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A SHORT HISTORY OF OER

Emily Carlisle-Johnston

Beginning in 1999, Massachusetts Institute of Technology (MIT) faculty began to consider how they might use the internet to fulfill the school's mission of advancing knowledge. MIT OpenCourseWare (OCW) was proposed in 2000, and with original funding from the William and Flora Hewlett Foundation and the Andrew W. Mellon Foundation, was announced in the *New York Times* by April 2001.¹ In the announcement, author Carey Goldberg cited the project as a ten-year initiative to create public websites “for almost all of [MIT’s] 2,000 courses,” where materials like “lecture notes, problem sets, syllabuses, exams, simulations, even video lectures” could be made available for use and repurposing at no charge.²

OCW would “offer course materials as ingredients of learning that [could] then be combined with teacher-student interaction somewhere else—or simply explored by, say, professors in Chile or precocious high school students in Bangladesh.”³ Five hundred courses were published by OCW’s 2003 launch, and since then materials from over 2,000 courses have been made openly available.⁴

Like many early open education projects, OCW embodies pillars of open education’s history: the project originated out of motivation to make education more accessible and was made possible with evolving technologies and the growth of the internet. As Martin Weller writes in *The Battle for Open*:

[Open education’s] foundations lie in one of altruism, and the belief that education is a public good. It has undergone many interpretations and adaptations, moving from a model which had open entry to study as its primary focus, to one that emphasises openly available content and resources. This change in the definition of openness in education has largely been a result of the digital and network revolution. Changes in other sectors, most notably the open source model of software production, and values associated with the internet of free access and open approaches have influenced (and been influenced by) practitioners in higher education.⁵

Yet the history of OER long predates MIT OpenCourseWare. This chapter will cover key milestones in the history of OER, tracing the relationship between technology and human aspirations throughout. We will begin with the 1948 Universal Declaration of Human Rights.

PRE-INTERNET (1948–1987)

UNIVERSAL DECLARATION OF HUMAN RIGHTS (1948)

The Universal Declaration of Human Rights (UDHR) is a critical document in the history of human rights and in education. It was proclaimed by the United Nations General Assembly in Paris on December 10, 1948, and drafted by individuals from across the world. The document established for the first time a set of fundamental and universal human rights,⁶ and was also the first document to recognize education as a fundamental human right. As noted in Article 26(1):

Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.⁷

Although the UDHR is not a legally binding instrument, it has served (and continues to serve) as a political and moral force. The right to education, in particular, has been reaffirmed in declarations adopted by the United Nations, such as the United Nations Educational, Scientific and Cultural Organization (UNESCO) Convention against Discrimination in Education (1960) and the Convention on the Rights of the Child (1989).⁸

The fact that education is a fundamental human right is cited as the driving motivation behind open education's efforts to democratize education. Rooted in access, agency, ownership, and participation, open education and OER are part of a broader movement to democratize education by removing “the traditional barriers that people often face in obtaining knowledge, credits, and degrees—including but not limited to cost.”⁹

OPEN UNIVERSITIES (1946–)

Efforts to increase access to education by removing traditional barriers to access began in earnest with the establishment of open universities. In 1946, the University of South Africa (UNISA) became the first university to teach exclusively via distance education. Because of its distance learning opportunities—which brought education to those who could not attend residential institutions—UNISA played a key role in providing quality tertiary education to disadvantaged groups during political tensions and the apartheid years. While institutionalized racism reigned in South and South West Africa from 1948 until the 1990s, UNISA “was perhaps the only university in South Africa to have provided all people with access to education, irrespective of race, colour or creed.”¹⁰

Seventeen years after UNISA pioneered tertiary distance education, British Prime Minister Harold Wilson proposed the UK Open University (the OU). Like UNISA, the OU was imagined as an opportunity to use communications technology to bring “high quality degree-level learning” to those without the opportunity to attend campus. Officially established on April 23, 1969, the OU's origins are similarly rooted in altruism and social justice, along with a motivation to disprove the assumed link between exclusivity and excellence in education.¹¹

Since the internet did not yet exist, early students of the OU received their education at a distance through printed course materials and science home experiment kits. As time and technology advanced, university staff adapted their teaching methods. In 1971, for example, the OU signed an agreement with BBC that allowed the OU to deliver courses, news, and

information about the university on BBC 2 and Radio 4 for thirty hours per week. By the 1980s, students of the OU were sent broadcasts via videocassette and, in some cases, were also required to have home computers.¹²

Following UNISA and the OU, other universities around the world have been established exclusively as distance learning opportunities—including Athabasca University in Canada (1970) and Bangladesh Open University (1992).¹³ Schools everywhere have come to embrace distance education, at least in part. However, while the mission of open universities reflects the long-standing tradition of access to education that is at the core of open education, Weller acknowledges that open entry to study was only the beginning.¹⁴ Open education has potential to “create opportunities for shared meaning-making, collaborative activities, and creative participation”¹⁵—opportunities that became apparent with the influence of the open source software movement.

