of the post-spring break COVID lockdown period for them)."

- Hayley McGowan & Jordan Mangefrida
- Anna Suben & Hannah Cook
- Fan Xi Tang & Eleanore Barrera
- Cameron DeMott & Lauren Berry

Resources Used in the Making of this Book

Open Pedagogy Approaches drew upon the tradition and resources of other open scholarly book publishers, including [BCCampus OpenEd](#), [Open SUNY Textbooks](#), and [Rebus Community](#).

In the spirit of paying it forward, we wish to share the materials that helped us along the way. These are also available on our [Rebus Community Project Home Page](#).

- [Call for Proposals, Long Version](#) (PDF)
- [Proposal Evaluation Rubric](#) (PDF)
- [Author Agreement](#) (Google Docs)
- [Call for Peer Reviewers](#) (Google Docs)
- [Review Guide](#) (Google Docs)
- [Call for Copy Editors](#) (Google Docs)
- [Guidelines for Copy Editors](#) (Google Docs)
- [Proofreading Guidelines](#) (Google Docs)

We made heavy use of Google Sheets and AirTable for project management. Please [contact the editors](#) if you'd like more information about these processes.

Adoption Form

If you have adopted concepts from this book or made a revised/adapted version for your own insitution, please let us know with the [Adoption form for *Open Pedagogy Approaches*](#).

Feedback and Suggestions

Feedback, suggestions, or conversation about any portion of this book may be shared via our [Rebus Community Discussion Page](#). Tweets on this project use the hashtag #OpenPedCollab.

Alternatively, you can fill out this [Errata form](#).

Version History

This page provides a record of edits and changes made to this book since its initial publication. Whenever edits or updates are made in the text, we provide a record and description of those changes here. If the change is minor, the web version will be immediately updated. If the edits involve substantial updates, the edition number increases to the next whole number, and web and PDF editions will be updated on a regular schedule.

The files posted alongside this book always reflect the most recent version. If you find an error in this book, please let us know in the [Rebus Community platform](). (You could instead fill out an [error reporting form]() for the book, though we prefer the discussion platform so others can see if the error has already been reported.)

We will contact the author and make the necessary changes as soon as possible. Once complete, this Version History page will be updated to reflect the edits made.

VERSION HISTORY

Version	Date	Change	Affected section
1.0	July 1, 2020	Original web-only publication release. (Formal release with PDF downloads to happen August, 2020).	
	July 2, 2020	Spelling correction	Harnessing the Power of Student-Created Content
	July 3, 2020	Punctuation and clarity improvements	Introduction
	July 3, 2020	Spelling correction	"And Still We Rise": Open Pedagogy and Black History at a Rural Comprehensive State College
	July 17, 2020	Punctuation corrections	Acknowledgements
	July 20, 2020	Addition of Guide for Copy Editors and Proofreading Guide	Resources Used In the Making of This Book