Scholarship and OER in the 21st Century

Open Educational Resources in Teaching, Learning and Research

December 11, 2008

Joseph Hardin University of Michigan



What are OER?

What is Learning 2.0?

OCW combined with a recognition of the importance of peer-to-peer learning can contribute to valuable improvements in our scholarly ecosystem

"Open"

- Open Source Sakai Project/Ctools; Moodle; etc
- Open Access Open Archives Initiative, DOJ
- Open Content MIT OCW, Merlot
- Open Publishing DigitalCultureBooks
- Open Research Open Journals; pre-print servers
- Open Data Proteomecommons.org
- Open Textbooks ChemE Control Theory
- Open Lectures UCalBerkeley opencast
- Open Teaching Wiley, Severance
- All these are types/constituents of
- Open Educational Resources (OER)

open.umich.edu

open.michigan

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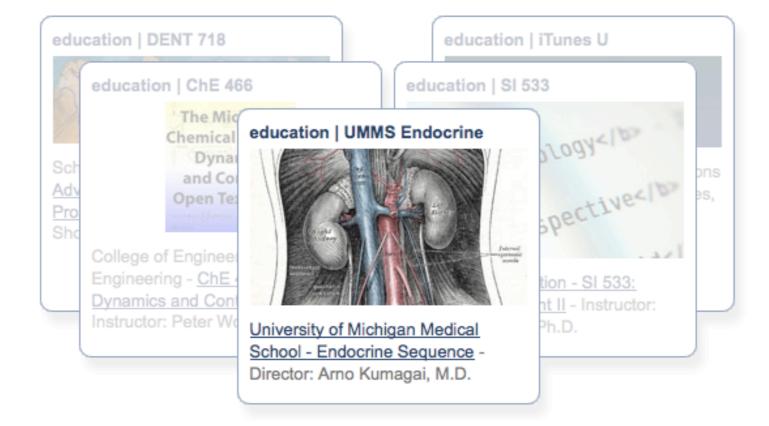
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Open.Michigan: a University of Michigan initiative to create and share knowledge, resources, and research with the global learning community.



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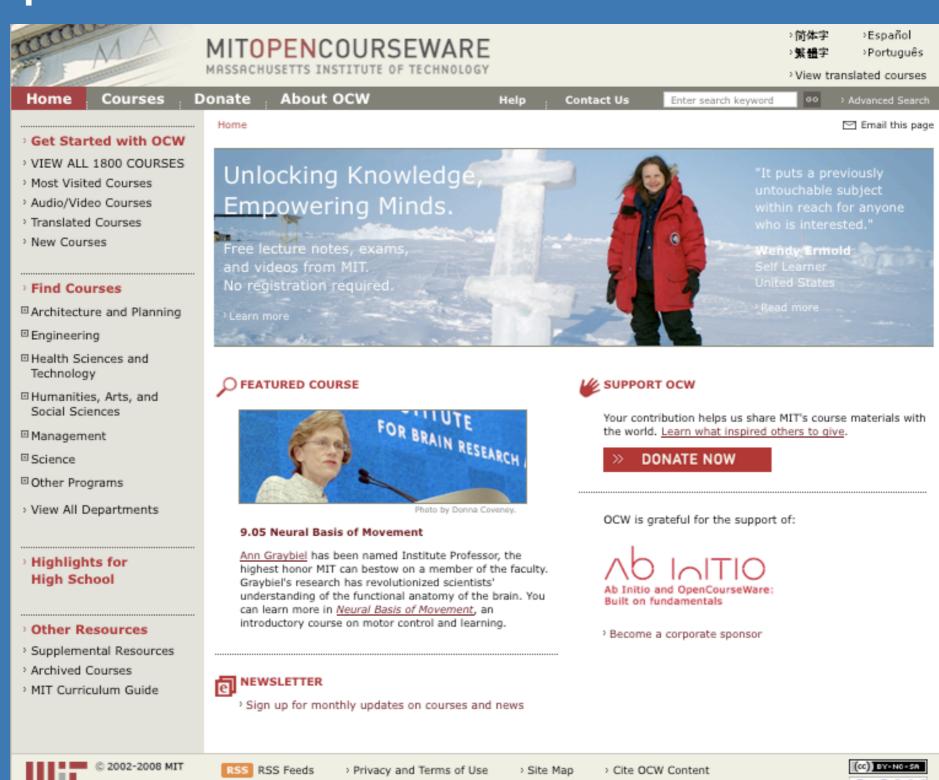
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Sep 12:

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Architecture

The Department of Architecture, established in 1865, is the oldest architecture department in the United States and is consistently ranked as one of the top programs in the U.S.

