Open Education Primer

An Introduction to Open Educational Resources, Practices and Policy for Academic Libraries

SPARC Open Education Leadership Program | Version 1.0

SPARC

About This Resource

Welcome to the *Open Textbook Primer*, the textbook for the SPARC Open Education Leadership Program. This resource is intended to provide an introduction to open education for academic librarians in North America, with emphasis on the three pillars of resources, practices, and policy.

Background

The *Open Education Primer* is a living document. It began as a document called the *Open Education Toolkit* commissioned by SPARC in 2015. It was then opened up for crowdsourced editing, but was never fully completed. When SPARC launched the Open Education Leadership Program in 2017, we decided to put the principles of open education into practice and assigned it as the textbook for our pilot cohort to both learn from and build upon. Version 1.0 is a result of their outstanding work.

Starting in fall 2018, the second cohort of SPARC Open Education Leadership Fellows are assigned the task of preparing Version 2.0. Future iterations of the program will in turn build on their work.

Contribution Policy

SPARC Open Education Leadership Fellows have permissions enabled to comment and suggest changes to this Google Doc. The underlying Version 1.0 document is publicly visible, but comments and suggestions will only be visible to those with permission. To see the public version, switch to View Only mode.

If you contribute, you agree to release any copyrightable contributions under a CC BY License. Attribution will be provided by adding your name under the Contributors list, and substantial contributions will be acknowledged at the end of each chapter. Contributions will be reviewed by the editors, and incorporated into Version 2.0 for publication in September 2019.

Contributors are encouraged to think big about the document and provide edits or suggestions at any level: from the overall structure down to sentence-level edits. While the 2017-2018 SPARC Leadership Fellows made excellent progress on the document, it is a living resource and will need ongoing input to become the best resource that it can be.

Editorial Priorities

Below are a set of priorities for the document identified by the editors. While contributions need not be limited to these areas, help with these priorities are especially appreciated.

- ❑ **Consistency:** Through multiple rounds of editing, the depth of coverage and detail is inconsistent across chapters. Consider where detail can be cut or added, or where chapters could be split to make the coverage more even.
- ❑ **Updating Facts:** A number of the examples and statistics are still from 2015. Please replace them with the most relevant, modern sources.
- ❑ **Culling Resources:** Each chapter has a "More Resources" section. These lists have grown substantially, and include many unnecessary or outdated resources. The goal should be to reduce each chapter down to 5-10 high quality sources. Furthermore, we'd like to get away from spelling out hyperlinks, and instead embedding them.
- ❑ **Converting Citations:** There are many unnecessary APA in-text citations left over from the original draft. Claims that require support should simply indicate the source and provide a hyperlink, then ensure that the linked resource is provided in the More Resources list.
- ❑ **Content Editing:** Both copyediting and editing for clarity and consistency are strongly encouraged.
- ❑ **New Topics:** We are always open to contributions of new chapters that cover areas of Open Education that are underrepresented or missing in the current version. Chapter proposals should be sent to editor Nicole Allen (nicole@sparcopen.org).

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1. What is Open Education?

Education is essential to advancing society. It's how we pass down the wealth of human knowledge and equip the next generation of leaders, innovators and productive members of society. Our educational systems are built with the goal of providing every person the opportunity to build a better life—by turning children into citizens, learners into teachers, laborers into skilled workers.

Open Education Defined

Open education stems from the fact that expanding educational opportunities is more possible now than it has ever been before. Through the Internet, learners can find information instantly on virtually any topic, teachers can share their knowledge with students on another continent almost as easily as in their own classroom, and educational materials can be disseminated to a worldwide audience at virtually no marginal cost.

> *Open Education encompasses educational resources, tools and practices that can be freely and fully used in the digital environment without legal, financial or technical barriers. The meaning of "open" is typically defined in terms of users being able to freely exercise the five "R" rights: retain, reuse, revise, remix, and redistribute.*

Open Education is the realization of everything education can be in today's world: where teachers, learners and members of society can leverage all of the new pathways offered by technology to create and share knowledge together. This can start as small as a student using open resources to enrich her education, or become as large as an entire university that offers courses openly online to the entire world.

Pillars of Open Education

Open Education is a broad movement that applies differently across the world. In the context of higher education institutions, it is useful to think about Open Education in terms of three main pillars:

- ❑ **Open Educational Resources:** Open educational resources (OER) are the foundation upon which Open Education is built. OER are defined as educational materials that are distributed at no cost with legal permission for the public to freely use, share, and build upon the content. OER include open textbooks, lecture videos, presentation slides, assessments, software, articles, and any other kind of content published online and shared openly with the world. These resources are either in the public domain or carry an open license granting legal permission for their use,

and can be used on a variety of software platforms, learning management systems, and in print.

- ❏ **Open Educational Practices**: Open Educational Practices (OEP) are teaching techniques that leverage the "open" nature of OER and open technologies to facilitate learning. This may include open pedagogy where students participate in the creation or improvement of OER, "flipped classroom" models where students watch open video lectures to free up class time for discussion, or online courses taught openly so that anyone with an internet connection can participate.
- ❏ **Open Educational Policy:** Open Educational Policy refers to policy frameworks that support, encourage and remove barriers to Open Education. This encompasses all levels of policy from the Federal government to individual academic departments, and may include mission statements, human resource policy, intellectual property policy, professional development programs, resource allocation decisions, and sustainability models.

The Five Rs of Open

The "Five Rs" is a widely adopted framework defining what makes educational material open. Users must be able to engage in the Five Rs freely and with permission. (Wiley, 2014)

- ❏ **RETAIN -** the right to make, own, and control copies of the content.
- ❏ **REUSE -** the right to use the content in a wide range of ways (e.g., in a class, in a study group, on a website, in a video).
- ❏ **REVISE -** the right to adapt, adjust, modify, or alter the content itself (e.g., translate the content into another language).
- ❏ **REMIX -** the right to combine the original or revised content with other open content to create something new (e.g., incorporate the content into a mashup).
- ❏ **REDISTRIBUTE -** the right to share copies of the original content, your revisions, or your remixes with others (e.g., give a copy of the content to a friend) .

Chapter Notes

More Resources

Analyzing your Instructional Environment: A Workbook
http://www.ala.org/acrl/aboutacrl/directoryofleadership/sections/is/iswebsite/projpubs/aie

2. Why Open Education?

When it comes to the “why” for open education, the answer always comes back to students. The commonly-cited reason for open education is around the cost barriers to accessing a quality education. This is important, but there are also myriad reasons beyond financial savings that make open education worth advocating for.

The Case for Open Education

Textbook costs should not be a barrier to education

The price of textbooks has skyrocketed more than three times the rate of inflation for decades. College students face steep price tags that can top $200 per book, and K-12 schools use books many years out of date because they are too expensive to replace. Using OER solves this problem because the material is free online, affordable in print, and can be saved forever. Resources that would otherwise go to purchasing textbooks can be redirected toward technology, improving instruction, or reducing debt.

Students learn more when they have access to quality materials

The rapidly rising cost of textbooks in higher education has left many students without access to the materials they need to succeed. Numerous studies have documented that students who use OER do as well or better than those using traditional materials. OER also create important opportunities to meet the needs of diverse learners, including improving cultural relevance and making modifications to meet the needs of students of all abilities.

> *In total, 7,779 students have utilized OER materials across the ten studies that attempted to measure results pertaining to student efficacy … the use of OER was sometimes correlated with higher test scores, lower failure, or withdrawal rates. None of the nine studies that measured efficacy had results in which students who utilized OER performed worse than their peers who used traditional textbooks. (Robinson, Fischer, Wiley, & Hilton, 2014).*

Technology holds boundless potential to improve teaching and learning

Open Education ensures that teachers, learners and institutions can fully explore this potential. Imagine an American History textbook with the latest news from the run-up to the 2018 election, or a math tutorial that incorporates local landmarks into word problems. Imagine a lecture attended by hundreds of thousands of people across the globe, or a peer-to-peer exchange between Canadian students learning Mandarin with Chinese students learning English or French. All of this and more is possible when the pathways for technology in education are fully open.

Better education means a better future

Education is the key to advancing society's greatest goals, from a building a strong economy to leading healthy lives. By increasing access to education and creating a platform for more effective teaching and learning, Open Education benefits us all.

Open education allows for continuous quality improvement

When using traditional educational materials, educators can identify problems and alert the author or publisher to them, but they must then wait for the next edition before seeing a correction. With OER, any shortcomings in the materials can be corrected immediately, because open resources give educators permission to make changes. The adaptability of OER offer the ability to provide targeted, localized education experiences to students from different locations, cultures, and backgrounds. (Wiley, 2014).

Open education gives educators and learners control over content

Using OER can enable educators to become more involved and invested in teaching and learning practice.

> *"Most open licenses permit instructors to create customized versions of the textbook for use in their own classroom. For example, an instructor could remove unwanted chapters, change notations, or insert their own sections and examples. Instructors can distribute their customized versions online, or have them printed for students by the bookstore or a local copy shop." (Fasimpaur, 2015)*

Many open textbooks also come with ancillary resources like test banks and quizzes. The flexibility of open licensing allows educators to create supplementary materials for open textbooks which can link back to the texts themselves, something which would be considerably more difficult with the proprietary nature of traditional textbooks. An example of this process in action is the OpenStax Hub available through OER Commons, where educators can create and share educational resources designed to supplement specific textbooks available from OpenStax.

Open education supports true academic freedom

The ability to adapt, update, and remix OER enables a new way of practicing academic freedom for faculty and instructional staff of all disciplines. Under a traditional model, teachers are encouraged to "follow the textbook" and therefore don't have a lot of room to set their own pace or collate the content of their courses from various sources (Fasimpaur, 2015). Open licenses put the control of education back in the hands of faculty, researchers,

instructional designers, students. Open licensing allows for a community to grow: faculty can engage a broader spectrum of their peers in the creation, review, and revision process.

Open pedagogy enables better pedagogy

While it is not necessary to use OER any differently than traditional textbooks, OER provides a significant opportunity for educators to transform their practice. Because learners and educators have more control over the materials they're using, and because the materials are freely available using open licenses, they offer an opportunity for students to produce content that can itself be openly shared, used and remixed by a wider audience.

> *"Open pedagogy means providing real-life, relevant, and transparent learning opportunities that let students become much more engaged with the material, thereby improving learning outcomes. Because students know their work will be used both by their peers and potentially by future generations of students, they invest in this work at a different level" (Wiley 2013).*

Libraries can be leaders in opening up education

Librarians are a valuable link between OER and students and faculty. They are leading the way on many campuses. They are the problem-solvers who can provide an entry point for open educational practices that include textbooks and ancillary resources. In fact, a recent report on the outreach activities of SPARC member institutions has found that libraries are the most actively engaged OER outreach groups on college campuses (Yano, 2017).

Library resources are available to students largely for free, but those resources are also published under a traditional proprietary model that restricts what faculty and students can do with them. Open educational resources are available for free or at low cost to students for free, but their open licenses give irrevocable permissions to retain, reuse, revise, remix, and redistribute them.

Chapter Notes

More Resources

Hilton III, J., & Laman, C. (2012). One college's use of an open psychology textbook. The Journal of Open, Distance and E-Learning, 27(3), 265–272. http://dx.doi.org/10.1080/02680513.2012.716657

Iiyoshi, T., & Kumar, M. S. V. (2008). Opening Up Education (Open Access Edition). Retrieved from https://mitpress.mit.edu/books/opening-education

Ngugi, Catherine N. "OER In Africa's Higher Education Institutions." Distance Education 32.2 (2011): 277-287. Academic Search Premier. Web. 18 Aug. 2013.

