Reaching the Heart of the University: Libraries and the Future of OER

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Abstract

University libraries are well positioned to run or support OER production and publication operations. Many university libraries already have the technical, service, and policy infrastructure in place that would provide economies of scale for nascent and mature OER projects. Given a number of aligning factors, the University of Michigan (U-M) has an excellent opportunity to integrate Open.Michigan, its OER operation, into the University Library. This paper presents the case for greater university library involvement in OER projects generally, with U-M as a case study.

Keywords

Libraries, OER, OCW, sustainability, university, academic, infrastructure, publishing, policy

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Introduction

University libraries are well positioned to run or support open educational resource (OER) production and publication operations, but so far most academic institutions developing OER have little or no integration with their respective libraries. Many university libraries already have the technical, service, and policy infrastructure in place that would provide economies of scale for nascent and mature OER projects. Given a number of aligning factors, the University of Michigan (U-M) has an excellent opportunity to integrate Open.Michigan, its OER operation, into the University Library. While the U-M Library's established publishing apparatus is larger than that of most academic libraries, many institutions share elements that would make OER integration feasible in one form or another. This paper presents the case for greater university library involvement in OER projects generally, with U-M as a case study.

Libraries were among the first OER producers, digitizing and sharing digital content even before the arrival of the public Internet. These early "digital library" projects were spearheaded by libraries in support of their missions to collect, preserve, and provide access to knowledge and information. In the United States, the Library of Congress launched one of the first efforts with a pilot program in 1990 that became the American Memory Historical Collections.[1] The program digitized public domain historical materials from the Library's collections, including documents, moving images, sound recordings, and print and photographic media, and selected forty-four schools and libraries across the country to receive CD-ROMs of all the materials. In 1994, after the internet had arisen as a viable multimedia distribution system, the program moved online and the Library of Congress launched the National Digital Library Program, "a pioneering systematic effort to digitize some of the foremost historical treasures in the Library and other major research archives and make them readily available on the Web to Congress, scholars, educators, students, the general public, and the global Internet community."[2] With a wave of funding support from the government (National Science Foundation Digital Library Initiative) and a handful of committed foundations (The Andrew W. Mellon Foundation, the J. Paul Getty Foundation and the W.K. Kellogg Foundation), similar projects soon sprung up at university libraries across the country, notably including Harvard, Cornell, the University of Virginia, and the University of Michigan (Greenstein and Thorin, 2002).

Many of the libraries that experimented with digital publishing in the 1990's now have established operations to share free content online, and they have been joined by libraries large and small, academic and public, all with the same mission: to improve access to scholarly, educational, and historical materials for everyone.[3] Indeed, the missions and goals of the new crop of OER initiatives align closely with those of academic libraries. Academic OER initiatives and university libraries share a determination to improve access to all kinds of scholarly and educational materials, both on their campuses and throughout the world. Given those dovetailing values, partnerships between OER initiatives and libraries seem not just logistically convenient but philosophically obvious.

The Advantages of Libraries

In addition to this convenient philosophical convergence, there are two key advantages that many university libraries share, and OER initiatives need: infrastructure and relationships.

Infrastructure: Depending on the institution, areas where existing library infrastructure could support OER include search and discovery, copyright expertise, data storage, metadata and indexing, and institutional repositories and preservation. Most OER shops are isolated in individual departments or as stand-alone units and do not have access to the kind of robust support available in many libraries.[4] In trying to create duplicate infrastructure, OER groups may be missing opportunities to use existing and proven systems.

- Search and discovery: For a long time, libraries have been engaged in the struggle to help their users find the information they need quickly and seamlessly. Many academic libraries have programmers and other experts working on the problem of improving search results across large bodies of heterogeneous content in databases, library catalogs, and across the open web. This expertise would be valuable to OER operations that have invested a great deal in producing content, but have not yet figured out how to make that content findable to all the people who could use it.[5]

- Copyright expertise: In recent years, many academic libraries have created positions for copyright or scholarly communications specialists. These librarians provide outreach and education to faculty, staff, and students on a range of issues including publishing agreements, author rights, licensing contracts, and open access policies. Access to this copyright expertise would serve OER initiatives in two ways: helping to create policy and answer questions related to the use of third party content and licensing in OER, and supporting outreach efforts by helping to educate faculty about their rights as authors and creators and about the value of sharing.