FREE AND OPEN SOURCE SOFTWARE (1983)

Although there are critical differences between open source software and OER, David Wiley established a connection between the two by way of analogy when he coined the term “open content” in 1998. While working at Marshall University and as a graduate student at Brigham Young University, Wiley realized that “the ideals and principles of open source software could be applied to the world of digital educational content.”¹⁶

Before *open source software* was the widely recognized term, *free software* was used as a blanket term to capture similar meaning. Richard Stallman is credited with laying the foundation for both. In 1983 Stallman launched the GNU free software project, creating an operating system free from constraints to use of its source code.¹⁷ By Stallman’s definition, free software does not have to be free of cost, but does give people the freedom to

1. run the program for any purpose,
2. modify the program from the source code to suit needs,
3. redistribute copies gratis or at a cost, and
4. distribute modified versions of the program for the community’s benefit.¹⁸

To protect free software from being used in proprietary packages, Stallman developed the concept of copyleft:

To copyleft a program, we first state that it is copyrighted; then we add distribution terms, which are a legal instrument that gives everyone the rights to use, modify, and redistribute the program’s code or any program derived from it but only if the distribution terms are unchanged. Thus, the code and the freedoms become legally inseparable.¹⁹

Stallman’s copyleft terms offered a compromise between releasing the program into the public domain (at the risk of it being licensed as a proprietary product) and releasing it under restrictive copyright terms preventing modification.²⁰ *Free* and *open source software* refer to these same distribution licenses.

The term *open source*, however, was born out of motivation by Eric Raymond, author of “The Cathedral and the Bazaar” (1997),²¹ and others to rebrand free software as appealing to the commercial software industry. Recognizing that *free software* was often interpreted to mean free of cost, Raymond’s “The Cathedral and the Bazaar” introduced the argument that “open source software communities develop software faster, produce software with fewer bugs, are more innovative, and offer a better fit for the end-users than do proprietary software production companies.”²² The paper prompted Netscape Communications Corporation to

release its internet suite as free software, leading to the term *open source* being coined at a 1998 strategy session in Palo Alto, California.²³

Where *free software* focuses on the acts that users are permitted to take with the software, *open source* focuses on opportunities enabled by licenses, like collaboration around software development. Regardless, Richard Stallman's free software and Eric Raymond's open source movements uncovered a series of values and ideas—like collaboration, innovation, modification, and redistribution—that David Wiley would later apply to educational materials.²⁴ Before Wiley would make this connection, however, the development of the World Wide Web and the internet laid the technical groundwork for these values to be realized in open education.

LAUNCH OF THE WORLD WIDE WEB (1991)

In 1991, the World Wide Web became publicly available as a series of documents interconnected via hypertext links, paving the way for the internet as we know it today. The World Wide Web, and by extension the internet, has made it possible to share and access information at will. While the internet is a global network of networks across which data travels, the World Wide Web “provides a uniform, user friendly interface to the Internet.”²⁵ Together, they have provided the infrastructure through which educational materials can be made openly available and global communities of OER champions can become connected.

EARLY DAYS: MERLOT/MIT OPENCOURSEWARE

Introduced at the beginning of this subsection, MIT depended upon both the World Wide Web and the internet to make its course materials freely available and accessible to anyone via the MIT OpenCourseWare project. Owing to this technical infrastructure, this early OER project has grown to reach roughly five hundred million visitors from across the world as of 2020.²⁶

Another early OER project, MERLOT (Multimedia Educational Resource for Learning and Online Teaching), provides “curated online learning and support materials and content creation tools, led by an international community of educators, learners, and researchers.”²⁷ MERLOT was launched in 1997 under the leadership of Chuck Schneebeck, director of California State University's Center for Distributed Learning (CSU-CDL)—an academic service provider for the California State University system's twenty-three campuses. MERLOT was developed out of the need for a technology service to which users could contribute a collection of online resources.²⁸ Over time it has grown into an online digital resource library.*