OpenStax College. (2014). Our textbooks have saved students $30 million [press release]. Retrieved from http://openstaxcollege.org/news/our-textbooks-have-saved-students-30-million

Pawlyshyn, N. (2013). Adopting OER: A Case Study of Cross-Institutional Collaboration and Innovation. EDUCAUSE Review. Retrieved from http://www.educause.edu/ero/article/adopting-oer-case-study-cross-institutional-collaboration-and-innovation

Pigott Robinson, L. (n.d.). Who cares?: Using real-world perspectives to engage academically gifted learners - Reaching every learner: Differentiating instruction in theory and practice. Retrieved July 13, 2015, from http://www.learnnc.org/lp/editions/every-learner/6682

Robinson, T. J., Fischer, L., Wiley, D., & Hilton, J. (2014). The Impact of Open Textbooks on Secondary Science Learning Outcomes. Educational Researcher, 43(7), 341–351. http://doi.org/10.3102/0013189X14550275

Acknowledgments

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3. Open Educational Resources

Open educational resources (OER) are the foundation upon which open education is built. OER are defined as educational materials that are distributed at no cost with legal permission for the public to freely use, share, and build upon the content. OER include open textbooks, lecture videos, presentation slides, assessments, software, articles, and any other kind of content published online and shared openly with the world.

Defining OER

OER unleash the use of content; they are freely distributed online under a “some rights reserved” (as opposed to “all rights reserved”) copyright license that grants blanket permission to reuse, revise, remix and redistribute the content. Unlike ‘closed’ e-textbooks, users can engage with OER content in the myriad ways possible in the digital environment— copying, mixing, matching, sharing, printing, editing and more.

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

A 2007 report published by UNESCO's Virtual University identifies several characteristics of ideal OER. While aspirational, this list can help provide a guiding star for OER creators and practitioners.

- ❏ The license under which an OER is released should mention precisely what is authorized in terms of adaptation and re-use.
- ❏ OER should be published in a format that everyone can open, copy and paste from, and edit content in, without needing to install proprietary software.
- ❏ To be re-usable easily, OER should be released in small chunks, or be easily separable into smaller chunks.
- ❏ OER should be easy to search for and find. This means that resources should be described using standards-compliant metadata, to enable federated searching across a variety of search tools.
- ❏ OER should be efficient (i.e. well designed and of high quality) for teaching and learning.

Examples of OER

Most people think first of textbooks when they think of OER. Open textbooks are the most visible, easily identifiable open resource available. They are often the first exposure to OER for students, instructors, and others working in post-secondary education.

Open textbooks are high-quality college texts with an "open" copyright license allowing the material to be freely accessed, shared and adapted. Open textbooks are typically distributed online at no cost and can be purchased in a variety of other print and digital formats at a low cost, including hard bound copies. Using open textbooks in place of traditional textbooks saves students 80% on average (Student PIRGs, n.d.).

Beyond Textbooks

Open educational resources can include individual learning objects (like videos and graphics), entire programs of study, and everything in between: courses, workshops, lesson plans, web tools, lab assignments, test banks and study guides. OER exist across almost all academic fields of study. The only requirement for OER is that they are available for free sharing and reuse among educators.

At least one international project: OERu (Open Educational Resources Universitas) seeks to make formal academic qualifications accessible to anyone online through a worldwide partnership of accredited post-secondary institutions.

Some Common Sources of OER

- CK-12
- LibreTexts
- Project Gutenberg
- Open Textbook Library
- OpenStax
- Open SUNY
- Open Oregon Pressbooks
- Open Michigan
- OER Commons

OER in Practice

How OER Are Developed

In the U.S., a national movement has emerged around OER, encompassing everything from MIT's OpenCourseWare program to the online Khan Academy to a $2 billion federal grant

program for workforce training materials. Numerous states have invested in OER as a cost-saving measure (Allen 2013). OER are not only the product of large initiatives, however. As a result of the openness to adoption and remixing, individual educators often play a great role in developing, improving, and sharing free materials as part of their usual work preparing for classes.

How OER Are Used

Open resources are gaining traction as more faculty seek alternatives that all students can afford and immediately access. Open textbooks were in use by more than 3,000 faculty and hundreds of thousands of students in 2013 alone. Worldwide, OER are used to bring education to communities in both first world and developing nations that otherwise would face insurmountable cost and access barriers.

How OER Can Support Institutions

The momentum behind this movement will only intensify as new research links OER with better student success. In 2012, an OER pilot program at the Virginia State University Business School resulted in 30-40 percent higher GPAs and more than $200,000 in student savings across nine core courses using open textbooks. Project Kaleidoscope, a pilot funded by the Next Generation Learning Challenge, documents improved success rates in gatekeeper courses, especially for low-income students.

As opportunities to bring new learning technologies on campus abound, the choice each institution must make is which model to prioritize. The ongoing transition from print to digital is a singular opportunity to trade the existing broken market for one that better serves the needs of students (Allen 2013).

Chapter Notes

More Resources

7 things to know about open textbooks-Educause.pdf. (n.d.).

Affordable Learning Georgia. (2015). Open Textbooks - Find Textbooks / Affordable Learning Georgia. Retrieved July 20, 2015, from http://www.affordablelearninggeorgia.org/find_textbooks/open_textbooks

Allen, N. (2013, December). The Future of Digital Textbooks. Public Purpose: AASCU (The American Association of State Colleges and Universities), (Winter 2013). Retrieved from http://www.aascu.org/MAP/PPMDefault.aspx?id=6314#2

Baker, J., & Hood, J. (2011, March). 7 Things You Should Know About Open Textbook Publishing. EDUCAUSE. Retrieved from http://net.educause.edu/ir/library/pdf/eli7070.pdf

Hewlett Foundation. (n.d.). Open Educational Resources. Retrieved August 12, 2015, from http://www.hewlett.org/programs/education/open-educational-resources

Hilton III, J. (2014). The Review Project. Retrieved from http://openedgroup.org/review

Hilton, J., & Laman, C. (2012). One college's use of an open psychology textbook. The Journal of Open, Distance and E-Learning, 27(3), 265–272.

Wiley, D., Green, C., & Soares, L. (2012, February 7). Dramatically Bringing Down the Cost of Education with OER. Retrieved from https://www.americanprogress.org/issues/labor/news/2012/02/07/11167/dramatically-bringing-down-the-cost-of-education-with-oer/

Acknowledgments

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4. Open Educational Practices

Much of the focus of the Open Education movement is on developing and sharing open content. Open educational practices are what happen in the classroom around the content, where an open environment creates many new possibilities to improve teaching and learning.

Defining Open Educational Practice

Open educational practice is a set of activities and support around the creation, use and repurposing of open educational resources (OER). OER focus largely on the questions of how resources can be made available with broad reuse permissions. In contrast, open educational practice asks the question of how OER can be used in the educational context. In a sense, open educational practice (OEP) means to put OER to the test by creating educational activities, feedback and interaction around a piece of open learning material.

Focusing on "practice," rather than the actual resources, helps ensure that a holistic approach is taken; including the stakeholders involved (such as the designers, the learners and the teachers) and most importantly the context within which the OER is created or used.

Teachers, potentially, no longer need to adopt the traditional role as providers of knowledge; provision of content via OER means their role can shift to one that is focussed more on facilitation than delivery. They can help students validate their learning experiences, rather than simply transfer knowledge to them (Ehlers & Conole, n.d.).

Open Pedagogy

According to David Wiley (2013), "Open pedagogy is that set of teaching and learning practices only possible in the context of the free access and 4R permissions characteristic of open educational resources … Simply adopting open educational resources will not make one's pedagogy magically change to take advantage of the capabilities of the internet. Adding legal permission to technological capacity only creates possibilities – we must choose to actively take advantage of them. There is nothing about OER adoption that forces innovative teaching practices on educators."

EdTech thought leader David Wiley speaks of 'disposable assignments,' such as the typical essay assignment, which has no purpose or applicability outside of the classroom. "Students hate doing them, teachers hate grading them, and therefore they're a huge waste of time and energy" (Wiley 2013).

Valuable assignments are ones where students see value, teachers see value, and they actually add value to the world. In theory, there's no reason why educational assignments shouldn't result in valuable products or processes beyond the school environment.

But that's not all. Consider how materials that are thoughtfully developed via collaboration and modified over time are stronger instructional tools that continue to improve with subsequent usage and adaptation. This directly translates into higher-quality student interaction with core concepts and, ultimately, mastery of competencies, especially when those materials are freely available online because of their open licensing. For example, while creating open content for flipped classrooms, faculty at the Kwame Nkrumah University of Science and Technology and the University of Ghana reimagined their pedagogical methods, suggesting that the open process facilitated improvement in instruction (Ngugi, 2013).

Characteristics of Open Educational Practice

- ❏ **Collaboration:** using OER means using resources created by others, even enhancing them and re-sharing under the same license. OEP encourages sharing and collaboration.
- ❏ **Social learning:** using OER can create more meaningful learning experiences instead of disposable assignments, as students may be asked to share their findings to blogs or wikis, shared bookmarking or other transparent and open spaces helping them realize that peer feedback and teamwork leads to deeper reflective learning.
- ❏ **Multiplier effect:** when learners interact with each other and with the open materials, they create new open resources that are in turn available for repurposing and sharing.
- ❏ **A bridge between old and new practices:** between informal and formal learning settings, between gatekeepers of knowledge and user-generated content.
- ❏ **Community:** when learners become content creators, teachers become learners themselves. Policymakers and administrators therefore need to co-create new policies and practices to take into account a new learning landscape, transforming the governance of education step by step (ICDE, n.d.).

Assessment in OEP

By making teaching practice aligned with the promise of OER, teachers become facilitators in knowledge creation, as opposed to an all-knowing authority figure who imparts information. Rather than transferring knowledge, teachers using open pedagogy help students validate their own learning experiences. In turn, validation in itself becomes a reflective practice, thus moving away from oral or written tests. (ICDE, n.d.)

Examples of OEP

Latin American Literature

In 2008, JB Murray, a professor at University of British Columbia, decided to include Wikipedia as a central part of a course he was teaching, SPAN312, titled Murder, Madness, and Mayhem: Latin American Literature in Translation. The assignment was: the students divided into groups to edit (and in a couple of cases create from scratch) Wikipedia articles on the texts and authors covered in the class.

Murray's belief was by actively contributing to the crowd-sourced encyclopedia, students would learn about its weaknesses, as well as its strengths. Also, they would as a side benefit improve articles in the field of Latin American literature, which in Murray's experience, Wikipedia has been especially weak (Murray 2008).

Project Management for Instructional Designers

A class at Brigham Young University: Project Management for Instructional Designers (PM4ID), taught by David Wiley, has as a learning resource an online textbook. As part of their education, students in a separate class: Introduction to Project Management work to improve the online resource. The second edition of Project Management for Instructional Designers was created by students in David Wiley's IPT 682: Introduction to Project Management class at Brigham Young University during Fall term 2012.

Chapter Notes

More Resources

Ehlers, U.-D., & Conole, G. C. (n.d.). Open Educational Practices: Unleashing the power of OER. University of Augsberg, Germany; Open University, UK. Retrieved from http://www.icde.org/en/resources/open_educational_practices/news_from_opal/Open+Educational+Practices%3A+Unleashing+the+power+of+OER.b7C_wlvU1m.ips

ICDE. (n.d.). ICDE » International Council for Open and Distance Education. Retrieved July 21, 2015, from http://www.icde.org/en/

Iiyoshi, T., & Kumar, M. S. V. (2008). Opening Up Education (Open Access Edition). Retrieved from https://mitpress.mit.edu/books/opening-education

Jhangiani, R. (2015a). An openness to openness: The terrifying and liberating process of disrupting higher education. Vancouver, BC Canada: SFU Harbour Centre. Retrieved from http://otsummit.bccampus.ca/livestream/

Jhangiani, R. (2015b, June). An openness to openness: The terrifying and liberating process of disrupting higher education. Presented at the Open Textbook Summit 2015, Vancouver, BC Canada. Retrieved from http://www.slideshare.net/BCcampus/an-openness-to-openness-the-terrifying-and-liberating-process-of-disrupting-higher-education-48938720

OPAL. (2010). Open Educational Quality Initiative (OPAL) Kickoff meeting discussion paper. Retrieved from http://www.icde.org/filestore/Resources/OPAL/Openeducationalpractice-approachingadefinitionforanewconcept.pdf

Open Education Consortium. (n.d.). Relating OCW to Pedagogy. Retrieved July 21, 2015, from http://www.oeconsortium.org/resources/toolkits/ocwpedagogy/

Shieber, S., & Suber, P. (2015, July 21). Good practices for university open-access policies. Retrieved July 24, 2015, from https://cyber.law.harvard.edu/hoap/Good_practices_for_university_open-access_policies

Stommel, Jesse. (2018, April 16). Textbooks, OER, and the Need for Open Pedagogy. Retrieved April 24, 2018 from https://www.jessestommel.com/textbooks-oer-and-the-need-for-open-pedagogy/

Wikipedia:WikiProject Murder Madness and Mayhem. (2015, May 6). In Wikipedia, the free encyclopedia. Retrieved from https://en.wikipedia.org/w/index.php?title=Wikipedia:WikiProject_Murder_Madness_and_Mayhem&oldid=661110223

Wiley, D. (2013, October 21). What is Open Pedagogy? Retrieved July 10, 2015, from http://opencontent.org/blog/archives/2975

Wiley, D., Clements, G., Drysdale, J., Francis, J., Harrison, B., Rino, J., ... Snyder, A. (2012). Project Management for Instructional Designers, 2nd ed. Retrieved August 12, 2015, from http://pm4id.org/

Acknowledgments

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5. Open Education Policy

The term “policy” refers to a framework for decision-making and action that can exist at all levels of governance: local, state, national, and international. Policies are formed to help organizations and societies function by establishing common rules and pathways that everyone agrees to, which helps reduce the need for repetitive decision making. Policy can be used both to advance open education, and also sometimes creates barriers.