It is a place where the individual creativity of a student can be cultivated and nurtured in a framework that is humanistically, socially, and environmentally responsible.

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The Department offers degree programs in the areas of Architectural Design, Building Technology, Design Technology, History, Theory and Criticism and the Visual Arts. Other opportunities for study within the department are also available through the Aga Khan Program for Islamic Architecture.

Notable strengths of the department that cut across the discipline groups are our devoted teaching, the grounding of architecture in both social and material issues, interdisciplinarity, and the remarkable internationalism of faculty, students, teaching and research.

Department of Architecture links

Visit the MIT Department of Architecture home page at:

http://architecture.mit.edu/

Highlights for High School

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- > Supplemental Resources
- > Archived Courses
- > MIT Curriculum Guide

Available Courses

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> Undergraduate > Graduate

Undergraduate Courses

MIT Course #	Course Title	Term
4.001J	CityScope: New Orleans	Spring 2007
4.101	Experiencing Architecture Studio	Spring 2003
4.104	Architectural Design: Intentions	Spring 2004
4.104	Architecture Studio: Intentions	Spring 2005
4.125	Architecture Studio: Building in Landscapes	Fall 2002
4.125A	Architecture Studio: Building in Landscapes	Fall 2005
4.125B	Architecture Studio: Building in Landscapes	Fall 2005
4.170	Ecuador Workshop	Fall 2006
4.171	Ecuador Workshop	Fall 2006
4.183	Sustainable Design and Technology Research Workshop	Spring 2004
4.191	Introduction to Integrated Design	Fall 2006
4.206	Introduction to Design Computing	Spring 2004
4.211J	The Once and Future City	Spring 2006
4.243J	Media Technology and City Design and Development	Spring 2002
4.2503	Introduction to Urban Design and	Spring 2006



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4.125 Architecture Studio: Building in Landscapes

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Fall 2002



The Rockport Quarry. (Image by Jan Wampler.)

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Staff

Instructor: Prof. Jan Wampler

Course Meeting Times

Lectures:

Three sessions / week 4 hours / session

Level

Undergraduate

*Translations

- Portuguese
- Spanish

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Feedback

- Send feedback on this course.
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Syllabus

The work for the semester is the designing of places for community and privacy. These are always the two main issues that we have as architects: How to make spaces that can respond to the needs of the community for joyful livable places of interaction, and how to respond to the dreams of individuals to provide for a joyful livable place of their own. The second concern is building on the land, or earthtexture. Earthtexture includes land, sky, air, wind, sun, context - all of that influences what we design. Architecture happens in the space between the sky and land and the designs for the studio will always take this into account. We will also explore materials and structures that can relate to earthtexture and give architectural meaning to the forms. It is with an understanding of materials/structures that we can give form to our ideas of architecture. Finally, and most important, we will be understanding and reflecting the ideas and dreams of the people we are designing for. Architecture is an echo of our society and culture and at the same time it can influence the way that people relate to their surroundings.

There is one project for the semester but in three parts. The first part is designing an "observation community place" in an abandoned quarry in Rockport near Boston. The concern is how to design a cover for the sky - sky form - and a platform for the land - land form -that can give people shelter from the wind, sun, rain, snow.

The second part is to design places for a "community of individuals in the sky" on the rooftops and walls of buildings in the North End. This is another translation of land and we will treat the area as quarry, the buildings being sides of this quarry. Sites will be on roof tops, on sides of the quarry/buildings, or both. There will be as many sites as designers in the studio and each will be asked to pick a site -space- and design a place for themselves to live and work while projecting their lives ten years from now. Again the architecture must not only relate to the sky and land but also the attached walls or roof.

The last part is to design a "community meeting place" for members of a defined community on a site in the same area. The project is the making of a small building of not more than 5,000 square feet that might contain meeting places, work rooms, living places. The program for the building is to be designed by each studio member. Adjacent to this building will be a small "earthplace" a place related to nature that might be enjoyed by not only your community but others in the North End neighborhood.



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Lecture Notes

The following Video Lectures were filmed during field trips and class review sessions. They are in chronological order from the Fall 2002 semester. Requires RealOne Basic Player. RealOne Player software is required to run the .rm files in this section.

These files are also available for download from iTunes® and YouTube™.

- Quarry Pinups (<u>56k</u>) (<u>80k</u>) (<u>220k</u>)
- Quarry Reviews (56k) (80k) (220k)
- Site Lecture (<u>56k</u>) (<u>80k</u>) (<u>220k</u>)
- Pinups (56k) (80k) (220k)
- 5. Reviews from the North End in Boston (56k) (80k) (220k)
- Community Space Intro Lecture (56k) (80k) (220k)
- 7. Space Between (56k) (80k) (220k)
- Deskside Critiques A (<u>56k</u>) (<u>80k</u>) (<u>220k</u>)
- Deskside Critiques B-C (<u>56k</u>) (<u>80k</u>) (<u>220k</u>)
- 10. Pinups (56k) (80k) (220k)
- 11. Final Review A (56k) (80k) (220k)
- Final Review B (<u>56k</u>) (<u>80k</u>) (<u>220k</u>)



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Study Materials

The following are links to image collections from field trips and class.

