CONTEXT AND CATALYST

The unwalled garden: growth of the OpenCourseWare Consortium, 2001–2008

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This article traces the development of the OpenCourseWare movement, including the origin of the concept at the Massachusetts Institute of Technology (MIT), the implementation of the MIT OpenCourseWare project, and the ideas spread into the global educational community, ultimately resulting in the formation of the OpenCourseWare Consortium. The growth and maturation of the OpenCourseWare Consortium is reviewed and the article considers briefly some possible directions for the future of open education.

Keywords: MIT; open courseware; digital learning; global cooperation; open licensing

Introduction

In preparation for the April 2008 meeting of the OpenCourseWare (OCW) Consortium, the 200 member universities conducted an inventory of courses available through institution OCW sites, and of traffic to those materials. At that date, course materials from more than 6200 courses were freely and openly available, and incomplete reporting indicated that more than 2.25 million visits were paid to those materials each month (traffic reporting did not include traffic to more than 1600 courses available through the China Quality OpenCourseWare programme). Consortium membership as of that meeting included leading universities from the United States, China, Japan, Spain, Latin America, Korea, Turkey and Vietnam. Only five and a half years before that meeting, not a single course had been shared via OCW, and the idea had only just been suggested by a group of faculty at Massachusetts Institute of Technology (MIT).

The explosive growth of OCW sharing was unimaginable at the time the concept was first proposed in 2001. The idea that a great many top universities might choose to share the core academic materials from their courses – including syllabi, lecture notes, assignments and examinations – on the Web, that they would licence these materials in an open source model and encourage others to download and modify them, was antithetical to the thinking of most universities at the time. In a report entitled The Knowledge Web published in 2000 (Moe & Blodget, 2000), analysts at Merrill Lynch had predicted a US distance learning market in excess of $25 billion emerging by 2003, with $7 billion of that in higher education. Most universities felt pressure to capture a share of this market at any cost, or risk being left out. In his account of the development of the OCW concept, MIT Professor Hal Abelson describes the general atmosphere of the time:

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December 1999 was still full-fledged dot-com euphoria time, and the possibilities for a world-leading university like MIT seemed limitless – and daunting. Three years earlier, the eminent management consultant Peter Drucker [Drucker, 1997, cited in Lenzer & Johnson, 1997] had famously predicted that ‘thirty years from now the big university campuses will be relics … The college won’t survive as a residential institution,’ and murmurs about the displacement of the traditional university rustled throughout the halls of academe. Flocks of hopeful dot-com startup suitors courted leading universities, offering to usher them – and their famous brands – into the lucrative world of Internet distance education. Some of these ventures were already making offers to MIT: UNext (which had begun to work with Stanford, Chicago, Columbia, and CMU), Pensare (working with Harvard Business School and the Wharton School of Commerce), and Caliber Learning (working with Georgetown, USC, Wharton, and Johns Hopkins). Other institutions were launching commercial ventures of their own: the Princeton-Oxford-Stanford-Yale $12M ‘POSY Alliance’ for Lifelong Learning to create distance education courses for alumni, Columbia’s Fathom Knowledge Network for online learning, and Cornell’s eCornell online professional development courses. (Abelson, 2007)

As with many peer institutions, MIT struggled to understand how this new online educational environment did or did not fit with the Institute’s unique character and core competencies. Through a series of faculty committees, MIT articulated its core values and how those might or might not be translated into digital education initiatives. Early in 2000, a joint MIT–McKinsey and Company team presented a report containing e-learning recommendations to the MIT Council on Educational Technology, whose charter is ‘to provide strategic guidance and oversight of MIT efforts to develop an infrastructure and initiatives for the application of technology to education.’ In that report, the team identified core MIT values that would have to be considered in any distance learning proposal, including MIT’s expectation that all faculty be involved in teaching, research and service; MIT’s strong commitment to the residential education experience; and an unwillingness to compromise on enrolment standards (Abelson, 2007).