In 1998, a State Higher Education Executives Organization/American Productivity and Quality Center study on faculty development and instructional technology selected CSU-CDL as one of six best practices centers in North America. This award resulted in institutions collaborating with CSU-CDL on the MERLOT project so that by July 2000 the project had grown into a cooperative of twenty-three institutional partners of MERLOT—each a higher education system or individual institution. Today, MERLOT serves as one of the largest online OER repositories and as a consortium composed of over thirty partner members that contribute annual fees to sustain MERLOT's activities. Key to MERLOT's activities is the fostering of community, as the community drives growth by contributing and reviewing resources and networking on behalf of MERLOT's mission.²⁹

* The digital resource library is available at the MERLOT home page, <https://www.merlot.org/merlot/>.

MIT OpenCourseWare and MERLOT illustrate early efforts to share online learning materials across international borders, made possible because of the affordances of the internet. With the technology in place to support open sharing of educational material at scale, however, a need arose to conceptually and legally define the kinds of open sharing that were beginning to take shape.

OPEN LICENSING (2001–2002)

Creative Commons licenses are the default licenses for sharing OER. Founded in 2001 by Lawrence Lessig and others, Creative Commons (the nonprofit organization) grew out of inspiration from web publisher Eric Eldred and in response to a growing community of bloggers who were creating, sharing, and remixing online content. The Creative Commons (often referred to as CC) licenses were released in 2002 as a means to legally enable creators like the community of bloggers to retain their copyright while sharing their work in a way that was more flexible than “all rights reserved.”³⁰

As the internet expanded the ways in which people were able to share digital content, educational resources were increasingly born digital. Creative Commons licenses made it possible for creators to define the conditions under which others use their work and for users to interpret their rights to an item. Around the same time, UNESCO would come to provide the first ever definition of OER—both of which may be deemed contributing factors to the significant increase in OER in the early twenty-first century.

OPEN EDUCATION ADVOCACY (2002–PRESENT)

UNESCO COINS *OER*

UNESCO convened the Forum on the Impact of Open Courseware for Higher Education in Developing Countries in Paris on July 1–3, 2002. The forum was held in partnership with the William and Flora Hewlett Foundation and the Western Cooperative for Educational Telecommunications. Following MIT’s high-profile push to release OpenCourseWare, a group of seventeen principal participants representing higher education from over ten countries came together to increase support and collaboration in this new area of education. (For a full list of participants and the countries/institutions represented, view the forum’s final report.)³¹

Recognizing the need to rename the service that was until that point referred to as *open courseware*, a working group at the forum coined and defined the term *open educational resources* as “the open provision of educational resources, enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes.”³²

GLOBAL DECLARATIONS

In the years that followed the coining of the term *OER*, international efforts to grow open education increased, including the first Open Education Conference (held at Utah State University) in 2003, the development of the not-for-profit organization China Open Resources for Education in 2004, and the Cape Town meeting in 2007.³³

Cape Town Declaration (2007)

Held in Cape Town in September 2007, the Cape Town meeting brought together twenty-nine leading proponents of open education from nations across the globe, including South Africa, Poland, Chile, and Canada.³⁴

Convened by the Open Society Institute and the Shuttleworth Foundation, the Cape Town meeting was intended to accelerate efforts to promote open resources, technology, and teaching practices in education. As at the Forum on the Impact of Open Courseware for Higher Education in Developing Countries, participants discussed ways to expand OER initiatives through collaboration. The Cape Town Declaration—coauthored by meeting participants—was the outcome.³⁵

Released publicly on January 22, 2008, the Cape Town Declaration is a statement of principle, strategy, and commitment. It recognizes open education not just as a means to increase access to education, but also as an opportunity to imagine “a new pedagogy where educators and learners create, shape and evolve knowledge together.”³⁶ It presents three strategies to “increase the reach and impact of open educational resources”:

1. “Educators and learners” are encouraged “to actively participate in the open education movement.”
2. “Educators, authors, publishers, and institutions” are encouraged “to release their resources openly.”
3. “Governments, school boards, colleges, and universities” are called upon “to make open education a . . . priority.”³⁷

Read the full Cape Town Open Education Declaration and view its list of authors at <https://www.capetowndeclaration.org/>.

As of 2022, the declaration has been signed by more than 3,227 individuals and 362 organizations, each committing to the declaration’s three strategies.³⁸ The Cape Town Declaration remains part of the global movement toward open education.