North End Images



Site 6 (PDF)

Site 1 (PDF)



Site 2 (PDF)





Site 12 (PDF)



Site 3 (PDF)



Site 8 (PDF)



Site 13 (PDF)



Site 4 (PDF)



Site 9 (PDF)



Site 14 (PDF)



Site 5 (PDF)



Site 10 (PDF)

Rockport Quarry Images



Site 11 (PDF)

Image 1 (PDF)



Image 2 (PDF)



Image 3 (PDF)



Image 4 (PDF)



Image 5 (PDF)





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Assignments

The designing mediums include sketch modeling, sketching, making of full size pieces of the building, and the drawing methods used in previous semesters. In addition, there will be work done in digital programs, such as Photoshop and PowerPoint, programs that can be useful in explaining designs. (Examples of completed assignments can be seen in the projects section.)

Course Assignments Overview

Examples of student work are included in the assignments. The student work is courtesy of Joyce Wang, Sarah Shin, Stephanie Hsu, Eulalia Massague, and Phillip Kelleher. Used with permission.

- Assignment 1: Clues and References (PDF)
- Assignment 2: Making a Design (PDF)
- Assignment 3: North End Quarry Community in the Sky (PDF)
- Assignment 4: North End Quarry Community in the Sky (PDF)
- Assignment 5: North End Quarry Community in the Sky (PDF)
- Assignment 6: Making a Community Place Clues, Attitude and Program (PDF)
- Assignment 6a: Making a Community Place (PDF)
- Assignment 7: First pass at Design (PDF)
- Assignment 8: A Building Design (PDF)
- Assignment 9: Developing the Design (PDF)
- Assignment 10: Detailing a Chunk (PDF)
- Assignment 11: Putting it All Together (PDF)