- Data storage: In order to support the aforementioned digital collections, libraries have access to excellent storage systems for electronic content, along with carefully developed standards to keep those collections safe and accessible. Some run their own servers, while others partner with the central campus IT provider or use an external service, but the result is reliable storage that is protected against data loss and server outages. The storage infrastructure available to OER initiatives varies widely across institutions and depends a great deal on where the project is housed. On some campuses, the storage options available outside the library may be better than those in it, but on others the storage infrastructure in the library is top notch and would be an excellent home for OER.

- Metadata and indexing: Libraries have been cataloguing and indexing materials for centuries, and they have carried this expertise forward into the networked era. Metadata experts in libraries could serve as consultants for OER projects, either formally or informally, in order to help standardize and improve metadata for open content.

- Institutional repositories and preservation: Universities across the country are launching institutional repositories (IRs) to preserve and make available the scholarly output from their campuses. Many OER projects either use dedicated OER or open courseware publishing platforms such as eduCommons, learning management systems like Sakai or Moodle, or have created their own, but these systems are not designed for preservation of materials or formats. Using platforms like DSpace and Fedora, IRs contain materials in a wide range of formats, and are committed both to making the content freely available and discoverable on the open web, and to preserving the

content over the very long term. Few digital publishing operations have concerned themselves with long-term preservation, and as a result gigabytes of born digital content, websites and publications have already been lost (Brand, 1999). Depositing OER into institutional repositories opens up a new potential avenue of discovery while also ensuring that the material will be available for years to come.

Many of the infrastructural benefits in libraries could be available to OER initiatives without formally becoming a part of the library. Indeed, for many OER shops, collaborations with their libraries in some or all of these areas may be sufficient to meet the needs of the project. However, the next advantage will be harder to capitalize on through simple collaboration.

Relationships: Living at the heart of the University

Most university libraries have a central and trusted position in the lives of faculty, students, and administrators on their campuses. Librarians support curriculum development, guide instructors to appropriate learning content, and assist with research. According to data collected by the Association for Research Libraries (ARL), the average research library in the United States answers tens of thousands of reference questions each year (ARL Statistics, 2009). While gate counts are not collected by ARL, at a representative institution like the University of Washington, which sits towards the middle of ARL size rankings, that number is in the millions.[6] Despite the changes brought by technology and the availability of scholarly and educational content online, people on university campuses still use their libraries and librarians every day. Areas in which librarians have skills that are relevant to OER programs include outreach and education, curriculum development, and instructional support.

- Outreach and education: Public services librarians spend their time developing programming, reaching out to faculty and students, and teaching research skills. They know intimately which outreach strategies will work best for different departments, disciplines, and subcultures across campus. For OER projects that are struggling to recruit more faculty participation, or to inform students of the existence and usefulness of OER, librarians can offer not just guidance on effective marketing and outreach, but also a direct and trusted line to faculty and students all over campus.

- Curriculum development: In many institutions, librarians are immersed in the process of curriculum development and are engaged directly as facilitators in courses, a position from which they can help both students and faculty access OER, and turn course materials, both faculty and student produced, into OER.

- Instructional support: Some university libraries offer instructional design support, and many more help faculty identify and locate materials to use in their courses. Increasingly, librarians are using this role to point their faculty towards open content of all kinds (Kleinman, 2008). When a course is taught with OER in mind from the beginning, it is much easier to openly license it later.

When we refer to that oft-quoted line (so oft-quoted that we are not actually sure whom to quote), “Libraries are the heart of universities,” what we mean is this: Libraries are for everyone. Libraries provide services to every student, instructor, and staff member from every school, college, and department on a campus. When libraries are not beholden to the interests of a specific unit or department, they can be trusted to direct their financial, personnel, and technical resources in a manner that will provide the most benefit to the most people. This is exactly the kind of reputation

OER publishing initiatives should want to have. An affiliation with the library signifies trustworthiness, sensibleness, and a commitment to the common good.

Case Study: OER and the Library at the University of Michigan

We now turn our attention to the case study underway at the University of Michigan. In March 2010, a small group within the University Library submitted a report to Dean of Libraries Paul Courant recommending that the Library launch a University-wide program housed in its MPublishing unit to publish and collect OER. The group argued that the Library should focus on integrating some or all of the existing Open.Michigan OER operation into the Library to capitalize on the experience and connections that operation had already built. Courant charged a task force with researching the requirements for developing a University-wide OER program in the Library, including the staffing and resource needs and potential funding sources, and that task force delivered its report in August 2010. As of this writing, the Library is in the process of making a final decision about taking on responsibility for OER publishing at the University, but a number of collaborations are already underway, and some of the groundwork has been completed.

