MIT OpenCourseWare

MIT OpenCourseWare (OCW) is a free and open digital publication of high-quality educational materials organized as courses. Through the internet, MIT OpenCourseWare has opened MIT's curriculum and the course materials created by MIT faculty to a global audience of teachers and learners. In the US and around the world educators use these materials for teaching and curriculum development, while students and self-learners draw upon the materials for self-study or supplementary use.

In November 2008, OCW reached an important milestone: the publication of 1,800 courses offered on the web, delivering on the original promise to make available virtually the entire undergraduate and graduate curricula in MIT's five schools and 33 academic units. Since the inception of OCW in 2002, we have also republished more than 500 courses with updated materials and new pedagogical approaches. Going forward, OCW will continue to publish about 50 new courses and 150 updates each year.

This year we also launched Highlights for High School (HFHS), described in more detail later in this report. HFHS is a new section of OCW that brings together materials of particular relevance to high school teachers and students. As of June 30, there were nearly 3,000 modules and resources in the HFHS program.

The overarching goals of OCW are to:

- Publish high-quality, up-to-date MIT course materials
- Increase use of OCW for teaching and learning
- Maximize the benefit of OCW for the MIT community
- Support worldwide Open Educational Resources (OER) and OCW movements
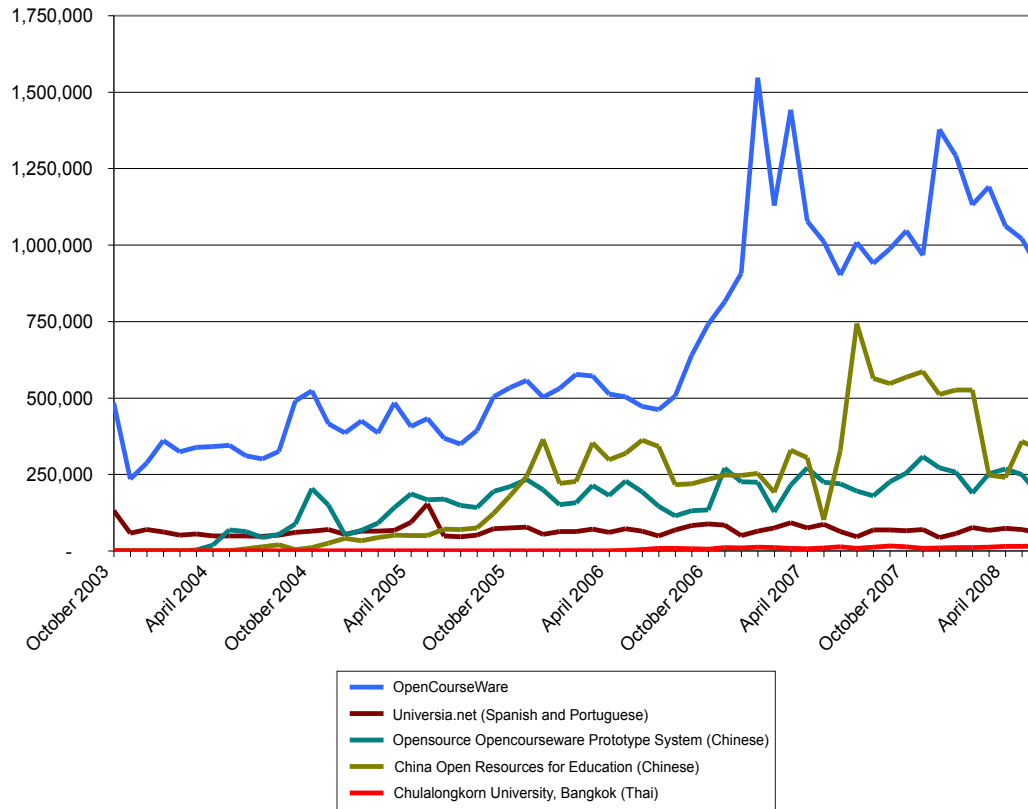- Sustain the MIT OCW program

Highlights of the Year

During this academic year, MIT OCW accomplished the following:

Published high-quality, up-to-date MIT course materials:

- Published more than 150 new courses, bringing the total number of courses available on OCW to 1,837
- Updated and refreshed over 125 previously published courses, bringing the total number of courses updated to nearly 500
- Completely redesigned the OCW website in September to enhance the user experience, present the breadth and depth of MIT course materials, and support fundraising efforts. Followed up with additional fine-tuning changes in May, primarily aimed at supporting a new fundraising campaign.