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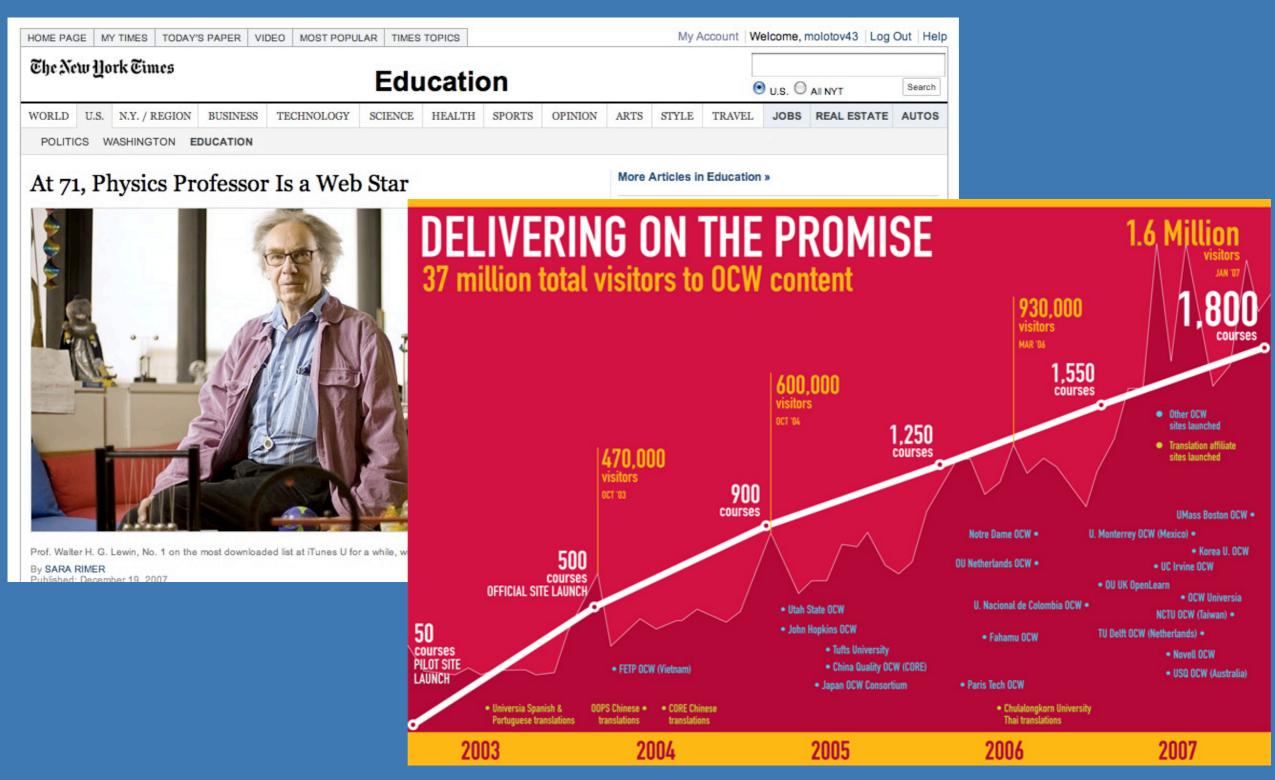
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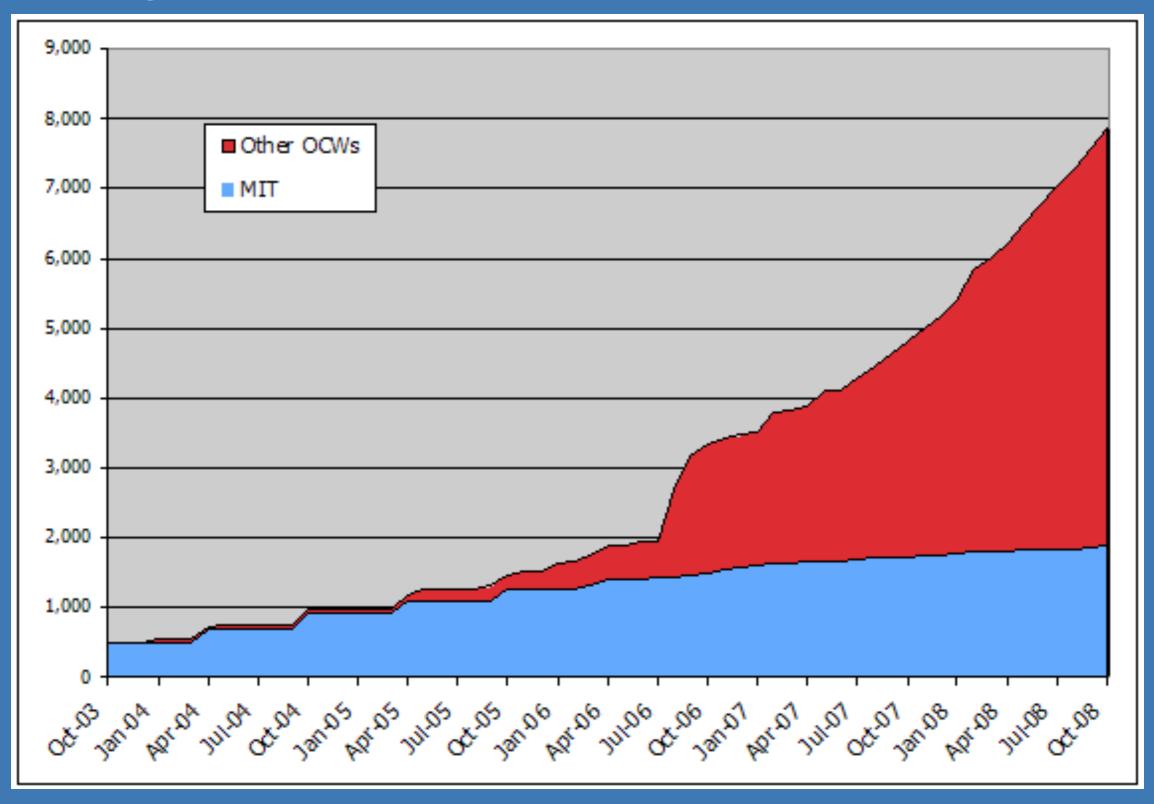
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Making Course Content Open



Growing International Effort



OCW International

profesores y estudiantes de cualquier parte del mundo una colección de

cursos por internet de libre acceso, con contenidos que forman parte de

los programas de estudios superiores que ofrece la universidad. De esta

manera, la UDEM espera contribuir con la responsabilidad global de

educar y servir a al comunidad.



Nos interesa saber su opinión

escríbanos con sus Comentarios.

acerca de nuestro sitio,

OCW Consortium



NEWS

Wed 06 Feb 2008 // United Nations University launches OpenCourseWare Portal UNESCO

why do this?