Defining Open Education Policy

Open Educational Policy refers to policy frameworks that support, encourage and remove barriers to Open Education. This encompasses all levels of policy from the Federal government to individual academic departments, and may include mission statements, human resource policy, intellectual property policy, professional development programs, resource allocation decisions, and sustainability models. When we talk about Open Education Policy, we mean changes to existing policy frameworks that enable open education.

Levels of Policy

- **Institutional:** All education institutions have their own sets of policies that govern factors such as how faculty are evaluated and promoted, how course materials are designated and communicated to the bookstore, and how intellectual property on campus is licensed. Within the institution, policy also exists at multiple levels, from the top-level governance body down to individual offices and departments.
- **State/Provincial:** States and provinces have laws that govern the education institutions in their jurisdiction, which are especially influential in the case of public institutions where policy decisions encompass funding. State-level policies can intersect in open education in multiple ways, including providing funding, convening task forces, or setting transparency or open licensing requirements.
- **National:** In North America, national governments do not control institutions of higher education, but do carry important weight in terms of providing resources, raising visibility, and being able to set standards (particularly in the U.S.) Also, national decisions can have far reaching implications.
- **International:** Policy plays a different role at the international level, especially concerning education. International policy can help set priorities and provide a common language for communicating across borders. In fact, the term “open educational resources” was coined by UNESCO, an international body.

Open Education and Institutional Missions

Some post-secondary institutions have developed policies to encourage the broad use of OER in their programs of study, but as yet, few have incorporated open education principles into their official vision and mission statements. Participation rate is growing, however, because open education aligns closely with the educational and public service missions of publicly funded institutions.

Institutions who have open education as their mission often offer some professional recognition to scholars who practice open education. They recognize that creating OER puts content-rich material on the web that will be indexed by search engines and can be used to attract potential students. OER creation and use align well with institutional missions where (at least) part of that mission is to disseminate knowledge broadly (Wikibooks, n.d.).

Examples of Open Education Policy in Action

“Open” in Tenure and Promotion

The University of British Columbia (UBC) became one of the first institutions to include language recognizing OER as a contribution to scholarship in the institution's tenure and promotion guidelines (Yano, Munro & Coolidge, 2018). Driven by student government advocacy, this change creates a way for faculty to formally be recognized for engaging in OER activities. This policy change creates removes potential barriers to engaging in open practices by establishing it as an accepted norm, and it also creates incentives that could result in broader use of OER that benefits students.

Expanding Support for OER in Texas

The State of Texas passed in 2017 SB 810, a comprehensive piece of state legislation that addressed several aspects of OER. It codified a new definition of the term, created a state grant program, and required Texas institutions to mark OER in course catalogs for students. It also commissioned a study on the potential need for a statewide repository (Williamson, 2017). This legislation ignited a statewide conversation about OER in Texas, particularly around the implementation of the course marking requirement, which led to the development of an implementation toolkit at the University of Texas Arlington (Reed, n.d.). It also resulted in a grant program to faculty administered by the Texas Higher Education Coordinating Board.

Making Publicly Funded Resources Open

In 2017, the U.S. Department of Education adopted an open licensing policy for grant-funded materials. This policy followed an increasing call for public access to

publicly-funded resources across the research, data, and education space. The policy, now fully in effect, applies to the deliverables of discretionary grants, and was the result of an extensive rulemaking process that took 18 months (Allen, 2018). Relevant grant notices now include a statement that final grant deliverables must be openly licensed, and grantees are required to submit a dissemination plan for their openly licensed works. A similar policy was adopted at the U.S. Department of Labor.

Chapter Notes

More Resources

Allen, N. (2018, May 22). Marking Open Policy Milestones in the U.S. and Brazil. SPARC. Retrieved from https://sparcopen.org/news/2018/open-licensing-policy-milestones-u-s-brazil/

Parker-Milligan, M. (2015, May 4). Oregon Student Association » Mid-Session Policy Update 2015. Retrieved from http://www.orstudents.org/mid-session-policy-update-2015/

Reed. M. (n.d.). Texas Toolkit for OER Course Markings. University of Texas at Arlington. Retrieved April 14, 2018 from http://libguides.uta.edu/txtoolkit

Shieber, S., & Suber, P. (2015, July 21). Good practices for university open-access policies. Retrieved July 24, 2015, from https://cyber.law.harvard.edu/hoap/Good_practices_for_university_open-access_policies

SPARC (n.d.). State OER Policy Tracker. Retrieved April 14, 2018 from https://sparcopen.org/our-work/state-policy-tracking/

Stacey, P. (2013, April 25). Third Round of TAACCCT Grants Announced by US Department of Labor. Retrieved from http://creativecommons.org/weblog/entry/37938

State of Connecticut. (2015, July 1). AN ACT CONCERNING THE USE OF DIGITAL OPEN-SOURCE TEXTBOOKS IN HIGHER EDUCATION. Retrieved August 13, 2015, from http://www.cga.ct.gov/2015/ACT/SA/2015SA-00018-R00HB-06117-SA.htm

Tidewater Community College. (2014, July 10). TCC Policy – Use of Open Educational Resources | Adopting Open Educational Resources in the Classroom. Retrieved from https://courses.candelalearning.com/pathways/chapter/tcc-policy-use-of-open-educational-resources/

Wiley, D., Green, C., & Soares, L. (2012, February 7). Dramatically Bringing Down the Cost of Education with OER. Retrieved from

https://www.americanprogress.org/issues/labor/news/2012/02/07/11167/dramatically-bringing-down-the-cost-of-education-with-oer/

Williamson, D. (2017, August 10). The Way I See It: New Texas Legislature bills encourage OER use to increase student access. Rice University News. Retrieved from http://news.rice.edu/2017/08/10/the-way-i-see-it-new-texas-legislature-bills-encourage-oer-use-to-increase-student-access/

Yano, B., Munro, D., & Coolidge, A. (2018, July 18). University of British Columbia: Recognizing Open in Promotion and Tenure. Educause Review. Retrieved from https://er.educause.edu/blogs/2018/7/university-of-british-columbia-recognizing-open-in-promotion-and-tenure

6. The Status Quo

The movement for open education has been accelerated by pressures facing the traditional publishing system in higher education. While open education is part of a larger aspirational vision, at the local level efforts must be grounded in problems that affect the lives of people on campus.

The Textbook Cost Crisis

According to the College Board, the average undergraduate student should budget between $1,200 and $1,300 for textbooks and supplies each year (College Board, 2014). That's as much as 40 percent of what tuition costs at a two-year community college and 13 per cent at a four-year public institution.

For many students and families already struggling to afford a college degree, that is simply too much – meaning more debt, working longer hours, or making choices that undermine academic success.

In the United States, 31 percent of students have not registered for a course they're interested in because of the textbook cost (BCcampus, 2014). That's a loss for society as well as for that individual. Since 1977, college textbook costs have increased more than 1000% (Popken, 2015). To put that in context, it means that textbook prices have increased at 3.2 times the rate of inflation.

A Broken Market

Five publishers control more than 90% of the $8.8 billion textbook market (Student PIRGs, 2012). As a result, these companies are protected from serious market competition. According to NBC's review of Bureau of Labor Statistics (BLS) data, textbook prices have risen over three times the rate of inflation from January 1977 to June 2015, a 1,041 per cent increase (Popken, 2015).

At the same time, traditional textbook publishers benefit from a fundamental market flaw in the college textbook market. Unlike a typical market, there is no direct interaction between the producer and the consumer. With normal markets, like the automobile market, the consumer exercises control over prices by choosing to purchase products priced best for their value. This consumer choice forces producers to price their products competitively.

In the textbook market, consumer control is eliminated by the fact that the professor, not the student/consumer, selects the product and the student/consumer actually spends the

money. Because of this, students constitute a captive market, and traditional publishers are able to continually drive prices higher without fear of market repercussions (Student PIRGs, n.d.).

Digital books may be an answer to high textbook costs. However, not all publishing models are equally adapted for the digital world, and to maximize the potential of technology in education the industry needs to retool its core business model and the role of copyright within it. The dominant digital textbook model among traditional publishers is "e-textbooks," digitized alternatives to printed texts that students read on a laptop or tablet. Similar to PDF documents, e-textbooks enable students to annotate, highlight and search. The cost is usually 40-50 per cent of the print retail price, and access normally expires after 180 days.

As traditional publishers continue to evolve, models that depend on restricting access rather than enabling it cannot be the solution. A future defined by e-textbooks will only amount to trading one broken system for another (Allen 2013).

Textbook Cost Facts

According to a survey in 2016 by Florida Virtual Campus:

- ❏ 66.6% of students did not purchase the required textbook.
- ❏ 53.2% of students spent more than $300 on textbooks during the spring 2016 term.
- ❏ The average survey participant purchased 2.6 textbooks that were not used during his or her academic career.
- ❏ 29.2% of students who received financial aid reported that their aid covered none of their textbooks costs.
- ❏ 84% of survey participants reported a willingness to rent textbooks in order to reduce costs.

College and University libraries have attempted to help address the issue of high textbooks costs by purchasing copies of course textbooks and making them available to students for limited check out periods. However, such purchasing programs are not a sustainable approach to the textbook cost problem, and these services have often proved inadequate to meet the demand. Library materials budgets cannot purchase enough textbooks for all students who need them and students become frustrated waiting for their turn to use textbooks. This does not solve the problem of high textbook costs; it just shifts the cost from student to library. Shifting the focus from purchasing and providing limited access to traditional print textbooks to partnering with teaching faculty, student retention services,

and campus administration to support and adopt open educational resources, positions libraries to help make a positive impact on the real problem.

Chapter Notes

More Resources

Allen, N. (2013, December). The Future of Digital Textbooks. Public Purpose: AASCU (The American Association of State Colleges and Universities), (Winter 2013). Retrieved from http://www.aascu.org/MAP/PPMDefault.aspx?id=6314

Education Database Online. (2011, November 5). Textbook Shakedown. Retrieved July 10, 2015, from http://www.onlineeducation.net/2011/11/05/textbook-shakedown

OnlineEducation.net. (2012, September 6). College Textbook Prices [Infographic] | Daily Infographic. Retrieved July 10, 2015, from http://www.dailyinfographic.com/college-textbook-prices-infographic

Popken, B. (2015, August 6). College Textbook Prices Have Risen 1,041 Percent Since 1977. Retrieved August 12, 2015, from http://www.nbcnews.com/feature/freshman-year/college-textbook-prices-have-risen-812-percent-1978-n399926

Student PIRGs. (2012a). Textbook Pricing | Student PIRGs. Retrieved August 12, 2015, from http://studentpirgs.org/sp/textbook-pricing-0

Student PIRGs. (2012b). Open Textbooks: Student PIRGs. Retrieved July 10, 2015, from http://studentpirgs.org/open-textbooks/about

Student PIRGs. (2012c). Our Textbook Mission | Student PIRGs. Retrieved July 10, 2015, from http://studentpirgs.org/sp/our-textbook-mission

Acknowledgments

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7. Open Education on Campus

The open education movement is rapidly growing, with more and more institutions publishing or using open educational resources and practices. The role of the advocate is helping to promote and sustain this growth on campus.