Monthly visits to OCW and OCW translation affiliates, October 2003–June 2008

Legend:
- OpenCourseWare
- Universia.net (Spanish and Portuguese)
- Opensource Opencourseware Prototype System (Chinese)
- China Open Resources for Education (Chinese)
- Chulalongkorn University, Bangkok (Thai)

- Improved accessibility features for users with disabilities. Beginning this year, we have made subtitling of video materials a routine part of the video production process. As of June 30, five complete course lecture series are subtitled, with eight more retrospective captioning projects underway and scheduled for completion in September.

- Concluded a ground-breaking model intellectual property agreement with Elsevier to allow open use of their copyrighted materials in OCW courses

Increased use of OCW for teaching and learning:

- Set new record for web traffic to MIT content, averaging more than 1.8 million visits per month to MIT OCW and affiliate sites hosting MIT content—an increase of 28% over last year. More than 63 millions total visits to MIT OCW and affiliate sites since OCW's launch in October 2003.

- Similarly set new record for zip downloads, averaging 303,000 downloads per month, an increase of 140% over last year

- Introduced distribution of OCW video material via iTunes U and YouTube

- Doubled mirror site program to 205 partner sites. Streamlined mirror site process so that installation at the local site is accomplished with one click

- Working through translation partners, OCW increased the number of course translations to 610

Maximized the benefit of OCW for the MIT community:

- Worked with the Admissions Office and Alumni Office to leverage OCW to advance their goals.

- Began work on requirements and technical solutions for an OCW image repository to encourage reuse of OCW's graphical content by the OCW publishing team and MIT faculty.

- Worked with ACCORD (an interdepartmental collaboration among OCW, MIT Libraries, Dean for Undergraduate Education, and Information Services and Technology) to integrate OCW processes and services to better meet faculty needs.

- Began discussions with the MIT Energy Initiative on the concept of building an energy-focused portal into OCW.

Supported worldwide Open Educational Resources (OER) and OCW movements
On behalf of the OpenCourseWare Consortium (OCWC, described in more detail later in this report), MIT:

- Obtained $1M in funding from the Hewlett Foundation to support OCWC efforts in AY2008 and AY2009.

- Hired an executive director for OCWC.

- Undertook organizational work to create a separate board of directors and spin off the consortium as an independent 501(c)(3) entity. The spin-off was completed as of July 9, 2008.

- We also made dozens of conference presentations and hosted visits from government, industry, foundations, and university groups.

Sustained the MIT OpenCourseWare program:

- Brought several formerly outsourced production processes in-house and streamlined procedures to save costs and improve quality:

  - Undertook in-house video production—editing, digital encoding (AMPS continues classroom video capture)

  - Increased in-house capacity to create graphical materials

  - Moved servers for content management system from Sapient to MIT, increasing access speed

- Launched the new "Invest in Open" campaign to increase end user donations. The spring launch was one of three appeals, the others coming in October and December 2008. User donations in FY2008 totaled $94,335, a 250% increase over FY2007.