- example benefits to various groups:
- Students preview, review
- Faculty exposure, publication
- Alumni access, lifelong learning
- Self learners access, entry
- Universities web presence, recruiting, improving pedagogy, supporting faculty/students, leadership...
- •others throughout the world can benefit all these people/groups simultaneously (think of this and the University of Auckland)

Prospective students access OCW and their choice of school is influenced by the site

- Half of 2005 freshmen were aware of OCW prior to choosing to attend MIT
- 32% of those aware say OCW influenced their choice
- A third of faculty expressing an opinion say OCW has helped their department recruit students

"When I was deciding whether or not to go to MIT, I went to OCW [to] see what a typical physics course at MIT might cover. Obviously, I thought it was pretty helpful to be able to see that, because I go here now." — MIT undergraduate

OCW enhances the reputation of MIT's faculty and departments

- 34% of faculty who published on OCW agree the site has
- increased their professional standing
- 58% of faculty expressing an opinion say OCW has enhanced
- their department's reputation
- 95% believe OCW reflects positively on MIT
- "Many students and faculty around the world have commented
- to me about the help they have received from OCW. It is a
- wonderful representative of MIT to the world." MIT faculty

Creates a lifelong connection between MIT and our students and alumni.

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Nearly all MIT students use OCW and find it enhances their student experience

93% of undergrads and 82% of grads use OCW

OCW Impact on Student Experience

	UG	Grad	Both
Extremely positive impact	65.%	53%	58%
Positive impact	03.70		36 70
Moderately positive impact	33% 42%		38%
Somewhat positive impact			3670
No positive impact	2%	5%	4%
Total	100.0%	100.0%	100.0%

Source: 06 Grad Survey, 07 UG Survey

Many MIT alum use OCW and view it as enhancing the Institute's reputation

- 51% of MIT alumni use the OCW site
- Half of those using the site rate it as "very valuable"
- Alumni have donated more than \$1.2 M to OCW

Alum View of OCW Impact on MIT Reputation

	%	
Greatly enhances/Enhances	84%	
Neither enhances nor detracts	14%	
Detracts/Greatly detracts	2 %	
Total	100.0%	
Among alum expressing an opinion. Source: 06 A	Source: 06 Alumni Survey	

the taking and is not hoarded. I am proud that MIT is willing to stick its neck out and lead on issues that are important to science and society." — MIT Alumnus

"It speaks to the open nature of MIT: that knowledge is there for

Catalyzes improvements in teaching and learning at the Institute.

Through funding and staff resources, OCW directly improves course materials

- OCW has generated \$33 M in external funding. largely used for course materials development
- 87% of participating faculty say the OCW staff is a helpful resource for educational tech questions

The OCW publication process helps MIT faculty improve their teaching methods and materials

• 90% of MIT faculty have published on OCW

Benefits of OCW publication

	% agree	
Increased quality or organization of course materials	30%	
Increased level of comfort with use of the web in teaching	29%	
Allowed me to rethink my teaching approach	26%	
Source: 07 Faculty Survey		

MIT faculty have ready access to their colleagues' materials on OCW to support a range of activities

- 84% of MIT faculty use OCW
- F a culty use OCW for revising existing courses (38%); enhancing personal knowledge (30%); finding materials for classroom use (23%); and developing curriculum (18%)

Students use OCW to make more informed decisions about programs and courses, and faculty have more resources for advising

- 46% of students use OCW to select courses; 29% of faculty use OCW as an aid for advising
- 53% of faculty expressing an opinion agree OCW has improved available advising material

"I can't prove it, but I suspect that those who look at the site are more likely to take [my] course and probably better prepared for the course when they take it."— MIT faculty

MIT undergraduates and graduates use OCW to perform better in their classes and to extend their learning beyond their formal curriculum

MIT Student Use of OC W

	UG	Grad	Both
Complement a current course	88%	58%	70%
Plan course of study	52%	42%	46%
Enhance personal knowledge	30%	45%	39%
Review previous courses	36%	30%	33%
Source: 06 Crad Survey, 07 HC Survey			7 LIC CURV OV

Source: 06 Grad Survey, 07 UG Surv e y

Showcases MIT's curriculum, strengthens the Institute's reputation, and promotes international engagement.

OCW furthers the Institute's mission

- 93% of faculty agree OCW furthers MIT's public service mission
- Thr ough OCW, MIT has provided educational materials to an estimated 35 M individuals worldwide

"OCW is tremendously important for emphasizing that education, ideally, should be free to all comers." — MIT faculty

OCW enhances the reputation of MIT's faculty and departments

- 34% of faculty who published on OCW agree the site has increased their professional standing
- 58% of faculty expressing an opinion say OCW has enhanced their department's reputation
- 95% believe OCW reflects positively on MIT
- Thr ough OCW, MIT has developed and maintains its leadership position in open educational resources

"Many students and faculty around the world have commented to me about the help they have received from OCW. It is a wonderful representative of MIT to the world." - MIT faculty