Mapping Campus Constituencies

The Role of Academic Libraries

Academic libraries have a long history of connecting the communities they serve with resources that meet their learning needs. Librarians are often the first point of contact for students who are overwhelmed by textbook costs and looking for alternate ways to access course materials. Course reserves and textbook purchasing programs are two common approaches to countering the high cost for students, but there are serious sustainability concerns with this approach as a long-term solution.

Additionally, instructors often look to librarians for resources to use in their teaching and learning practices. Therefore, libraries have an integral role to play in finding and curating OER, as well as and educating instructors on the benefits of open education.The more librarians know about Open Educational Resources—how to find, curate, assess and implement them, how to publish them, and how to adopt open educational practices—the better the service they can provide to learners and teachers alike.

Stakeholder Perspectives

- ❏ **Upper administration:** Presidents, vice-presidents and other administrators take an institution-wide perspective, and are concerned about how open education can impact the bottom line (is there possibility for OER to lead to revenue generation, for example) and institutional reputation (which will attract more students, top researchers, grant funding, etc.)

- ❏ **Mid-level administration:** Deans and department heads take a program perspective, and are concerned about how open education can lead to program enhancement, attracting top faculty, better use of teaching and learning resources, etc.

- ❏ **Faculty:** In research institutions, faculty have concerns over teaching loads, research funding, and some may also have intellectual property concerns that need to be addressed before open education policy can be implemented. Teaching faculty have an opportunity to enhance their practice using open pedagogy.

- ❏ **Information technology:** The use of OER can have an impact on the way the LMS and other educational technology is used and configured.
- ❏ **Libraries:** Librarians have a unique perspective on the use of OER and open practices, as they are a valuable resource for finding and deploying OER on campus.
- ❏ **Instructional designers:** Instructional designers work closely with faculty to design and develop courses. For courses with an online presence (LMS shell) whether taught from a distance or face-to-face, instructional designers are often an important link between the teaching faculty and information technology staff. They can play a key role in helping faculty incorporate OER and open pedagogy (open educational?) activities into courses.
- ❏ **Students:** Student loan debt, including the high cost of post-secondary textbooks, is an increasing concern for students, affecting their ability to access higher education. Student groups are some of the most vocal advocates of open education for this reason.
- ❏ **Bookstores:** Bookstore staff can be among your most important OER allies. Because bookstores rarely make much profit on the sale of textbooks and face much larger threats from off-campus booksellers, many have gotten involved in OER initiatives. Bookstores can help by raising awareness with faculty, procuring print on demand copies, or providing important data.

Common Opportunities

Open education resonates deeply with educators (whether instructional or non-instructional staff) who have a passion for teaching or have dedicated their lives to the advancement and dissemination of knowledge. Making the case for open education is often a matter of tapping into this passion and inviting education professionals to join in a growing, world-wide movement to improve education (OER Consortium, n.d.).

Students benefit from the lower cost of open education resources and practices. Where open educational practices are used, a richer learning experience is possible. In situations where students are entering a formal learning context for the first time, open education can help informal learners to build up confidence about formal education and support their transition into academic institutions.

Post-secondary institutions that use OER and open educational practice have an opportunity to demonstrate their willingness to innovate, thereby enhancing their reputations. Open education programs demarcate an institution of higher learning as a leader in a fast moving and highly significant area. Making OER public may prompt other

institutions, community organizations, and businesses to pursue partnerships with institutions that otherwise would not be possible.

Apart from these economic reasons, publishing resources openly is reclaiming traditional academic practice of sharing knowledge. Releasing material can help bridge gaps between groups. Seeing the content used for for teaching and learning in universities can help people realize that higher education may not be too big a step for them.

Common Challenges

Proponents of open education must be prepared to address reservations about such issues as cost, erosion of distance education revenues, drain on faculty time, intellectual property, and other issues.

Faculty concerned about reputation and intellectual property can hear the case that open education makes it possible (usually via open access models) to share materials more easily, to make their work more visible, therefore attracting more funding. Having materials more widely disseminated helps raise the profile of educators and allows their resources to be improved upon by others (Wikibooks, n.d.).

Faculty concerned about the time taken in finding and curating resources can be shown that using existing OER frees up time that can be spent on other aspects of the teaching and learning process (Wikibooks, n.d.).

Furthermore, letting students preview high quality resources prior to applying at an institution is good practice and may boost recruitment.

Chapter Notes

More Resources

About Noba and the Diener Education Fund. (n.d.). Retrieved August 3, 2015, from http://nobaproject.com/about-noba

Allen, N. (2014). Webcast: Open Education Week on Campus. Retrieved from https://vimeo.com/86109661

BCcampus. (2014, September 9). The “Great Psychology Test Bank Sprint” offers new OER for instructors | BCcampus. Retrieved August 3, 2015, from http://bccampus.ca/2014/09/09/bccampus-sprints-create-new-open-educational-resources/

Lane, A. (2012). A Review of the Role of National Policy and Institutional Mission in European Distance Teaching Universities with Respect to Widening Participation in Higher Education Study through Open Educational Resources. Distance Education, 33(2), 135–150. http://doi.org/10.1080/01587919.2012.692067

OER Consortium. (n.d.). Making the Case | The Open Education Consortium. Retrieved August 2, 2015, from http://www.oeconsortium.org/resources/toolkits/toolkit-making-the-case/

Open Education Week. (n.d.). Retrieved August 3, 2015, from http://openeducationwkstoryfeed.me/

Peet, L. (n.d.). NCSU Libraries Spur Innovation Through Alt-Textbook Grants. Retrieved August 3, 2015, from http://lj.libraryjournal.com/2014/09/oa/ncsu-libraries-spur-innovation-through-alt-textbook-grants/

What is a Book Sprint? | Book Sprints. (n.d.). Retrieved August 3, 2015, from http://www.booksprints.net/about/Wikibooks. (n.d.). Open Education Handbook/Why use OER? -

Wikibooks, open books for an open world. Retrieved August 3, 2015, from https://en.wikibooks.org/wiki/Open_Education_Handbook/Why_use_OER%3F

Acknowledgments

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8. Open Education Programs

Open education programs may be implemented at a post-secondary institution in any number of ways. Some of them are explained here in this chapter. A common first step for universities or colleges interested in expanding open education on campus is to establish a committee or task force to spearhead work. Committees may organize events, oversee additional programs, or conduct planning or needs assessments on campus.

Types of Programs

Open Textbook Reviews

Open textbook review programs encourage educators to review and evaluate existing open resources. By reviewing open textbooks, educators become part of the OER quality assurance process, thus addressing two of the common concerns instructors have about using open resources: 1) educators often hesitate to use a resource they didn't create or curate themselves and 2) they are unsure if the quality of a "free" textbook is the same as that of an expensive textbook.

One example of this type of program is the Davidson College TDEL OER Review Program. This program asks faculty members at Davidson College to:

- ❏ Attend an OER consultation with a librarian in which they will learn more about OERs and identify appropriate OER(s) for review.
- ❏ Complete a review form (provided) for each OER identified in the consultation.
- ❏ Provide feedback on the program through an online survey.

Furthermore, Davidson's program, and others like it, provide faculty who complete their evaluations with a small stipend to offset the time they have committed to evaluating and reviewing OER.

Open Education Workshops

Organizing an on-campus professional development workshop on Open Education can be a successful way to engage faculty on campus.

- ❏ **System-Wide Impact:** As part of its highly successful Affordable Learning Georgia program, the University System of Georgia offers locally-relevant trainings and events for members of its community to learn about OER.

- ❏ **Open Textbook Network:** The University of Minnesota launched the Open Textbook Network (OTN), which provides workshops to member institutions to increase open textbook adoptions. A significant number of faculty who attend OTN workshops end up adopting open textbooks.

- ❏ **Local Workshops:** North Shore Community College Library in Massachusetts has an open educational resource program that offers workshops and support for instructional staff to use OER.

Mini-Grant Programs

A mini-grant program is one that provides small grants to faculty to replace costly, traditionally-published textbooks with free or low-cost alternatives for students. These alternatives can take multiple forms, making use of a variety of open and library licensed content.

- **University of Massachusetts Amherst:** Educators and administrators realized that $1,200 (the average cost of textbooks per year) was equivalent to 79 percent of earnings from a summer job for a student working full-time earning the Massachusetts minimum wage. So, in spring 2011, UMass launched an Open Education Initiative, providing grants for educators to create new resources, use existing library resources, or use existing open resources.

- **North Carolina State University:** NCSU also instituted a similar program, citing the availability of "mini-grants," consulting sessions, workshops, as elements of their success. Libraries provided education, expertise, and outreach in their support of the mini-grant programs on all campuses.

- **Temple University:** The first program of its kind, the Alternate Textbook Project at Temple Libraries supports faculty to stop using expensive commercial textbooks and to instead create their own set of learning content that can be offered to students at no cost.

Many mini-grant programs supplement OER with other materials that are available free on campus, including library-licensed materials (which have already been paid for), public domain resources, free internet resources such as YouTube videos, and materials under fair use. This approach can help broaden the spectrum of content available, although it is important to be clear with faculty and students about what is OER and what is not.

Textbook Transformation and Adoption Initiatives

Affordable Learning Georgia- encourages faculty across University system of Georgia campuses to focus on transforming courses across the system.

OER Publishing

The best way to ensure open resources are available is to create them. Some higher education institutions have developed programs to have their faculty create open resources:

- ❏ **Oregon State University:** OSU established a pioneering model for publishing open textbooks through a collaboration of OSU Libraries, OSU Press, and OSU Extended Campus. It provides financial, technical and editorial support for faculty members to create "open" texts that aim to reduce costs for students and further position Oregon State as a leader in research and teaching (Oregon State University, 2014).
- ❏ **Open SUNY Textbooks:** Open SUNY is an open access textbook publishing initiative established by State University of New York libraries and supported by SUNY Innovative Instruction Technology Grants. The pilot project was launched in 2012 to publish high-quality, cost-effective course resources by engaging faculty as authors and peer-reviewers (Millard, 2015).

Zero Textbook Cost Degree

A Zero Textbook Cost or "ZTC" Degree refers to a degree pathway where at least one section of every course uses free and open materials. The idea is that students can attain a degree without spending a signle dollar on textbook costs. Lumen Learning reports on average, drop rates decrease by 6% in OER-based "Z courses" (Lumen Learning, n.d.).

- ❏ **Tidewater Community College:** TCC introduced the first truly textbook-free degree program in 2013: there is no cost for textbooks, and all course content is openly-licensed for its Business Administration Associate of Science Degree. This includes not only the degree-specific content but also the general education courses needed to acquire the credential.
- ❏ **Pierce College:** This college in Washington State has instituted a Z-degree program for a university transfer degree. The Pierce Open Pathway program will allow students to enrol in online and hybrid classes, which feature low-cost, openly licensed learning resources (Pierce College, 2015).
- ❏ **Achieving the Dream:** Launched in 2016, a multi-campus OER Degree initiative led by Achieving the Dream will seek to boost college access and completion, particularly for underserved students, by engaging faculty in the redesign of courses and degree programs through the replacement of proprietary textbooks with open educational resources. The three year initiative includes 38 community colleges in 13 states.

OpenCourseWare and MOOCs

Some of the most publicly recognizable Open Education projects fall into this category. OpenCourseWare refers to campus programs that enable the free and open sharing of instructional materials that faculty create. MOOCs are a similar idea expanded to full courses, although many courses called MOOCs do not meet the criteria for “open” in open education (Parr, 2013).

Comparison Chart

The chart below summarizes key aspects of the programs discussed above.

Program	**Reach**	**Openness**	**Impact**
Open Textbook Reviewers	Individual instructor level (with some institutional support)	Completely open	Significant: student savings are measurable
Alt-Textbook	Individual instructor level (with considerable institutional support)	Partial: some closed copyright resources used	Considerable: student savings increase as instructor uptake grows
Z-Degree	Program level (with extensive institutional support)	Completely open	Extensive: 100% coverage in targeted programs
OpenCourseWare	Institutional level	Completely open	Significant: student savings are measurable
MOOCs	Very broad; but at an individual level.	Partial: only some are completely “open,” most use proprietary platforms and resources	Unknown: most MOOCs report less than 2 percent completion rate.