Open.Michigan

Open.Michigan is a project based in the University of Michigan Medical School and is dedicated to enabling educators, students and staff to make their instructional and educational resources available to everyone in the world. It is supervised by Ted Hanss, director of the Office of Enabling Technologies, which is a part of the Dean's Office in the Medical School. The Office of Enabling Technologies was created as an incubator for new technologies, techniques, and activities that might be of use to the instructional and research missions of the Medical School. The Open.Michigan project was born from the initiative of a few graduate students and the Dean's conviction that open education had a place in medical instruction.

The mission of Open.Michigan is to "increase knowledge and sharing in the higher education community through fostering an open culture." Most of the activity in service of this mission is directly related to OER production and publishing in some form, but there is also an underlying effort to change the climate at the University of Michigan to encourage sharing and foster a participatory learning environment.

Open.Michigan consists of four major areas of activity:

1) *The production of OER from U-M courses and learning materials, and outreach and consulting services related to OER production:* Open Education Specialists partner with faculty who wish to create any form of OER, including courses, textbooks, and datasets, support faculty who are seeking open content to use in their teaching, and promote the use and creation of OER throughout the

campus. This work includes an effort to educate faculty about copyright and to encourage them to create courses using material that is licensed for downstream copying and adaptation.

2) *The development of processes and software to support OER production and publishing*: Open.Michigan developed a distributed OER production process called dScribe, which uses student volunteers in U-M courses to collect course materials, run them through a copyright clearance process, replace proprietary third party materials with public domain or Creative Commons licensed content, and republish the courses as OER in the Open.Michigan OER repository. To support this work, Open.Michigan developed an open source software application called OERca that facilitates the copyright clearance process. Open.Michigan also worked with a contractor to build an open source OER publishing platform on Drupal.

3) *The Open.Michigan website, which serves as a gateway to a wide spectrum of "open" initiatives at the University of Michigan and collaborating institutions*: This website highlights relevant projects throughout the University, including many Library initiatives, and serves as a publishing platform for over 60 courses and resources produced as OER from 10 different units, schools and colleges at U-M.

4) *African Health OER Network, a partnership between the U-M Medical School, OER Africa, and several health science universities across the continent*: Funded by the Hewlett Foundation, the aim of the project is to improve health science education in Africa and enable teaching resources to flow back and forth between U-M and African health science schools. The participating schools are collaborating on content creation, production and publishing development, and advocacy and policymaking related to OER.

The University of Michigan Library

The University of Michigan Library in Ann Arbor is one of the largest university library systems in the United States. Comprising several locations across campus, the Library holds more than 8 million volumes and serves more than 3 million patrons per year. In a typical year, the University Library teaches more than 1,000 classes to 20,000 undergraduates, graduate students, and faculty through course-integrated instruction and technology-focused programs. The overarching mission of the University Library is to support the research and scholarship of students and faculty. In recent years, many non-traditional activities that support scholarship have begun to fit under the Library's umbrella, including publishing, technology instruction, copyright advocacy, and software development.

The University Library launched its first digitization and open access projects in the early 1990's. The Making of America project was a Mellon Foundation-funded partnership among U-M, Cornell University, and the Library of Congress that created one of the first digital libraries of public domain content.[7] Since then, the Library has built a robust digital publishing program that includes a copyright office, an institutional repository, and an experimental unit that publishes open access scholarly journals, monograph series, public domain image collections, print-on-demand textbooks, and reprints. When it assumed responsibility for the University of Michigan Press in

2009, the University Library organized a new unit called MPublishing and consolidated within it tremendous expertise in the skills necessary to create and publish open digital content. Recently, the U-M Library began exploring the addition of OER to its portfolio with the potential integration of Open.Michigan into MPublishing.

Moving OER into the Library

The task force on moving Open.Michigan into the University Library identified several advantages that would be gained from such a shift, many of them outlined in the section above: the Library has a broader reach and relationships throughout campus, and has already established much of the infrastructure and expertise necessary to support OER production. In addition to its primary work with the Medical School, Open.Michigan has partnered with the College of Literature, Science and Arts, the College of Engineering, the Taubman College of Architecture and Urban Planning, and the Schools of Dentistry, Education, Information, Nursing, Public Health, and Public Policy to support their OER efforts. Creating a central home for OER publishing would give the operation more freedom to support all interested faculty and students on campus. Furthermore, developing a central unit that helps manage the production, storage, access, and preservation of OER would allow the University to achieve efficiencies.