OCW promotes international engagement

- 82% of faculty say OCW is an important element of MIT's international engagement
- OCW has sparked collaborations with external faculty and groups including the Italian Space Agency
- OCW supports activities of student groups working internationally, including MISTI and AITI
- Approximately 600 OCW courses have been translated by other organizations; these translations have been accessed by an estimated 14 M individuals

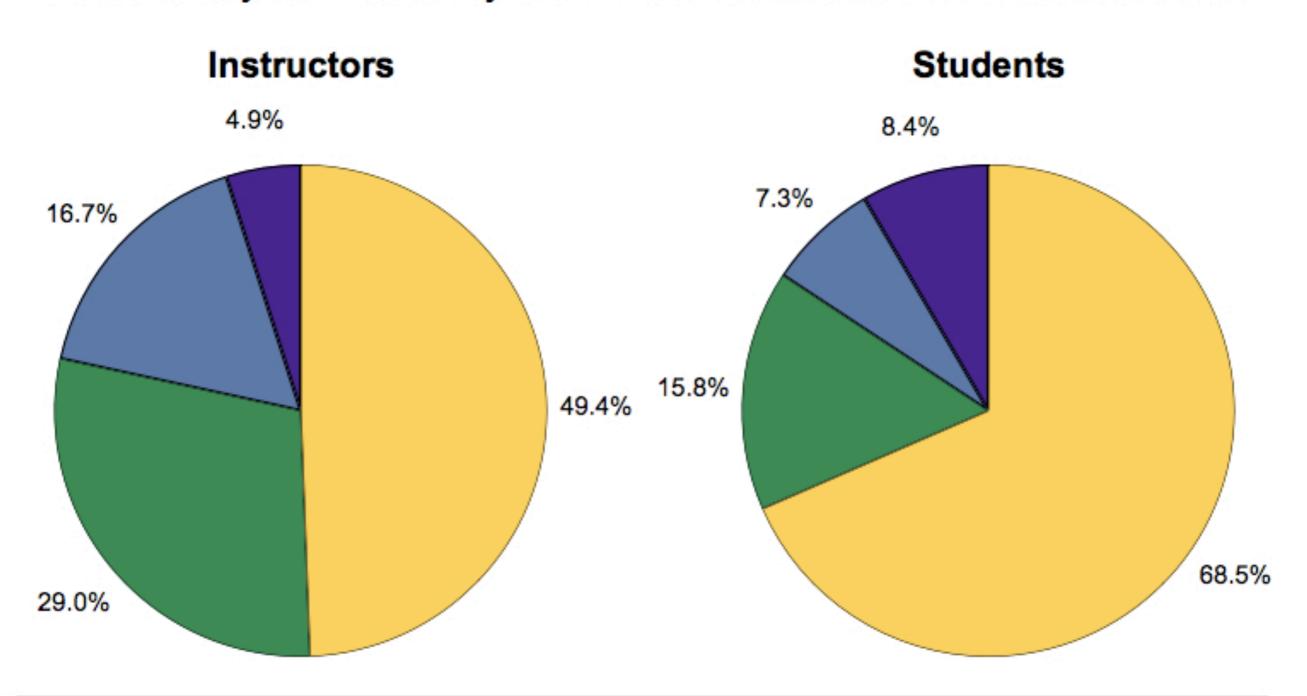
OCW provides a platform for developing and disseminating information about new initiatives

- T he OCW team has developed a portal to support High School AP faculty and students
- OCW has been used by numerous faculty as a mode of dissemination in grant applications
- OCW showcases significant portions of the curriculum for the MIT Energy Initiative, the Computational and Systems Biology Initiative and other cutting-edge interdisciplinary programs

Data sources: 2005 Alumni Survey, 2006 OCW Graduate Student Survey, 2007 OCW Undergraduate Survey, 2007 OCW Faculty Survey, 2007 Institutional Research Communication Survey, WebTrends Metrics

At the University of Michigan

Q: What is your familiarity with OCW websites at other institutions?