The report also presented a range of options for a digital learning initiative, which included both programmes that served existing MIT constituencies and options for reaching into new markets. As Abelson observed:

The options presented posed the classic industry strategic choice of ‘move into new markets’ versus ‘focus on core constituencies.’ In MIT’s case, this amounted to, on the one hand, increasing the Institute’s reach and influence, expanding MIT education globally to top-tier students, and creating educational offerings for the corporate and mass markets; versus improving the experience ‘at home,’ enhancing the quality of MIT’s current education, and engaging and leveraging the MIT community. (2007)

The Council on Educational Technology directed an MIT faculty committee – this time working with Booz Allen Hamilton – to explore options to serve MIT’s core constituencies. The committee worked throughout the summer of 2000 to develop a proposal for ‘Knowledge Updates’, online mini-courses on hot issues and emerging fields designed for MIT alumni and based on MIT’s strengths in technical and interdisciplinary studies. As the recommendation neared its final draft, members of the committee began to be concerned that the final results were uninspiring and unlikely to enhance MIT’s influence or leadership in the digital environment. It was at this point the committee revisited a non-profit business model that had been examined and set aside earlier in the process. The final report included an exhaustive array of business models and rationales for Knowledge Updates, along with a brief seminal
proposal for freely sharing MIT’s educational materials that came with little in the way of analysis – OpenCourseWare.

Despite the embryonic nature of the proposal, the OCW concept received an enthusiastic reception from MIT’s president, Charles Vest. During the early months of 2001, President Vest and members of the committee undertook a series of discussions with every department at MIT to vet the idea, and found the concept warmly received throughout the Institute, although not without dissenting views in some quarters. President Vest also worked with representatives from the Andrew W. Mellon and William and Flora Hewlett Foundations to provide funding for OCW. By the spring, sufficient consensus had been achieved for MIT to announce the programme publicly. The announcement was covered on the front page of The New York Times, and in the article President Vest described the vision of the project:

This is a natural fit to what the Web is really all about,’ Dr. Vest said. ‘We’ve learned this lesson over and over again. You can’t have tight, closed-up systems. We’ve tried to open up software infrastructure in a variety of ways and that’s what unleashed the creativity of software developers; I think the same thing can happen in education. (Goldberg, 2001)

In proposing the OCW concept, the faculty committee had found a way to marry MIT’s core strength – the provision of high-quality residential education – with the Internet’s strength – wide and inexpensive distribution of content. Rather than attempting to create expensive new materials to support an online learning experience, MIT set out to openly share the materials already being created on campus for classroom-based learning. These materials, it was hoped, would provide the building blocks for other educators around the world to create better classroom experiences, and give students additional resources for understanding concepts from their classes. OCW, while not intended to be a distance learning platform, might also be a powerful tool to support independent learning in a variety of circumstances. And, in proposing OCW at a time when the prevailing trends in higher education were toward commercialisation and competition, MIT also staked out a new model for the role of universities in the digital environment, one that reflected longstanding commitments in academia to dissemination of knowledge and shared scholarship – a model that would ultimately resonate worldwide.

A cooperative model

In addition to presenting a new model for the role of universities in the digital environment, OCW encouraged a new model of interaction between institutions in the digital space. Distance learning, with its focus on the provision of certification, generated an atmosphere of competition as universities struggled for market share. It was clear early on that OCW, with its non-profit approach and focus on addressing the much wider global need for access to educational content, would benefit from cooperation between universities. In developing the initial 2001 proposal to the Mellon Foundation for MIT OCW, the OCW Interim Management Board explicitly stated MIT’s intent to ensure the project would be replicable at other universities, and adoption of the model by other leading schools was listed as an important success criterion (Abelson, Brown, & Lerman, 2001).

This initial commitment to supporting the spread of the model was expressed in the dual mission developed for MIT OCW:
To provide free access to virtually all MIT course materials for educators, students and individual learners around the world.

To extend the reach and impact of MIT OpenCourseWare and the OpenCourseWare concept.

The Interim Management Board expected initially that key activities in supporting the spread of the concept would largely be in developing a replicable model at MIT, extending the reach of the MIT materials and demonstrating their value globally. It was only after the value of the model was clear that MIT expected other universities would join in sharing their own course content openly.