Chapter Notes

More Resources

Affordable Learning Georgia. https://www.affordablelearninggeorgia.org/about/about_us. Retrieved November 28, 2017)

Bell, S. (n.d.). Research Guides: The Alternate Textbook Project at Temple Libraries: Home. Retrieved August 14, 2015, from http://guides.temple.edu/alttextbook

Billings, M. S., Roh, C., Cross, W. M., & O'Connell, B. (2014). Libraries Leading the Way on the Textbook Problem. Presented at the Charleston Conference. Retrieved from http://works.bepress.com/marilyn_billings/63

CCCOER. (n.d.). Community College Consortium for Open Educational Resources. Retrieved August 14, 2015, from http://oerconsortium.org/

Davidson College Library. (n.d.). TDEL OER Review Program. Retrieved November 27, 2017, from https://davidson.libguides.com/open/TDELOER

Downes, S. (2011). Welcome to CCK11 ~ CCK11. Retrieved August 13, 2015, from http://cck11.mooc.ca/

Gaudet, D. (2014). Evolution of a Truly Open Arithmetic MOOC. In OpenCourseWare Consortium Global 2014: Open Education for a Multicultural World. Retrieved from http://conference.oeconsortium.org/2014/ai1ec_event/evolution-of-a-truly-open-arithmetic-mooc/?instance_id=

Goodchild, C. (n.d.). LibGuides. Open Educational Resources. The Project. Retrieved August 14, 2015, from http://libguides.northshore.edu/open

Lumen Learning. (n.d.). Lumen Learning – Success Story: Tidewater Community College. Retrieved August 2, 2015, from http://lumenlearning.com/success-story-tidewater/

Millard, M. (2015, March 16). Open source textbooks drive down cost of college | Opensource.com. Retrieved August 2, 2015, from http://opensource.com/education/15/3/open-textbooks-drive-down-cost-of-college

MOOCs and OERs – which one to go with? | The Open Education Consortium. (n.d.). Retrieved August 13, 2015, from http://www.oeconsortium.org/info-center/topic/moocs-and-oers-which-one-to-go-with/

Oregon State University. (2014, February 21). OSU open textbook initiative aims to reduce student costs, enhance learning. Retrieved August 13, 2015, from http://oregonstate.edu/ua/ncs/archives/2014/feb/osu-open-textbook-initiative-aims-reduce-student-costs-enhance-learning

Parr, C. (2013, October 17). Mooc creators criticise courses' lack of creativity. Retrieved August 13, 2015, from https://www.timeshighereducation.co.uk/news/mooc-creators-criticise-courses-lack-of-creativity/2008180.article?nopaging=1

Peet, L. (n.d.). NCSU Libraries Spur Innovation Through Alt-Textbook Grants. Retrieved August 2, 2015, from http://lj.libraryjournal.com/2014/09/oa/ncsu-libraries-spur-innovation-through-alt-textbook-grants/

Pierce College. (2015, July 2). New university transfer degree eliminates textbook costs. Retrieved August 14, 2015, from http://thesubtimes.com/2015/07/02/new-university-transfer-degree-eliminates-textbook-costs/

Pierce College. (n.d.). New university transfer degree eliminates textbook costs. Retrieved August 14, 2015, from http://wp.pierce.ctc.edu/blog/piercenews/2015/07/02/new-university-transfer-degree-eliminates-textbook-costs/

Wiley, D. (2012, July 1). The MOOC Misnomer. Retrieved August 13, 2015, from http://opencontent.org/blog/archives/2436

Wiley, D. (2015, May). On the Relationship Between OER Adoption Initiatives and Libraries. Retrieved August 2, 2015, from http://opencontent.org/blog/archives/3883

Z-DEGREE | Tidewater Community College. (n.d.). Retrieved August 2, 2015, from http://www.tcc.edu/academics/zdegree/index.html

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9. Working With Students

Students play a unique role on campuses as they are the primary beneficiaries of higher education and make up the largest demographic. Recognizing this, there is huge people power potential which can be channelled to propel OER advocacy forward. By bringing new voices to the table, especially those who are directly impacted by the high cost of textbooks, it can show that there are multiple stakeholder groups on campus advocating for change. Overall, student participation in conjunction with existing efforts can make clear the seriousness of the problem at hand.

Student-Library Partnerships

As the primary consumers of these materials, they are equipped to become major campus OER allies. Students are placed in a difficult financial position; at the beginning of each semester they must choose whether to purchase their assigned course materials or forego the purchase and attempt to get through the semester without them. While many students may realize that textbooks are expensive, many may not be aware of the background knowledge of textbook price increases and what can be done to solve this problem. Therefore academic libraries can play a unique role in equipping students with the necessary information to catalyze action.

Engaging With Students

For many student leaders, open education may be an entirely new topic. While acquainted with the cost of textbooks, they may require education about the definition of OER, what the benefits are, and how to speak about the issue with faculty. A meeting with advocates from the library can help reduce the necessary learning curve and spark quicker action on the issue. Below are some common ways libraries connect with student leaders.

- ❏ **Student Government:** Student government is often seen as the natural place to start, since it serves as the primary voice for students at any institution. OER can appeal student government leaders both as an affordability measure and a way to improve student success. Student governments can make powerful allies since they have a direct connection to both senior administrators and the faculty. They can also pass resolutions, and may have access to financial resources.

- ❏ **Student Groups:** On some campuses, there is a Public Interest Research Group (PIRG) chapter. The PIRGs are a student advocacy network that have pioneered OER advocacy on some campuses for more than 10 years. Other student groups that may be interested include student clubs focused on relevant issues. Academic clubs will have a close connection with their relevant department and an interest in affordable textbooks, and social justice clubs may resonate with the idea of equity

of access and the opportunity to increase representation of underserved viewpoints and cultural relevance in course materials.

- ❏ **Advisory Groups:** Some libraries have a student advisory group or council, which are already well-versed in the library's activities on campus.

Additional Considerations

Working with students can be challenging, since student leadership terms typically only last for one year, and tend to fall to more advanced students closer to their graduation date. Therefore, a key element of the most successful student partnerships is steps to institutionalize OER work by establishing an ongoing program or creating an OER advisory position.

There are also certain times of year when it is better to engage with students than others. Student leaders often set their priorities within their first few months of their terms, so it may be more difficult to start new work after that. Also, student government elections typically happen in the spring, so seeking to brief the various candidates can help make sure they hit the ground running.

Ideas for Student Action

Successful student-led initiatives have ranged in length and scope from being as large as a campaign, to as small as a single event. Depending on your campus environment, certain approaches may be more effective than others. For example if you have a large student residence population, hosting events in the evening may be more appropriate whereas if your campus has primarily commuter students, engaging students during the school day or on social media may be more favorable.

Student Campaign Ideas

A number of practical guides exist that can help students organize and advocate effectively. The Student Government Resource Center, for example, puts out the Making Textbooks Affordable: Student Government Toolkit. It is loaded with useful examples and information including tabling scripts and answers to FAQ from faculty. Here are a few examples.

- ❏ **#textbookbroke:** One of the most successful campaigns to advance OER awareness has been the Student PIRGs #textbookbroke campaign. This campaign takes place at the beginning of an academic semester and asks participating students to publicize the amount of money they spent on course materials in photographs and posts shared on social media. As a highly visual campaign for passersby as well as on social media, this campaign receives high traction and is a fun and informative way to educate a campus community. The #textbookbrokeBC

initiative adopted at three research institutions in British Columbia Canada is written in detail in the BCcampus OER Student Toolkit referenced below.

- ❏ **Student Government OER Teaching Award:** A notable initiative at Texas A&M involving students and their library called the Texas A&M Student Government OER Teaching Award. The student-nominated award acknowledges faculty efforts to address educational costs through the use of open educational resources while maintaining course quality. The award is valued by faculty as it highlights teaching quality which is an important criteria used in tenure & promotion at the institution. Student government values the awards as they represent a strategy to control the costs of being a student, and the library values the program because of its ability to raise awareness of open access and open educational resources on campus.
- ❏ **Student Events:** Other efforts have included students and libraries issuing public challenges to their institution to save students a certain amount of money through OER adoption, hosting creative events like a 'Textbook Price is Right', or having a simple call to action for students to discuss traditional textbooks and their alternatives with professors during their office hours. Some student governments have led petitions calling on their faculty and administration to look into available OER while others have asked students to share what they would have rather spent their money on, on a visual display with colourful sticky notes and a whiteboard.

Chapter Notes

More Resources

Daniel Munro, Jenna Omassi, and Brady Yano. (2016). BCcampus OER Student Toolkit. British Columbia: BCcampus. Retrieved from https://opentextbc.ca/studenttoolkit/

The Student Government Resource Center. (2016). Making Textbooks Affordable Toolkit. Retrieved from http://studentgovresources.org/wp-content/uploads/2016/09/Open_Textbook_Alliance_Toolkit.pdf

Sample Student Government Resolution

Acknowledgments

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10. Finding & Adopting OER

Scholars researching OER have found a key barrier to using OER is difficulty in finding suitable open materials. However, the OER movement is growing, and help is available for Instructional staff who are proactive about searching out OER, and about joining a community of educators who are advocates for open education.

Getting Started

Finding and adopting OER is similar to finding and adopting traditionally published materials. When an instructor finds quality materials to help bring about desired learning outcomes, he or she will assign them to students as usual. There are, however, a few important differences to note when finding open versus traditional resources:

- ❏ Multiple peer-reviewed studies have found that students who use OER in place of traditional textbooks do as well or better than their peers using traditional materials.
- ❏ Once an instructor finds an open resource and assigns it, it's available to all students from the first day of classes. There is no wondering if all students have access to the assigned materials. In many cases, an instructor can link directly to the required chapters in an OER through their LMS or other means. This can make finding readings even easier.
- ❏ Because of the open licensing, OER are easily adapted to specific learning situations, and can be aligned with the course objectives and learning outcomes. This eliminates the need for the faculty member to build outcomes around the content of a traditional textbook that may not fit the curriculum or course goals.
- ❏ Students can be assigned only the information they need, as opposed to traditional materials that come in larger "chunks" that may include extraneous information. This way, students are not purchasing materials that they do not need, while always retaining access to the information they do need.

Sample Places to Search for OER

- Merlot http://www.merlot.org/
- OpenStax http://openstax.org/
- OpenStax CNX http://cnx.org/
- BCcampus OpenEd (some of these texts have been adapted for a Canadian audience) http://open.bccampus.ca/

- Open Textbook Library http://open.umn.edu/opentextbooks
- Open SUNY http://opensuny.org/omp/index.php
- College Open Textbooks http://collegeopentextbooks.org/
- Libguides http://libguides.com/community.php?m=i&ref=libguides.com
- OER Commons https://www.oercommons.org
- Affordable Learning Georgia

Logistics of Adoption

Working with the Bookstore

Most post-secondary bookstores support the mission of open education and are open to collaborating with educators to make open resources available on campus (Allen, 2014).

Example: Florida's repository, The Orange Grove, and professional publisher, University Press of Florida, work as a team to make open textbooks available. Also key to that collaboration are the ancillary producing partner, WebAssign, the print-on-demand printer, Integrated Book Technologies, Inc. (IBT), and campus bookstores which receive a discounted price for print-on-demand books. All of these partners have important roles to play in the collaborative process of making affordable open textbooks available to faculty and students (Florida Distance Learning Consortium, n.d.).

Working with Learning Management Systems

OER files can be loaded into Moodle, Desire2Learn, Blackboard, or Canvas learning management systems and thus available to students on the first day of class. In 2013, Blackboard released xpLor, a cloud-based learning object repository that allows educators to discover, create and share learning resources, including already created openly licensed resources. Blackboard said at time of release that xpLor may be deployed on any LMS platform using IMS standards (Park, 2013). Canvas includes a help tool so content creators can determine which type of Creative Commons licenses are best. LTI tools can also be used to integrate content into a variety of LMS. The OER Commons provides a comprehensive overview of their LTI tool.