I have heard of OCW but never gone to an OCW site

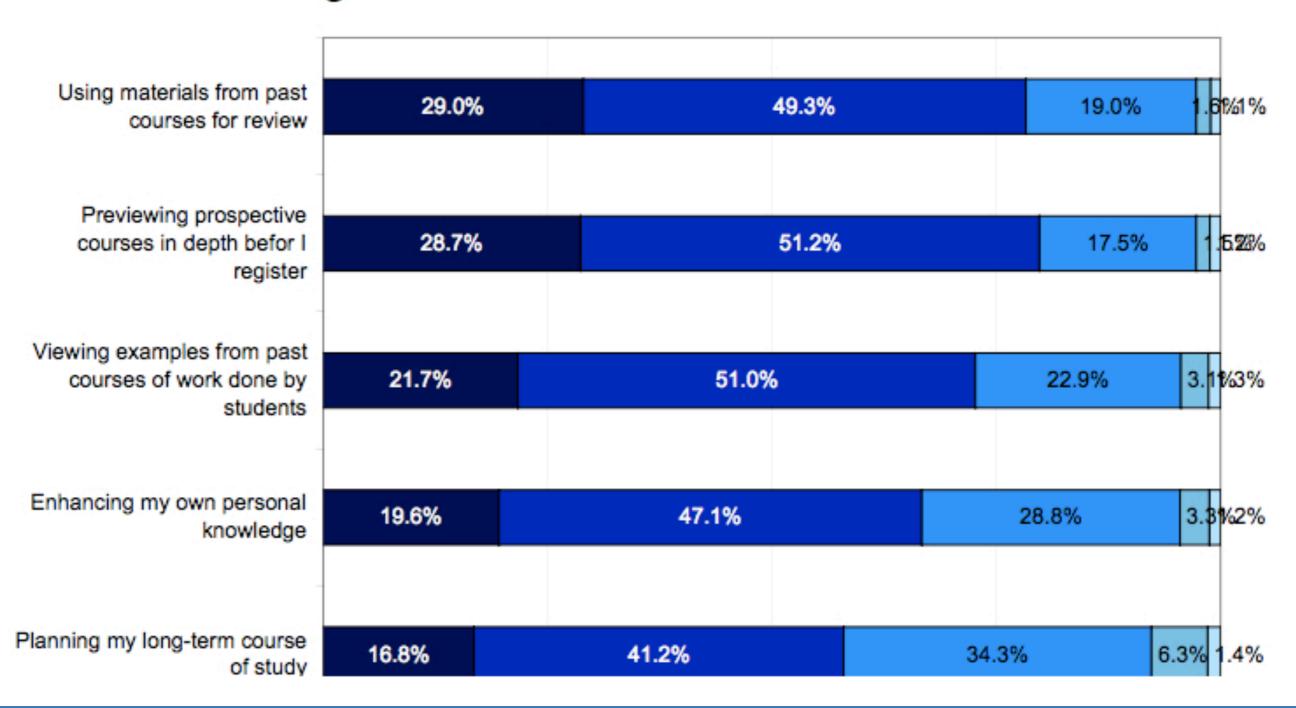
I have looked at an OCW site

I have looked at and used material from an OCW site in my teaching/studies



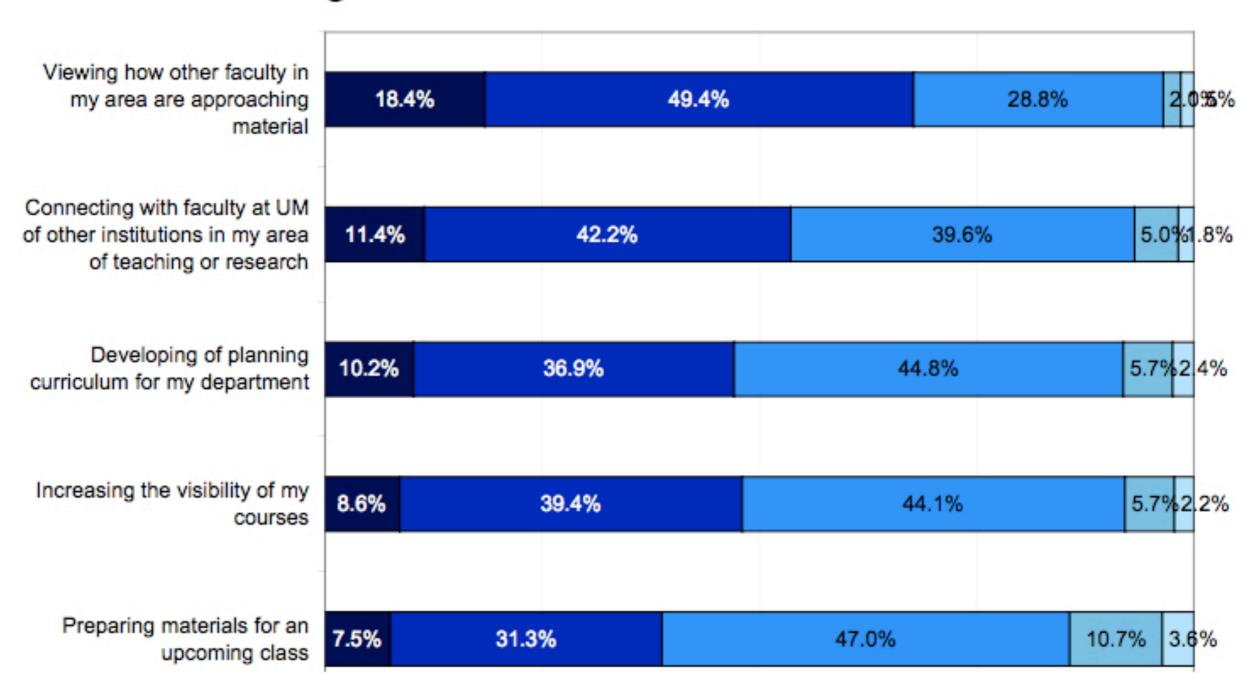
OCW - Value of Potential Uses: Students

Q: Using a OCW website would be valuable for...