In anticipation of a potential move, several collaborations between Open.Michigan and the University Library are already underway. These collaborations support the work of Open.Michigan, and can continue to do so even if the proposed integration does not move forward.

- Copyright: Both Open.Michigan and the Library have outreach and education programs related to copyright, licensing, and author rights, and over the last year there has been ongoing cooperation to join forces and reduce overlap. One of the Library's copyright specialists offers workshops that include copyright basics along with instruction on how to find, use, and create OER, and helps provide copyright trainings for dScribes. He also coordinates Open.Michigan's legal and policy meetings, where the Library Copyright Office, U-M's General Counsel's Office, and Open.Michigan create and discuss policies for copyright and OER production.

- Preservation: At the start of 2010, Open.Michigan began archiving courses and resources in Deep Blue, the University Library's institutional repository, where they will be preserved over the long term. The primary access point for Open.Michigan's OER is a custom-built Drupal website on hosted Medical School servers. Deposit in Deep Blue, a customized DSpace platform, will ensure that these resources are available well into the future.

- Student outreach: The Library has a robust outreach program for undergraduates, one that recently expanded with the opening of a new "media commons" in North Quad, a building that just opened and includes space for dormitories, several academic departments, and a variety of common spaces, many with large display screens. The Library oversees the common spaces, and Open.Michigan is working with the North Quad librarian to offer programming and other activities to support student engagement with open content.

The remaining question to be resolved before a final decision can be made on moving OER into the library is funding: the University Library cannot take on an OER publishing initiative without additional money. As of this writing, conversations are underway to investigate potential funding sources that may involve an ongoing partnership with the Medical School, in addition to support

from the Provost, individual departments and colleges on campus, the Alumni Association, and a partial cost recovery model. The University Library has a strong track record of turning open content into revenue streams, most notably with its reprint series.[8] Successes elsewhere in monetizing open educational resources, such as Flat World Knowledge's print textbook sales or MIT's recruitment of donors, suggest that similar opportunities are available for Michigan.

Conclusion

To achieve long-term sustainability, university-based OER projects need a stable and well-funded home. OER projects will only sustain themselves by demonstrating lasting value to their home institutions. By partnering with libraries -- entities that already share the open philosophy and have already proven their value to the academy -- it will be possible for OER operations to become more firmly embedded in the spirit and structure of the campus. Early digital library projects may have a lesson here for OER operations; in a survey of university libraries that launched successful digital library projects, all fifteen respondents cited "substantial institutional commitment" as crucial for their longevity and success (Greenstein and Thorin, 2002).

There is another, less tangible potential benefit to be gained from working more closely with university libraries. If the goal of OER production is to change the culture in the academy, to create a community of teaching and learning that is more participatory, more open, and more accessible, to shift the value system towards one that privileges research and teaching materials that are available for use and reuse over content that is restricted and locked away, what better place from which to launch such an ambitious program than the library, the heart of the university? There is real work to be done if we hope to live in a world where scholarship and knowledge are available to all. Bringing OER into libraries offers us an opportunity to get a few steps closer to that world by applying all the expertise and infrastructure of libraries to the challenge of opening up teaching materials in a way that makes them usable, findable, and durable.

Notes

1. http://memory.loc.gov/.
2. http://lcweb2.loc.gov/ammem/about/index.html.
3. Some examples include Cornell Windows on the Past (http://cdl.library.cornell.edu/), the California Digital Library (http://www.cdlib.org/), and the New York Public Library http://www.nypl.org/collections/nypl-collections).
4. For example, the Johns Hopkins OCW initiative is housed in the Bloomberg School of Public Health (http://ocw.jhsph.edu/), while Utah State's OCW group is unaffiliated with a larger university entity (http://ocw.usu.edu/).
5. Notwithstanding the early attempts of Creative Commons and their DiscoverEd project http://learn.creativecommons.org/wp-content/uploads/2009/07/discovered-paper-17-july-2009.pdf.

6. www.libqual.org/documents/admin/HillerLAFDenver.ppt.
7. http://quod.lib.umich.edu/m/moagrp/.
8. The Michigan Historical Reprint Series http://www.lib.umich.edu/spo/reprints.html and University of Michigan Faculty Reprints http://www.lib.umich.edu/spo/facultyreprints.html.

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