- Rolled out corporate sponsorship program to attract ongoing, sustaining support from companies that benefit from OCW or that wish to be associated with the program

- Worked with MIT Council on Educational Technology on funding and organizational recommendations for OCW

- Expanded Amazon linking from pilot to full implementation for purchase of materials referenced in courses

1,800 Milestone Event

On November 28, 2007, MIT hosted a celebration of OCW's achievement of its major milestone: publication of virtually all courses taught at MIT. The celebration also announced the launch of OCW's secondary education effort, called Highlights for High School. The day began with a meeting of the OCW Advisory Board and was followed with an afternoon program that drew more than 300 people, including many representing other OCW institutions from around the world. Highlights of the program included:

- Welcome and Introduction, Steve Lerman, dean for graduate students; chair of the OCW Faculty Advisory Committee

- Reflections on MIT OpenCourseWare, Susan Hockfield, MIT president

- Keynote Address, Thomas L. Friedman, columnist, *The New York Times*

- Panel Discussion: Future of OCW and Education

  Hal Abelson, professor of electrical engineering and computer science, MIT, moderator

  Charles M. Vest: president, National Academy of Engineering; MIT president emeritus

  John Seely Brown: former chief scientist, Xerox

  Sam Pitroda: chairman, National Knowledge Commission, Government of India

- Announcement of Highlights for High School (new OCW initiative), Susan Hockfield

- Acknowledgment of major OCW funders (William and Flora Hewlett Foundation, Andrew W. Mellon Foundation, Ab Initio Corporation), Susan Hockfield

Global Page Redesign

We designed and implemented a new look and feel for OCW in September 2007, incorporating new graphics, updated and streamlined content, new navigational paths and search capabilities to make it easier for users to find the content they seek. The principal goals for the website redesign were to:

- Improve user features, navigation, and overall readability/usability

- Support the new Highlights for High School program

- Enhance support for fundraising initiatives

This was the first major overhaul of the OCW website since its launch in 2002. The upgrades were timed as a prelude to the major milestone event in fall 2007.

Highlights for High School

On November 29, 2007, MIT OCW launched Highlights for High School. This program takes advantage of our strengths and our trove of exceptional teaching resources in a way that will better serve high school constituencies. The HFHS initiative:

- **Leverages existing materials.** We have identified existing OCW course materials that are relevant to high school studies in the areas of calculus, physics, biology, chemistry, computer science, and engineering. These are mapped to high school curricula using the Advanced Placement framework.

- **Develops new high school–oriented materials.** We have a small number of new materials developed by MIT students through the Educational Studies Program (http://esp.mit.edu/). These students design materials to be engaging, irreverent, and exciting, while still teaching advanced topics that young students would not likely be exposed to in high school.

- **Customizes access for the high school audience.** HFHS has a special portal that organizes access to these resources, tailored to the needs and interests of high school students and teachers. In addition we developed a guide to MIT introductory-level courses on OCW.

Currently there are approximately 500 calculus resources, 600 biology resources, and 1,650 physics resources available on HFHS. We also have "Hands-On Learning" and "Knowledge in Action" sections featuring labs, demonstrations, as well as materials on how to "Build Stuff," "Save the World," and "Write Better."

We have engaged in significant outreach activities at high school teacher and administrator conferences. HFHS has been featured in several prominent publications including: the front page of *The New York Times, Edutopia, Education Week, Teacher Magazine, eSchool News, T.H.E. Journal,* the *Los Angeles Times* education blog, *CNET News, Campus Technology News,* and *The Boston Globe.*

HFHS attracts about 1,400 visitors per day, with over 300,000 visits since its launch in November. Top three visitor roles are high school educators (34%), high school students (16%) and high school parents (13%).

OpenCourseWare Consortium

The mission of the OpenCourseWare Consortium is to advance education and empower people worldwide through OpenCourseWare. The goals of the consortium are to:

- Extend the reach and impact of OCW by encouraging the adoption and adaptation of open educational materials around the world.

- Foster the development of additional OCW projects.

- Ensure the long-term sustainability of OCW projects by identifying ways to improve effectiveness and reduce costs.

Over the past year, the consortium has transformed itself into an independent 501(c)(3) organization with its own fully functioning board of directors. MIT OCW external relations director Steve Carson was elected the first president of the OCWC board at the April board meeting in Dalian, China.