Print Formats

- ❑ **Bookstore:** campus bookstores or print shops can be approached to provide print copies of OER at low cost to students.

- ❑ **Print on demand online:** Arrangements can be made with a print provider to fulfil print-on-demand orders online, usually at cost. Costs vary depending on a number of factors: binding, text or graphics, colour or black and white, etc.

- ❏ **Self-printing:** students can have needed pages or chapters copied at their own initiative,

Digital Formats

- ❏ **Web page/HTML:** a universal format that does not require any additional software beyond a web browser; a textbook can be read online (BCcampus, 2014).
- ❏ **PDF:** simple and reliable to produce, good for texts that include tables and graphics, but usually fixed typeface and font sizes mean decreased readability on most devices.
- ❏ **EPUB:** optimized for most e-readers except Kindle; text is resizeable and reflows to fit the screen based on reader preferences (Basu, n.d.). Users may need to download a free App such as the Bluefire Reader to access the EPUB format.
- ❏ **MOBI:** e-reader format used by Kindle; lets publishers add more complex navigation and readers add other content like highlights and notes (Basu, n.d.).

Chapter Notes

More Resources

Allen, N. (2014). Webcast: Open Education Week on Campus. Retrieved from https://vimeo.com/86109661

Basu, S. (n.d.). Difference Between EPUB, MOBI, AZW and PDF eBook Formats. Retrieved from http://www.guidingtech.com/9661/difference-between-epub-mobi-azw-pdf-ebook-formats/

BCcampus. (2014, May). Open Textbook Formats | BC Open Textbook Authoring Guide. Retrieved August 20, 2015, from http://opentextbc.ca/opentextbook/chapter/open-textbook-formats/

BCOER Librarians. (n.d.). Faculty Guide for Evaluating Open Education Resources. Retrieved from http://mediawiki.bccampus.ca/images/9/98/Faculty_Guide_1-Apr-15.pdf

Burt, R. (2012, February 9). The Educator's Guide to Copyright, Fair Use, and Creative Commons. Retrieved August 13, 2015, from http://www.theedublogger.com/2012/02/09/the-educators-guide-to-copyright-fair-use-and-creative-commons/

Canvas Community. (n.d.). What is a Creative Commons license? Retrieved August 13, 2015, from https://community.canvaslms.com/docs/DOC-2929

Coolidge, A., Doner, S., & Robertson, T. (2014). BC Open Textbook Accessibility Toolkit | Open Textbook. BCcampus. Retrieved from http://opentextbc.ca/accessibilitytoolkit/

Florida Distance Learning Consortium. (n.d.). Open Access Textbooks: Project Info. Retrieved August 6, 2015, from http://www.openaccesstextbooks.org/%5Cmodel%5Cindex.html

Hendricks, C., Key, J., & Jhangiani, R. (2015, July). Faculty attitudes towards and experiences with OER & Open Textbooks. Retrieved from http://www.slideshare.net/BCcampus/faculty-attitudes-towards-and-experiences-with-oer-open-textbooks

LibGuides Community Site. (n.d.). Retrieved August 6, 2015, from http://libguides.com/community.php?m=i&ref=libguides.com

Moodle & Education Technology Guide for Faculty: Copyright, Creative Commons & Open Access. (n.d.). Retrieved August 13, 2015, from http://www.cotronline.ca/mod/book/view.php?id=16922&chapterid=15535

Park, J. (2013, June 25). Blackboard xpLor officially released with OER and CC license options. Retrieved from http://creativecommons.org/weblog/entry/38727

Professor spends sabbatical building “50 Wise Speakers” open videos. (2014, March 17). Retrieved August 6, 2015, from http://creativecommons.org/tag/open-educational-resources

Acknowledgments

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11. Creating & Adapting OER

Educators create and adapt educational content for their courses every day: writing lecture notes, developing assessments, editing readings, creating exercises, and more. All of these activities could potentially start with an open educational resource someone else created, or end with sharing the newly created (or improved) resource under an open license with others who might find it valuable.

Pathways to Creating OER

When an educator wants to get involved in developing OER, the first step is to determine what approach to take. There are three main paths:

- ❑ **Creating New OER:** While the most common way that faculty start with OER is to adopt existing materials, those who wish to create OER may start by writing it new. Authors should make a decision on their development software and open licensing terms in advance, since this will make it easier later on. It is also helpful to design OER in a modular format, so that parts of the content can easily stand alone and be re-used by others in other contexts.

- ❑ **Adapting Existing OER:** Before considering whether to create new OER, it is important to first evaluate whether there is existing content that can be repurposed and adapted. There is a vast amount of OER content already published, so this step can save time and energy. Once an OER has been identified, the next step is to determine how it is licensed and what permissions you have. Depending on the file format, it may be necessary to seek help in converting it to an editable format.

- ❑ **Openly License Existing Resources:** Turning an existing educational resource into OER is as simple as putting an open license on it. Thus, educators and organizations who already have content for which they control the copyright can create OER almost instantly. There have also been several cases of authors getting back the copyright to traditionally published resources and making them openly licensed. In fact, OpenStax Statistics, one of the most widely used texts in that subject, started out as a traditional text that went out of print.

Software & Platforms

These days most educational resources are “born digital,” meaning they are digital files before they are put into print or any other format. There is a wide variety of software and

platforms available to assist with creating or editing digital content that can be used for OER.

- ❏ **Low Tech:** The simplest way to create or edit educational resources is using familiar word processing tools, such as Microsoft Word, Google Docs, or Libre Office. This software includes most of the features needed for standard content, and the file can be easily exported as a PDF or printed. For mathematics and other technical fields, another option is to use the free and open source typesetting software LaTeX (latex-project.org), which can produce complex mathematical expressions.
- ❏ **Medium Tech:** Another common way to create or edit educational resources is to create a website. This could be in the form of a blog, such as a WordPress site, a static website, such as pages hosted by your institution, or a wiki, using Wikia or another form of wiki software. Also, some OER repositories provide authoring tools, including Connexions (cnx.org) and OER Commons (oercommons.org), and there are proprietary authoring platforms including FastPencil (fastpencil.com) and SoftChalk (softchalk.com).
- ❏ **High Tech:** There are a number of platforms that provide professional tools for authoring content, and some are very easy to use. A common tool used by OER projects is PressBooks (pressbooks.org), which is a WordPress plugin that makes it easy to author and produce e-books and other content.

Beware that some authoring platforms on the market include restrictions on how the final product can be published or shared. Before beginning, it is important for authors to ensure that they understand the terms of use and whether they will be able to move to a different platform if they choose.

Technical Considerations

When creating or adapting OER, it is important to keep in mind that the more technically complex it is, the harder it is for others to revise the content for their own educational purposes.

- Before building something new, consider looking to see if there is an existing OER you can build from. This saves time and effort.
- Keep technical aspects of the OER simple, since complexity can make it more difficult for both yourself and others to make improvements.
- Don’t build OER using proprietary software or platforms that can potentially lock up your content and prevent its sharing or reuse.
- Save your OER in an at least one editable format (.docx, .odt, .rtf, .gdoc, and .html) in addition to your final display format, such as a .pdf.

- When adapting or remixing content, be sure to understand the license terms of the content you are using.
- Designing OER so that it can be easily broken down into chunks or modules makes it easier for others to reuse. For example, think about subchapters and units, rather than chapters.
- When creating OER content, keep accessibility in mind and provide structured content (headings and subheadings) and use descriptive links to make conversion to a screen reader possible.
- Don't be afraid to test OER in the classroom, students can provide valuable feedback during the development process.

Chapter Notes

More Resources

Portions of this chapter have been adapted from the following website under a Creative Commons Attribution 4.0 International License: Affordable Learning Georgia. (2015). Creating and Modifying Open Educational Resources. Retrieved August 6, 2015, from http://www.affordablelearninggeorgia.org/help/creating-1

Affordable Learning Georgia. (2015). Creating and Modifying Open Educational Resources. Retrieved August 6, 2015, from http://www.affordablelearninggeorgia.org/help/creating-1

Code of Best Practices in Fair Use for OpenCourseWare. (2010, May 7). Retrieved August 7, 2015, from http://www.cmsimpact.org/ocw

Fair Use Week. (n.d.). Retrieved from http://fairuseweek.org/

Hess, K. (n.d.-a). LibGuides. Open Textbooks, OER & Other Open or Free Resources for Faculty. Fair Use Guidelines. Retrieved August 7, 2015, from http://guides.kirkwood.edu/content.php?pid=187709&sid=1578008

Hess, K. (n.d.-b). LibGuides. Open Textbooks, OER & Other Open or Free Resources for Faculty. Fair Use Guidelines. Retrieved August 7, 2015, from http://guides.kirkwood.edu/content.php?pid=187709&sid=1578008

Moodle & Education Technology Guide for Faculty: Copyright, Creative Commons & Open Access. (n.d.). Retrieved August 13, 2015, from http://www.cotronline.ca/mod/book/view.php?id=16922&chapterid=15535

Open Educational Resources Technology. (n.d.). Retrieved from http://pressbooks.com/for-academia/

PressBooks Textbook. (n.d.). Retrieved August 7, 2015, from https://wordpress.org/plugins/pressbooks-textbook/

Acknowledgments

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12. Publishing & Sharing OER

Digital repositories have evolved into a convenient place to find, share and remix OER from a variety of sources. They range in scope from portals and gateways that provide access to information on OER and aggregated content resources to institutional repositories with source content and tools to develop OER.

Where to Publish OER

Institutional Repositories

Institutional repositories have come to hold a wide range of intellectual outputs of the institutions they serve, including journal articles, conference papers, dissertations, collections of images or figures, datasets, and more. Some institutional repositories are also expanding to include educational resources, including collections of OpenCourseWare. An example of an institutional repository which encourages OER sharing is Grand Valley State University's Scholarworks platform.

University Presses

University Presses have already expanded into the publication of Open Access journals and monographs, setting out open educational resources as a logical area of exploration. Certain projects by university presses have attracted attention for their innovative approaches to scholarly communications and cost-recovery pricing models promoting wider dissemination: For example, the Oregon State University open textbook publishing program is a collaboration with the university press, the library, and the online learning centre (Oregon State University, 2014).

OER Repositories

There are many online repositories where anyone can share open educational resources. Three examples are widely considered the "big three" repositories that contain the largest collections.

- ❏ **Openstax CNX:** Openstax Connexions is an online learning repository that encourages contributors to deposit OER in a modular fashion, so it's easy to remix and reuse. It contains over 17,000 learning objects (Oregon State University, 2014)
- ❏ **OER Commons:** Supported by the Hewlett Foundation, OER Commons has a growing collection of over 50,000 high-quality OER, including full university courses, mini-lessons, simulations, textbooks, and OER for K-12 grades as well (OER Commons, n.d.).

- ❏ **MERLOT:** Developed by the California State University System, MERLOT (Multimedia Educational Resource for Learning and Online Teaching) is "a curated collection of free and open online teaching, learning, and faculty development services contributed and used by an international education community (MERLOT, n.d.).

Publishing Considerations

OER Publication Checklist

- ❏ Clearly marked with open license that permits the five "R's": retain, reuse, revise, remix, redistribute
- ❏ Published in a digital format without any barriers to access (beyond those inseparable from gaining access to the internet itself)
- ❏ Available in a format that everyone can download, open, and edit without proprietary software
- ❏ Published with the necessary metadata to make it easily discoverable by others

Print on Demand

Some open textbook programs have built a "print-on-demand" option for students who wish to purchase a hard copy of a textbook rather than using the electronic version exclusively. For example, the BCcampus Open Textbook Project has collaborated with the Simon Fraser University printing service to provide print-on-demand order fulfillment for students. Most textbooks in this project cost around $30-40 for a printed copy, plus shipping (Lalonde, 2013). In Utah, during pilot programs by the State Office of Education, print on demand texts were provided to more than 3,800 Utah high school science students at a cost of about $5 per book (Wiley, 2012).

Metadata

Metadata, often defined as "data about data," is used to describe information in a standardized way. This allows the information to be searched for and retrieved efficiently across multiple systems. OER, and the repositories in which they are housed, get used more often when they are searchable and discoverable. By paying attention to the metadata associated with online resources, OER creators can make sure their content can be found easily.