Paris OER Declaration

Global advocacy for OER culminated at the first World OER Congress in Paris on June 20–22, 2012, led by UNESCO, Commonwealth of Learning, and other partners. The congress was held to showcase global best practices around OER, celebrate the tenth anniversary of UNESCO’s 2002 forum, and release the 2012 Paris OER Declaration.³⁹

Recalling previous OER declarations, such as the Cape Town Open Education Declaration, and global declarations declaring education a human right, such as the Universal Declaration of Human Rights, the Paris OER Declaration made ten recommendations to grow OER:

1. Foster awareness and use of OER.
2. Facilitate enabling environments for information communications technology to bridge the digital divide.
3. Reinforce the development of strategies of policies on OER.
4. Promote the understanding and use of open licensing frameworks.
5. Support capacity building for the sustainable development of materials—support institutions and teachers in building OER.
6. Foster strategic alliances for OER.

7. Encourage the development and adaptation of OER in a variety of languages and cultural contexts.
8. Encourage research on OER.
9. Facilitate finding, retrieving, and sharing OER.
10. Encourage the open licensing of educational materials produced with public funds.⁴⁰

Read the full 2012 Paris OER declaration at <https://unesdoc.unesco.org/ark:/48223/pf0000246687>.

The Paris OER Declaration therefore reaffirmed previous advocacy efforts and actions made at national and international levels to support the expansion of OER creation and adoption. The importance of these efforts were further reaffirmed with the United Nations' 2030 Agenda for Sustainable Development.

UN Sustainable Development Goal 4 (2015)

In 2015, the United Nations member states adopted the 2030 Agenda for Sustainable Development, which featured seventeen development goals that together address global challenges, including poverty, climate change, inequality, and justice. Goal 4 calls for quality education; it articulates the necessity to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.”⁴¹ In doing so, UN Sustainable Development Goal 4 brings to focus the statements from the 1948 Universal Declaration of Human Rights, in which equal access to higher education was formally recognized as a human right.

UN Sustainable Development Goal 4 has given further cause to advocate for open education as a means to achieve inclusive and equitable lifelong access to education. In 2017, global representatives from 111 countries convened for the second World OER Congress, this time in Ljubljana, Slovenia, and organized by UNESCO and the government of Slovenia. Here, the representatives adopted the 2017 Ljubljana OER Action Plan, which recommends forty-one actions to achieve the 2030 Sustainable Development Goal on quality education.⁴²

The action plan grew out of broad consultation, including six regional OER consultations attended by experts from more than 100 countries, an online consultation on the draft that saw input from more than 100 individuals, and recommendations from sessions at the second World OER Congress. The wide consultation resulted in a plan addressing five key areas for government action:

1. Building the capacity of users to find, re-use, create and share OER
2. Language and cultural issues
3. Ensuring inclusive and equitable access to quality OER
4. Developing sustainability models
5. Developing supportive policy environments⁴³

Read the full Ljubljana OER Action Plan at https://en.unesco.org/sites/default/files/ljubljana_oer_action_plan_2017.pdf.

The widespread consultation, culminating in a 500-person world congress, is indicative of the global attention that OER have gained over the course of open education's history.

ON-THE-GROUND WORK

The global declarations and action plans can be thought of as strategic efforts to draw visibility to—and forge connections across—on-the-ground efforts in support of OER growth and development. Since the inception of the declarations and action plans, on-the-ground efforts have grown interest and awareness in OER at local, national, and global scales. In the United States, national organizations such as the Scholarly Publishing and Academic Resources Coalition (SPARC) have driven program and policy development in support of OER from the federal government. In 2011, for example, the US Department of Labor developed a Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant program to expand postsecondary education and training capacity, with the requirement that grantees openly license all digital assets created with TAACCCT funds.⁴⁴ The program and its \$1.9 billion investment continued through to 2018, with the openly licensed products still available in SkillsCommons (<https://www.skillscommons.org/>), an online repository.⁴⁵ Then in 2014, for example, the US government released new open government initiatives as part of its Second Open Government National Action Plan. The new initiatives focused on open education and specifically on (1) raising open education awareness and identifying new partnerships, (2) piloting new models for using OER to support learning, and (3) launching an online skills academy.⁴⁶ And in 2018, the US Department of Education launched the Open Textbook Pilot grant program to support institutions in creating and expanding use of open textbooks.⁴⁷