The Consortium has added about 100 members to a diverse, vibrant, and engaged group now numbering some 250 institutions. The development of new OCWs is adding to the collective body of high quality educational materials that comprise a broad spectrum of disciplines and teaching methods, that provide thorough coverage within subject areas, and that are offered freely and openly for educational purposes. As of June 30, 2008:

- Number of distinct courses offered across membership: 6,200

- Average monthly visits to all content: 2.7 million

- Live OCW course sites: more than 100

The Hewlett Foundation is supporting the consortium with a two-year $1 million grant for running from July 1, 2007 to June 30, 2009.

OCW in the News

We aggressively pursue media opportunities as a means of increasing the visibility and impact of OCW, and as a result, OCW is frequently cited in the media. The following articles are available via the OCW website at http://web.mit.edu/ocwcom/MITOCW/Media/:

- "At 71, Physics Professor Is a Web Star," *New York Times*, December 19, 2007

- "Get an MIT or Yale Education Free," *US News & World Report*, December. 20, 2007

- "Internet Opens Elite Colleges to All," Associated Press, December 29, 2007

- "Internet Access Is Only Prerequisite for More and More College Classes," *Washington Post*, December 31, 2007

- "On My Mind" (commentary by Bill Gates), *Forbes*, January 23, 2008

- "MIT Orients Course Materials Online to K-12," *Education Week News*, February 5, 2008

Additional media coverage during AY2008 included:

- "An MIT Education Is Now Just a Click Away," *Boston Globe*, December 1, 2007
- "MIT Puts Entire Curriculum Online," *Computerworld*, December 4, 2007
- "MIT Digitizes Its Courses, Throws Them Online," *PC World Magazine*, December 4, 2007
- "Open Courses Open Wider," Inside Higher Ed, December 12, 2007
- "Nation Opens Doors to MIT Course Ware," *Viet Nam News*, December 13, 2007
- "Online University Courses Big Hit," Canadian Broadcasting Corporation CBC News online, December 31, 2007
- "Universities across the Globe Offer Free Open Courseware," *TechShout!* (India), December 31, 2007
- "OpenCourseWare to Revolutionize Vietnam's Higher Education," *Thanh Nien News* (Vietnam), December 31, 2007
- "A Star in the Classroom," *Boston Globe*, January 2, 2008
- "Get Your Lectures From MIT, For Free!," EFYtimes.com (India), January 2, 2008
- "On the Web, College Classes with No Charge (or Credit)," Voice of America, January 2, 2008,
- "OpenCourseWare Movement Grows across Planet," ZDNet, January 5, 2008
- "Elite Universities Discover the Power of Online Video," IBL News, January 8, 2008
- "Following MIT's Lead, 'U' to Add Open Course Website," *Michigan Daily*, January 17, 2008
- "International Call for Open Educational Resources," Inside Higher Ed, January 22, 2008
- "In Age of e-learning, Yale's Peers Open Classrooms to Public," *Yale Daily News*, January 22, 2008
- "Esoteric Post of the Day," CNet News, January 24, 2008
- "Take Harvard Classes, and Without All the Harvard People," Wired Science blog, *Wired*, January 31, 2008
- "Can a Smart Campus Make its Professors Smart?" *The Statesman* (India), February 5, 2008
- "High School Help," The Homeroom education blog, *Los Angeles Times*, February 7, 2008
- "Website of the Week—MIT OpenCourseWare," Voice of America, February 8, 2008
- "Flat World Contrarians," Brainstorm: Lives of the Mind blog, *Chronicle of Higher Education, The Chronicle Review*, February 8, 2008

- "Varsity Channels on YouTube Offering Educational Videos," *Gulf Times* (Qatar), February 9, 2008
- "Sharing the Riches of a Penn Education," *Daily Pennsylvanian*, February 13, 2008
- "OpenCourseWare Worth Exploring," *Duke Chronicle*, February 15, 2008
- "Open Access to Brilliant Insights," *Boston Globe*, February 19, 2008
- "For Rock Stars and Professors, Perform or Perish," *Yale Daily News*, February 20, 2008
- "Age of 'Open Education' Here," ZDNet Asia, February 20, 2008
- "Gates to Students: Consider IT Careers," *eSchool News*, February 25, 2008

Organizational Transition

AY2008 was a year of change for the OCW organization. Anne Margulies, founding executive director of OCW since its inception in 2002, stepped down in September 2007. Cecilia d'Oliveira, who had been OCW director of technology since 2002, stepped in to serve as acting executive director pending appointment of a permanent director.