- ❏ Dublin Core (DC)
- ❏ Learning Resource Metadata Initiative (LRMI)
- ❏ The IEEE Learning Object Metadata Standard (LOM)

- ❏ Metadata Object Description Schema (MODS)

Apart from being collected and documented with a particular schema, metadata also needs to be in a machine-readable format like XML or RDF to be useful.

Editable Formats

Many authors publish educational materials as PDFs, since this format is usable on virtually any device and reliably preserves the integrity of formatting. This is convenient for sharing and publishing, but it is not ideal for users who want to revise and remix. While there is no obligation for authors to release OER content in an editable format, it is highly recommended to enable others to fully make use of the work. Editable formats include.

- ❏ Publish in an editable format to begin with. Options include ODT, RTF, HTML and DOCX.
- ❏ Publish an editable file and include information on how to download it in any non-editable file formats published.
- ❏ Publish using a platform that permits users to export editable files.

Open Formats

Educators seeking to develop OER should keep in mind that shared materials cannot be successfully adopted if others do not have the technical tools to read and edit them, and there consider distributing materials in an open file format that does not require the use of proprietary software. An example of a proprietary format is DOCX, which to use reliably requires access to Microsoft Word, whereas the open formats RTF and HTML work with a variety of open and proprietary software. However, there is sometimes tension between the principle and practice of open formats. For example, it could be argued that sharing in an open, non-editable format like PDF closes off more users than a widely available, editable, proprietary format like DOCX.

OER publishing efforts must balance both of these dynamics to maximize openness, which may involve publishing in more than one format. One solution has been put forward by Pressbooks, a platform for creating open textbooks that offers exports in a range of file types including both open and proprietary formats. However, Pressbooks has come under criticism for itself being proprietary, despite being built in the open source platform Wordpress.

Chapter Notes

More Resources

DCMI Home: Dublin Core® Metadata Initiative (DCMI). (n.d.). Retrieved August 20, 2015, from http://dublincore.org/

FAQs. (n.d.). Retrieved from http://oerconsortium.org/open-textbook-faqs/

Lalonde, C. (2013, May 25). Print on Demand. Retrieved August 11, 2015, from http://open.bccampus.ca/2013/11/25/print-on-demand-now-available-for-open-textbooks/

Learning Object Metadata Standard - EduTech Wiki. (n.d.). Retrieved August 20, 2015, from http://edutechwiki.unige.ch/en/Learning_Object_Metadata_Standard

Learning Resource Metadata Initiative. (n.d.). Retrieved August 20, 2015, from http://www.lrmi.net/

MERLOT. (n.d.). MERLOT II - About MERLOT. Retrieved August 20, 2015, from https://www.merlot.org/merlot/index.htm;jsessionid=A56F0544788596ED163898F671B0B48D?action=about

Module 4 - The OER Landscape - How to find OER? (n.d.). Retrieved August 11, 2015, from http://col-oer.weebly.com/module-4---the-oer-landscape---how-to-find-oer.html

Notable OER Initiatives in United States - POERUP - Policies for OER Uptake. (n.d.). Retrieved August 11, 2015, from http://poerup.referata.com/wiki/Notable_OER_Initiatives_in_United_States

OER Commons. (n.d.). OER Commons. Retrieved August 20, 2015, from https://www.oercommons.org/about

OER Repositories. (n.d.). Retrieved August 11, 2015, from http://www.oerafrica.org/find-oer/oer-repositories

Open Education Consortium. (n.d.). About The Open Education Consortium. Retrieved August 20, 2015, from http://www.oeconsortium.org/about-oec/

Oregon State University. (2014, February 12). OSU open textbook initiative aims to reduce student costs, enhance learning. Retrieved August 20, 2015, from http://oregonstate.edu/ua/ncs/archives/2014/feb/osu-open-textbook-initiative-aims-reduce-student-costs-enhance-learning

SPARC. (n.d.). Alternative Publishing Options for Authors | SPARC. Retrieved August 11, 2015, from http://www.sparc.arl.org/resources/authors/options

SPARC Europe. (2015). Institutional Repositories « SPARC Europe. Retrieved August 11, 2015, from http://sparceurope.org/repositories/

The Open Education Consortium | The Global Network for Open Education. (n.d.). Retrieved August 11, 2015, from http://www.oeconsortium.org/

Towards a Global Infrastructure For Sharing Learning Resources - Creative Commons. (n.d.). Retrieved August 11, 2015, from https://wiki.creativecommons.org/wiki/Towards_a_Global_Infrastructure_For_Sharing_Learning_Resources#Metadata

Wiley, D. (2012, January 25). Utah Moves to Open Textbooks. Retrieved August 11, 2015, from http://opencontent.org/blog/archives/2134

Wiley, D. (2014, February 11). On OER and College Bookstores. Retrieved August 12, 2015, from http://opencontent.org/blog/archives/3168

Acknowledgments

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13. Evaluating & Assessing OER

Evaluating the quality of educational resources is important, regardless of whether they are open or closed and evidence documenting student outcomes can be a useful tool for convincing educators of the value of using OER. The flexibility and free availability of OER offer new and exciting opportunities to go above and beyond traditional evaluation and assessment practices.

Reframing Quality

The age-old saying that "you get what you pay for" sometimes rears its head among those just learning about OER. However, with the growing body of evidence documenting perceptions and outcomes related to OER in the classroom provides a backstop for prejudice against the quality of OER. For example, the Babson Report (Allen & Seaman, 2014) found that most faculty, when they are aware of OER, assess it to be of similar quality to other teaching materials. Jhangiani (2015) as well as Allen and Seaman (2014) have found "The most significant barrier to wider adoption of OER remains a faculty perception of the time and effort required to find and evaluate it," (Allen & Seaman, 2014).

There are many aspects of quality that are subjective, since the right material for the course depends on the student, the professor, and the learning outcomes. This is true for both open and closed materials, and is evidenced in the traditional textbook market with multiple titles offered for the same subject. Questions about OER quality are actually questions of evaluation: the only way to tell if a resource is high quality is for a professor to evaluate it for their own course.

Types of Evaluation

Textbook reviews

BCcampus received government funding in 2012 to make open textbooks available for highly enrolled first and second year courses in post-secondary institutions in Canada's westernmost province. BCcampus sought reviewers for existing open textbooks, reasoning that peer evaluation would prompt more adoptions by faculty (BCcampus, 2012). All reviewed textbooks are given a score. Reviews and the average score are posted along with the textbook for educators thinking of adopting.

Research on Student Outcomes

Peer-reviewed research into the effectiveness of OER in terms of student outcomes is available. So far, Hilton, et al (The Review Project, n.d.) have gathered research that focuses

on the efficacy of OER as compared to traditional resources, and the teacher and student perceptions of OER in the learning environment. That research has concluded that OER are either equivalent to, or correlated with better outcomes for students, which has implications for education policy:

“Even if the use of OER materials do not significantly increase student learning outcomes, this is a very important finding. Given that (1) students and teachers generally find OER to be as good or better than traditional textbooks, and (2) students do not perform worse when utilizing OER, then (3) students, parents and taxpayers stand to save literally billions of dollars without any negative impact on learning through the adoption of OER (Hilton, et al, in The Review Project, n.d.).

Analytics

Some existing OER come with built in analytics that enable the users to improve the resource. OpenStax and Carnegie Mellon's Open Learning Initiative (OLI) are two such examples.

- ❏ At OpenStax, users can see real-time status updates for textbooks on their StaxDash page, and see if and when they’ve been improved by the open education community (“OpenStax College,” n.d.).
- ❏ Carnegie Mellon’s OLI has conducted studies of its courses since 2007. “The Open Learning Initiative (OLI) creates courses based on the findings of learning science and then evaluates those courses based on actual student performance in real classrooms” (“Our Proven Results | Open Learning Initiative,” n.d.).

Student surveys

Student surveys can be informal class evaluations or larger research projects. A more involved study would be like one undertaken by Dr. Rajiv Jhangiani of Kwantlen Polytechnic University in Canada, and involves “a major survey of … students aimed at assessing the impact of open textbook adoption on their personal and educational outcomes, including cost savings, employment status, course performance, and program completion rates,” (Jhangiani, 2015).

The simplest way to assess whether students are satisfied with the quality of OER assigned to them is to ask in an end-of-class survey. Likert scale questions can include the following: “Overall, I am satisfied with the quality of the modules/chapters in the open textbook,” and “I would have preferred to pay for a traditional textbook for this course,” (Jhangiani, 2015).

> *'I like how the theories are explained in more understandable ways compared to other textbooks where the author tends to talk in circles before explaining what is being talked about,' -- a psychology student as reported by Jhangiani in BCcampus 2015.*

Faculty surveys

Asking educators about their experiences with OER is a primary way of assessing the quality of open materials. Starting in November of 2014, the BCcampus Open Textbook Faculty Fellows worked with OER Research Hub in the U.K. on an open textbook research project that involved faculty in British Columbia, Canada. They presented their preliminary findings at an Open Textbook Summit in Vancouver in spring 2015 (Jhangiani, Hendricks, & Key, 2015).

Chapter Notes

More Resources

Allen, I. E., & Seaman, J. (2014). Opening the Curriculum: Open Educational Resources in U.S. Higher Education, 2014 (p. 49). Retrieved from http://www.onlinelearningsurvey.com/oer.html

BCcampus. (2012). Call for Reviewers. Retrieved from http://open.bccampus.ca/call-for-proposals/call-for-reviewers-2/

BCcampus. (n.d.). Survey opportunity for OER faculty in B.C. | BCcampus. Retrieved August 15, 2015, from http://bccampus.ca/2014/11/12/survey-opportunity-for-oer-faculty-in-b-c/

College Open Textbooks. (n.d.). College Open Textbooks - How to be a Reviewer. Retrieved August 15, 2015, from http://www.collegeopentextbooks.org/opentextbookcontent/how-to-be-a-reviewer

de los Arcos, B., Farrow, R., Pitt, R., & Weller, M. (n.d.). OER Evidence Report 2013-2014: Building Understanding of Open Education.

Farrow, R. (n.d.). OERRH OER Evidence Report 2013-2014. Retrieved from http://oerresearchhub.org/2014/11/19/oer-evidence-report-2013-2014/

Jhangiani, R. (2015a). An openness to openness: The terrifying and liberating process of disrupting higher education. Vancouver, BC Canada: SFU Harbour Centre. Retrieved from http://otsummit.bccampus.ca/livestream/

Jhangiani, R. (2015b, March 11). From believer to dOER. Retrieved August 15, 2015, from http://thatpsychprof.com/from-believer-to-doer/

Jhangiani, R. (2015c, June). An openness to openness: The terrifying and liberating process of disrupting higher education. Presented at the Open Textbook Summit 2015, Vancouver, BC Canada. Retrieved from http://www.slideshare.net/BCcampus/an-openness-to-openness-the-terrifying-and-liberating-process-of-disrupting-higher-education-48938720

Jhangiani, R., Hendricks, C., & Key, J. (2015, May 26). Early Findings from BC Faculty Survey on Open Educational Resources. Retrieved from http://open.bccampus.ca/2015/05/26/early-findings-from-bc-faculty-survey-on-open-educational-resources/

JISC. (n.d.). OER evaluation. Retrieved August 15, 2015, from https://www.jisc.ac.uk/guides/open-educational-resources/oer-evaluation

OER Research. (n.d.). Retrieved August 14, 2015, from http://oer.issuelab.org/home

OER Research Toolkit. http://openedgroup.org/toolkit

Pitt, B. (2015, August 4). It's here! Open Research Redux. Retrieved August 14, 2015, from http://oerresearchhub.org/2015/08/04/its-here-open-research-redux/

Our Proven Results | Open Learning Initiative. (n.d.). Retrieved August 19, 2015, from http://oli.cmu.edu/get-to-know-oli/see-our-proven-results/

OpenStax College. (n.d.). Retrieved August 19, 2015, from http://openstaxcollege.org

ROER4D. (2015). SP10: Impact of OER - Case studies. Retrieved August 14, 2015, from http://roer4d.org/sp-10-impact-of-oer-case-studies

ROER4D. (n.d.). Retrieved August 14, 2015, from http://roer4d.org/

Acknowledgments

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14. Open Licensing & Copyright

Open licensing is the most powerful tool available to content creators who want to make their educational resources into OER. An open copyright license grants a set of usage rights to the public that enable free and open use of the material. Open textbooks, for example, are typically distributed online at no cost and can be purchased in a variety of other print and digital formats at a low cost, including hard bound copies.