Staff hiring for OCW began in mid-2002, and by the end of that year a 50-course proof-of-concept site had been successfully launched. In the initial proposal, MIT had committed to the publication of materials from 500 total courses by September 2003, and so the programme’s focus that year was almost entirely on building the organisation and infrastructure, as well as collecting the vast amount of course content required to meet that ambitious goal. Activities supporting the second half of the dual mission were almost entirely devoted to developing two key translation partnerships—translations into Portuguese and Spanish by Universia.net, and translations into Chinese by China Open Resources for Education (CORE). The first OCW evaluation report, published in early 2004 and examining the impact of the first 500 courses, identified no other institutions that had adopted the OCW model (Carson, 2004).

It came then as somewhat of a surprise when the staff of OCW learned that the Fulbright Economics Teaching Program (http://www.fetp.edu.vn/), a Vietnamese programme run in conjunction with Harvard University, had in late 2003 launched an OCW site, which included the entire set of materials for their one-year core programme in applied economics for public policy. The FETP OCW site cited MIT as its inspiration on their homepage:

Inspired by the Massachusetts Institute of Technology’s OpenCourseWare Initiative (OCW), the Fulbright School has begun to publish its teaching and research materials online. FETP OpenCourseWare is not a long distance learning project, rather it is a resource for people working or studying in policy-related fields to increase their knowledge and explore new approaches to learning and curriculum development. Instructors are encouraged to adopt FETP’s curricular materials for use in their own courses. Students may use FETP’s materials to guide independent study. (FETP, 2008)

The FETP OCW site and its well-articulated description of the model was an important early indicator that the OCW concept would be replicable at other institutions.

2004 would witness further adoption of the OCW concept, primarily in Japan, France and China, with some early adopter institutions emerging in the United States. Adoption in Japan was encouraged and supported by MIT professor Shigeru Miyagawa, a member of the committee who first proposed OCW at MIT and who met individually with the presidents of leading Japanese universities to explain the concept. Ultimately, nine leading universities in Japan would join together to become the founding members of the Japan OpenCourseWare Consortium, a group that has now grown to include 17 universities and five affiliate members. The Japan OpenCourseWare Consortium members have collectively published materials from over 700 courses to date.

In 2004 collaboration between the Chinese Ministry of Education and MIT’s translation partner CORE would lead to the launch of the China Quality OpenCourseWare
An effort to openly publish the best courses from across the Chinese higher education system. By mid-2005, materials from more than 500 Chinese courses were available through the CORE site. This collection of courseware has now grown to over 1600 total courses, some of which are now being translated into English by the CORE team. December 2004 also marked the start of efforts by the ParisTech consortium of engineering schools to create an OCW site. The ParisTech membership includes 11 top engineering schools in Paris. The ParisTech ‘Graduate School’ OCW site launched in January 2006 and today includes materials from 295 courses.

Early interest in OCW in the United States would emerge at a group of universities with very strong public service missions, including Johns Hopkins University (Bloomberg School of Public Health), Tufts University (whose president, Lawrence Bacow, had been chancellor at MIT during the development of the OCW concept), University of Notre Dame, and Utah State University. Each of these early adopters saw in OCW a tool for furthering core commitments of their institutions. The Johns Hopkins Bloomberg School of Public Heath OCW illustrates this with a statement on their home page: ‘As challenges to the world’s health escalate daily, the School feels a moral imperative to provide equal and open access to information and knowledge about the obstacles to the public’s health and their potential solutions’ (Johns Hopkins Bloomberg School of Public Heath, 2008).

Throughout 2004 the MIT OCW staff provided as much support to these institutions as resources allowed. It rapidly became clear, however, that interest in the OCW concept was growing much more quickly than anyone had anticipated and MIT could not sustainably coordinate communication among all the emerging OCW programmes. Further, it became clear that while MIT had much to offer from its own experience, emerging projects were virtually all working with fewer resources than MIT, and were often developing innovative approaches to overcoming those constraints. Much of the communication the MIT team found itself engaged in was the facilitation of best practices between the emerging projects. It became apparent that a framework beyond what the MIT staff could provide was needed to support the growth of the community.