MIT mounted a formal search for an executive director shortly after Ms. Margulies's resignation. The search was sponsored by the Office of the Provost and was conducted by a faculty search committee that includes Steven D. Eppinger, Sloan School, chair; Ann Wolpert, MIT Libraries; Thomas DeFrantz, Music and Theater Arts; Hazel Sive, Biology; Eric Klopfer, Urban Studies and Planning; and Harold Abelson, Electrical Engineering and Computer Science. As of June 30, 2008, the search committee continues to consider candidates, with a final selection anticipated by end of summer.

OCW also said good-bye to Chris Merlan, who had been our publication director for the past two years. Dan Carchidi, a member of our publication team for the past three years and a key driver of the Highlights for High School project, is our new publication director.

In addition to the change in OCW leadership, OCW also experienced a planned reduction in staff of 4 full-time equivalents in recognition of the reduced publication workload following completion of the initial ramp up to 1,800 courses. We also reorganized the publication teams, reducing the number from five to three.

OCW Advisory Board and Faculty Advisory Committee

The external OCW Advisory Board advises MIT's president and provost on key questions concerning future directions and sustainability of OCW. The board keeps current on OCW activities via communications from the president. It meets annually in the fall on campus. This year's meeting was held in conjunction with the 1,800 Milestone Event.

Members of the Advisory Board in AY2008 were:

Bruce Alberts, professor, Department of Biochemistry and Biophysics, University of California, San Francisco; co-chair, InterAcademy Council; president-elect, American Society for Cell Biology

Yuichiro Anzai, president, Keio University

John Seely Brown, chief innovation officer, 12 Entrepreneuring; former chief scientist, Xerox

Carly Fiorina—former CEO of Hewlett-Packard; MIT alumna

Sheryl Handler—CEO, Ab Initio, Inc.; MIT alumna

Susan Hockfield (chair), MIT President

Wu Jinglian, senior research fellow, Development Research Centre of the State Council of P.R.C.; member, Standing Committee of the Chinese People's Political Consultative Conference

Kim Jones, president and managing director UK & Ireland, Sun Microsystems Ltd.

William Kaiser, partner, Greylock Partners; MIT alumnus

Frannie Léautier, managing partner, The Fezembat Group

Steven Lerman, MIT professor; chair, OCW Faculty Advisory Committee, MIT alumnus

Narciso Matos, CEO and executive director, Foundation for Community Development (Mozambique)

Patrick McGovern, founder and chairman, International Data Group; MIT alumnus

Sam Pitroda, chairman, India Knowledge Commission; chairman and CEO, World-Tel Limited

L. Rafael Reif, MIT Provost

George Shultz, former US Secretary of State; MIT alumnus

Peter Smith, senior vice president for academic strategies and development, Kaplan Higher Education

Matthew J. Szulik, chairman, chief executive officer, and president, Red Hat

Maria Thomas, vice president and general manager, NPR Digital Media

Laura d'Andrea Tyson, professor, Haas Business and Public Policy Group, University of California, Berkeley

Charles M. Vest, president, National Academies of Sciences; president emeritus, MIT

The Faculty Advisory Committee is an internal oversight group that advises on OCW policy, sustainability, and relations with the MIT Faculty and with academic departments. Committee members in AY2008 included: Harold Abelson, Eric Klopfer, Vijay Kumar, Steven Lerman (chair), Stuart Madnick, Shigeru Miyagawa, Hazel Sive, Ann Wolpert, and Dick Yue.

Cecilia d'Oliveira
Acting Executive Director

More information about OpenCourseWare is available at http://ocw.mit.edu/.