How Open Licensing Works

If you hide the copyright notice, it may be hard to tell the difference between some OER and traditional, proprietary resources. The educational content, whether it's a textbook or support materials like online homework, test banks, and supplemental videos, is created and reviewed by experts, and it aims to cover a similar scope and sequence of topics.

What sets open resources apart is the "open" license, which enables two key features. First, OER can be legally shared, copied, and distributed, so anyone can access the material in a wide range of print and digital formats at little or no cost, without fear of expiration dates. Second, the open materials can be legally adapted by instructors, which makes it possible to add new material, change terminology, or remove unnecessary components so the resource perfectly fits an educator's needs.

The specific license terms vary, but open licenses typically grant the right to share, adapt, translate and distribute the material as long as attribution is given to the author. Some licenses restrict commercial use or require that any derivatives retain the same license as the original.

What are Open Licenses?

Open licenses do not replace copyright; they work with copyright law to change the default setting from "All Rights Reserved" to "Some Rights Reserved." Under U.S. law, copyright is the exclusive right to dictate how users copy, distribute and adapt a work. By default, all of those rights are reserved by the author, and anyone who wants to use it needs to get permission from the author in the form of a license. Open licenses are a particular kind of license that enable authors to grant blanket permissions to everyone, which makes it much easier for people to legally use the material in the ways the license allows.

Some common licenses for open textbooks are:

- **Creative Commons Attribution (CC BY):** Grants the right to use, adapt and distribute as long as the author is attributed. http://creativecommons.org/licenses/by/4.0/
- **Creative Commons Attribution ShareAlike (CC BY-SA):** Grants the right to use, adapt and distribute as long as the author is attributed and any derivative versions use the same license. http://creativecommons.org/licenses/by-sa/4.0/
- **Creative Commons Attribution NonCommercial ShareAlike (CC BY-NC-SA):** Grants the right to use, adapt and distribute non-commercially as long as the author is attributed and any derivative versions use the same license. http://creativecommons.org/licenses/by-nc-sa/4.0/

Not all open licenses are Creative Commons licenses. Although Creative Commons licenses are some of the most popular open licenses available, there are other options available to creators. Two examples of these other options are:

- **GNU Free Documentation License:** Similar to CC BY-SA, except it includes some extra requirements about the source code and number of copies. http://www.gnu.org/licenses/fdl-1.3.en.html
- **Public Domain Dedications:** Waives the rights reserved by copyright to place the work in the public domain. https://en.wikipedia.org/wiki/Public_domain_equivalent_license

Determining Copyright Ownership

The first step to openly licensing a work is to determine who owns the copyright. Under U.S. copyright law, a creative work is protected by copyright from the moment of creation, and those rights are owned by the author of the work. However, authors sometimes authors sign contracts or licenses for their works, such as to a publisher. Also, for authors employed by institutions, be sure to check the relevant intellectual property policies to see who owns the work. A good place to start is your library copyright office or scholarly communications librarian. Another option is to approach your institution's Counsel Office or other legal office with copyright oversight about your concerns.

For works authored jointly between multiple individuals, the copyright is equally shared amongst the authors unless there is an alternate agreement. Each copyright owner can use the work as they see fit, provided that any earnings are shared equally. In this case, authors should mutually agree to openly license a work.

Using Open Licenses

When you put an open license on your work, it tells the world what uses you as a copyright holder permit – and which you do not. After you have chosen the specific license you wish to use, it is simple to apply the license to your work. While open licenses can apply to any

kind of media, the way to express the license will vary by format. Below are some ways to handle licensing for different types of media.

Text Document

Text documents including textbooks, articles, and blog posts, are often the simplest to license. Simply include a copyright statement on the title page, footer, or other reasonable location. To see an ideal copyright statement, see the title page of this document.

> © 2018 SPARC. This work is licensed under a Creative Commons Attribution 4.0 International License.

It is a good idea to include a visual image of the Creative Commons license badge to provide quick visual recognition to users. You can find high quality image downloads at the Creative Commons Downloads page.

Webpage/Website

For websites, it's important to not only mark the website visually as openly licensed, but also to include the requisite metadata to ensure that search engines can identify the webpage as openly licensed. If you use the license chooser from Creative Commons, the HTML code provided to embed the license in a webpage will ensure it is properly marked.

Video

It is recommended to put a brief bumper at the beginning or end of a video with the license informationation that is easily readable. If using a Creative Commons license, include the image of the license badge to make the license extra visible. When posting the video online, it is also recommended to indicate the license in the video metadata. Platforms including Vimeo and YouTube provide open licensing options, and you can also specify the license information in the description field.

Audio

If the audio file is such that a brief statement of the license at the end would not be disruptive, simply appending a copyright statement at the end is recommended. If the audio file is such that a spoken version of the license would be disruptive, it is recommended that the license information be included in any description of the file posted online. Many audio sharing websites permit users to indicate the specific license. If this is not offered, simply add the license in the description field.

Image

Many image sharing sites now provide the ability to mark images as openly licensed upon uploading. It is best to include license information through metadata or the image description as opposed to a watermark or caption, to avoid detracting from the image. For powerpoint slides or infographics, license statements can be incorporated into the design in such a way that they provide users with the necessary information without detracting from the work itself.

Remixing or Reusing Openly Licensed Works

Part of openly licensing works is that others can revise and remix them, creating derivative works based on the original. If you remix works, it is important to follow ethical attribution practices to ensure that creators are credited for their work, while also ensuring that it is clear that the derivative is not endorsed by the original creator. Below is an example from the SPARC Open Education Leadership Program course materials.

> © 2018 SPARC. This work is licensed under a Creative Commons Attribution 4.0 International License. This work is an adaptation of "OER Treasure Hunt Worksheet" by Mathieu Plourde also available under a Creative Commons Attribution 4.0 International License.

It is a good idea to keep intact the copyright notice provided by the original creator in the manner they specify, including specifying the author, title of the work, license, and URL.

For different media, follow the same practices as marking works with a copyright statement to provide appropriate marking of republished or derivative works.

Note that for Creative Commons licenses, different versions of the licenses have different attribution requirements. Be sure to check Creative Commons' handy attribution chart and attribution guidelines.

Chapter Notes

More Resources

Burt, R. (2012, February 9). The Educator's Guide to Copyright, Fair Use, and Creative Commons. Retrieved August 13, 2015, from http://www.theedublogger.com/2012/02/09/the-educators-guide-to-copyright-fair-use-and-creative-commons/

Canvas Community. (n.d.). What is a Creative Commons license? Retrieved August 13, 2015, from https://community.canvaslms.com/docs/DOC-2929

Creative Commons. (n.d.) About the licenses. Retrieved March 6, 2018, from https://creativecommons.org/licenses/

Creative Commons. (n.d.). Best practices for attribution. Retrieved March 9, 2018, from https://wiki.creativecommons.org/wiki/Best_practices_for_attribution

Fields, E. (n.d.). Research Guides Home. Open Education. Open Education Resources. Retrieved August 13, 2015, from http://guides.library.ubc.ca/content.php?pid=659422&sid=5526466

Harper, G. K. (2012). Fair use of copyrighted materials. Retrieved August 13, 2015, from http://copyright.lib.utexas.edu/copypol2.html

Marking your work with a CC license. (n.d.). Retrieved August 13, 2015, from https://wiki.creativecommons.org/wiki/Marking_your_work_with_a_CC_license

Open Professionals Education Network. (n.d.). CC BY license implementation deep dive: Resources. Retrieved August 13, 2015, from https://open4us.org/resources/cc-by-license-implementation-deep-dive-resources/

Student PIRG. (n.d.). Open Textbooks: More Information. Retrieved July 25, 2015, from http://studentpirgs.org/open-textbooks/about

University of Michigan Library. (n.d.-a). Licensing Your Own Material Under a CC License. Retrieved August 13, 2015, from http://www.lib.umich.edu/copyright/licensing-your-own-material-under-cc-license

University of Michigan Library. (n.d.-b). Using Creative Commons Licensed Material. Retrieved August 13, 2015, from http://www.lib.umich.edu/copyright/using-cc-licensed-material

Acknowledgments

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15. Open Education & Accessibility

A truly open educational resource is one that is free and accessible for all students spanning the full spectrum of human ability. Content creators, instructional designers, educational technologists, librarians, administrators, and teaching assistants need the skills and knowledge to create, curate or modify open resources to benefit all learners.

Making OER Accessible

Some frequently encountered accessibility considerations include (but are not limited to): sight impairments (from lack of colour vision to blindness), hearing impairment, mobility restrictions, cognitive impairments, and even location (for instance, remote learners in areas where high speed internet connectivity is limited, or access to hardware or software is restricted) (Coolidge, Doner, & Robertson, 2014).

Leveraging Open Licensing

By using OER that are openly licensed, modifying content to make it accessible is more easily accomplished. Openly licensed resources – particularly those that can be re-mixed and improved upon, mean an educator is better equipped to support accessibility in the learning environment. Traditional, closed learning resources are not easily modified, and therefore don't lend themselves to improvements in accessibility in the same way as OER.

The focus of many open textbook projects is to provide access to education at low or no cost. Paying attention to a broad range of accessibility issues can make sure that OER are truly inclusive from the start, and than openness to all learners is "baked in" rather than "bolted on."

Universal Design

Universal Design, or Universal Instructional Design (UID) has been developed to address some of these concerns. "UID provides equal access to learning, not simply equal access to information," (National Center for UDL).

> *"Universal Design is the process of creating products (devices, environments, systems, and processes) that are usable by people with the widest possible range of situations (environments, conditions, and circumstances). Universal Design emerged from the slightly earlier concept of being barrier-free, the broader accessibility movement, and adaptive and assistive technology. It also seeks to blend aesthetics into these core considerations," (Coolidge, Doner, & Robertson, 2014).*

Some examples of educational content that does not meet the accessibility criteria include: charts that use color as the primary distinguishing feature between variables, videos that do not include captions or descriptive narration, web links that are small or situated very close together, or infographics with too much information on one page.

The Web Content Accessibility Guidelines (WCAG) web site is developed through the W3C process, and aims to provide a single shared standard for web content accessibility that meets the needs of individuals, organizations, and governments internationally. The WCAG documents explain how to make web content more accessible to people with disabilities.

Case Studies and Examples

Bookshare.org is a website where people with print disabilities will find an accessible online library of over 350,000 titles.

FLOEProject.org is a site focused on OER where accessibility is personalized to different preferences, abilities and learning styles. "FLOE provides the resources to personalize how we each learn and to address barriers to learning" (FLOE Project, n.d.).

BCcampus's Accessibility Toolkit is available in a variety of downloadable formats (PDF, EPUB, MOBI, XHTML, and WordPress XML). Within this toolkit, educators will find information on how to make content accessible, with specifics on:

- Images/Charts/Graphs/Maps
- Weblinks
- Tables
- Multimedia
- Formulas (math and scientific)
- Font size
- Color contrast

More Resources

Bookshare. (n.d.). Bookshare | An Accessible Online Library for people with print disabilities. Retrieved August 14, 2015, from https://www.bookshare.org/cms

Coolidge, A., Doner, S., & Robertson, T. (2014). BC Open Textbook Accessibility Toolkit | Open Textbook. BCcampus. Retrieved from http://opentextbc.ca/accessibilitytoolkit/

FLOE Project. (n.d.). Paving the way toward inclusive Open Education Resources | floe. Retrieved August 14, 2015, from http://www.floeproject.org/

National Center on Universal Design for Learning. (n.d.). National Center On Universal Design for Learning. Retrieved August 14, 2015, from http://udlguidelines.cast.org/

Web Content Accessibility Guidelines. (n.d.). WCAG Overview. Retrieved August 30, 2018, from http://www.w3.org/WAI/intro/wcag

Attribution

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