State policy and programs have followed accordingly. For example, the Connecticut state legislature passed an act to create an open textbook pilot program in 2015,⁴⁸ California launched a statewide Zero Textbook Cost degree initiative in 2016,⁴⁹ and in spring 2017, New York State allocated an initial \$8 million in funding—split evenly between the City University of New York and the State University of New York—to increase the use and development of OER.⁵⁰ Additional investments have followed in subsequent years. Governmental adoption of OER is moving quickly outside of the United States as well. According to the Organization of Economic Cooperation and Development (OECD):

In August and September 2014, governments were asked to respond to a [Centre for Educational Research and Innovation]/OECD questionnaire on how they support and facilitate the development and use of OER in all education sectors. The survey collected the responses of 33 countries: 29 OECD member countries and 4 accession and key partner countries (Brazil, China, Indonesia and Latvia). The results indicate a clear policy support for OER, with 25 countries reporting having a government policy to support OER production and use.⁵¹

The sheer volume of OER that now exist also points to uptake in creation and use of OER, as well as investment in the infrastructure to disseminate them. There are now more than two billion works licensed with a Creative Commons license, while MERLOT has grown to hold more than 98,000 learning resources since its establishment in 1997.⁵² At the same time, more repositories have since been developed to host and increase discoverability of OER; the Open Textbook Library, which developed with support from the Open Education Network and which celebrated its tenth birthday in 2022, has grown in size to a collection with over 1,000 open textbooks.⁵³ More localized consortia, such as Canada's eCampusOntario and BCcampus, have also developed repositories to serve their constituents and beyond, which in recent years have grown to hold more than 700 and 350 resources, respectively.⁵⁴

Studies on OER awareness and use, however, show that while awareness of OER is steadily increasing, use remains comparatively low. A 2014 Bay View Analytics report showed awareness of OER among 20 percent of faculty respondents, as compared to 25 percent in 2015–16, and 46 percent in 2018.⁵⁵ While awareness of OER has been shown to increase likelihood that a faculty member will use OER, a 2020 Bay View Analytics report showed that only 15 percent of faculty respondents assigned OER as required course material.⁵⁶ Results from the 2020 report also suggest that despite the opportunity presented with the rapid shift to remote learning at the onset of COVID-19 in 2020, the pandemic did not significantly increase adoption of OER.

For all of the successes, then, the OER community—in which librarians have a strong role—still has work before it. There is room to continue advocacy and awareness building and to provide the education and support needed to increase uptake among those already aware of OER. Scholars and practitioners have also identified open pedagogy (which will be covered section 2.3.3) as an area for future growth and development. Where OER have come to be as a result of commitments to improve access to education and knowledge, open pedagogy goes further. “Open pedagogy instead represents a vision for education that replaces classrooms of control with communities of possibility.... Open pedagogy ...is firmly and explicitly grounded in concerns about social justice.”⁵⁷

Research has also demonstrated that although declarations like the 2012 Paris OER Declaration have a clear social justice alignment, key texts and literature that have followed are missing a social justice orientation. Dominant discourse around OER has framed openness and OER as good, often conflating access with social justice, but “access is not a synonym for social justice.”⁵⁸ And even with open education’s access-oriented commitment, most open textbooks do not meet basic accessibility requirements, meaning that OER are not accessible to all.⁵⁹ There is still work to be done to more closely align OER with the social justice values out of which the open education movement emerged.

CONCLUSION

This subsection has identified highlights throughout the history of open education, which originated out of a human rights–motivated desire to increase access to lifelong education. Through advocacy and advances in technology, open education has expanded into a global effort in which values like collaboration, inclusivity, and equity are at the forefront. And yet there is still work to be done. Noted by SPARC:

For too long, our educational systems have operated with a fundamental disconnect between practices left over from the analog world, and the vast potential of technology and the Internet to support more affordable, effective teaching and learning. The movement for Open Education seeks to close this gap.⁶⁰

Librarians play a key role in building the capacity for OER to be normalized as a means to achieve affordable, effective teaching and learning. Our work, and the present state of the field, are detailed in the rest of chapter 2.3.

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DISCUSSION QUESTIONS

1. Why is the Universal Declaration of Human Rights integral to the history of open education?
2. What values drove early efforts to create open universities? How have those values remained at the foreground of efforts driving OER use and development?
3. What impact have open licenses had on the ability to share online content?
4. What are some key similarities between the Cape Town Declaration, Paris OER Declaration, and Ljubljana OER Action Plan? Key differences?

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