Creation and development of the OpenCourseWare Consortium

In February 2005 representatives of the US schools, the Japan OpenCourseWare Consortium, CORE, and Universia.net gathered on the MIT campus to discuss the creation of the OCW Consortium and to develop a shared vision of what the movement, and the organisation that would support it, should be. Significantly, the attendees at that meeting developed a common definition of OCW that was to be the foundation for the group’s collaboration. The definition stated: ‘An OpenCourseWare is a free and open digital publication of high quality educational materials, organized as courses’. This definition captured the three core commitments of the newly formed consortium: a commitment to open licensing of materials, a focus on quality, and the framework of courses as a shared organising principle. The representatives gathered agreed to keep the Consortium loosely organised as the movement developed.

Interest in OCW publication continued to grow throughout 2005, with the University of Michigan beginning to explore a possible programme, and Universia.net securing commitments from major Spanish and Portuguese universities. When the members of the young Consortium gathered in Logan, Utah in late September 2005, more than 40 universities around the world had undertaken significant OCW publications. While most of these had yet to go live, the group estimated materials from more than 1700 total
courses were published, only about 1100 of which were MIT’s. October 2005 would also mark the launch of The Open University UK’s innovative OCW site called OpenLearn (http://openlearn.open.ac.uk/), which incorporates a suite of interactive tools into open educational content drawn from The Open University UK courses, and provides a laboratory space for modifying course content.

At the September 2005 meeting, the Consortium members articulated the mission of the group ‘to advance education and empower people worldwide through OpenCourseWare’. The goals of the organisation were established as follows:

- Extend the reach and impact of OpenCourseWare by encouraging the adoption and adaptation of open educational materials around the world.
- Foster the development of additional OpenCourseWare projects.
- Ensure the long-term sustainability of OpenCourseWare projects by identifying ways to improve effectiveness and reduce costs.

A number of working groups began collaborations to address technical issues, share best practices regarding evaluation and communication, and begin work on a shared portal to link member sites together.

The Hewlett Foundation, which had been a crucial early partner for MIT OCW, provided funding to support the development of the Consortium; first as a line item in the MIT OCW budget, and later in a separate grant specifically to further the development of the organisation and encourage more OCW publication. With this funding available, the Consortium was able to launch the OCW Consortium portal (http://ocwconsortium.org) in April 2006, at the Consortium meeting in Kyoto, Japan. By the end of that year, some 90 universities worldwide would be significantly involved in OCW publication, with materials from over 2600 courses openly published. MIT accounted for roughly 1400 of that total.

Throughout 2007 and 2008 the Consortium began to grow through the addition of additional regional consortia, with groups emerging in South Korea, Turkey, Taiwan, Utah and Vietnam. The Consortium also began the transition to a more formal organisation with the hiring of a full-time executive director in 2007 and the election of a board of directors in 2008. By the end of July 2008, the Consortium should have completed the process of incorporation as an independent non-profit organisation. The Consortium is designed to serve the needs of its members by assisting new projects, increasing global awareness of existing content, and helping all projects to develop more sustainable approaches to OCW publication.

**Future directions for open education**

Innovative new interpretations of the OCW concept are emerging as fast as new projects are announced. Utah State University has been a leader in the development of open source software and tools to enrich OCW publication, including the widely used eduCommons OCW publication platform. As previously mentioned, The Open University UK has been a leader in adding interactive features. The University of Michigan’s recently launched OCW programme incorporated student ‘D-Scribes’ to help capture content, simultaneously reducing cost and enriching student experience.

While the OCW concept was developed at MIT, the Consortium members will drive the future development of the OCW Consortium and the OCW concept. Given the rapid development of the movement to date, it is difficult to predict what lies ahead for open education.
ahead, but there are clusters of shared interest emerging within the Consortium membership. Many members are interested in further exploring interactive tools to support use of the published content, ‘educational networking’ that would allow users with shared interest to learn collaboratively. There is considerable interest within the Consortium in making materials more searchable and interoperable, supporting the needs of educators who are building new content out of the materials published. Interest is also growing around the issue of providing some level of certification or recognition of independent study undertaken using OCW materials. These represent only a few of the paths the many schools pursuing OCW publication may follow, paths with a common origin in the simple yet powerful idea that the Internet provides universities with a tool for increasing educational opportunity on a global scale through open sharing.

References