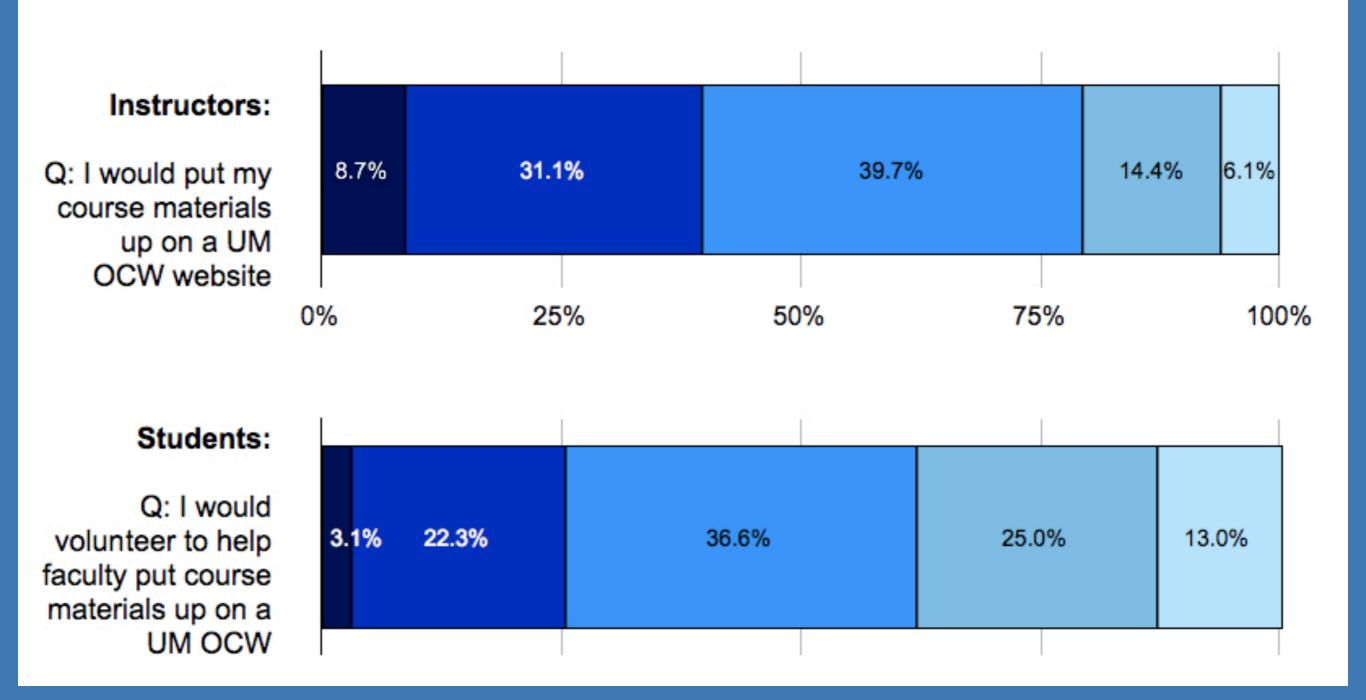


OCW - Value of Potential Uses: Instructors

Q: Using a OCW website would be valuable for...



OCW - Materials on a Possible UM Website



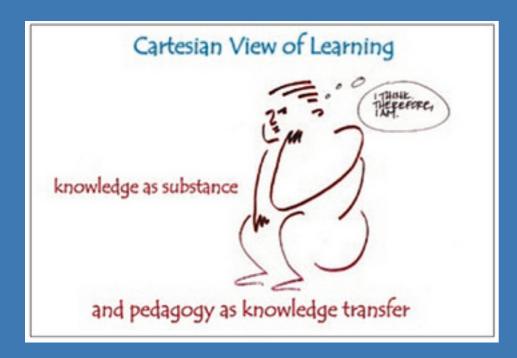
39.8% of our faculty are ready to go, and 25.4% of our students are ready to help - the early adopters are in place

OER and Web 2.0

- Web 2.0 is about the "social web"
- Participation people, users are not just consumers, but producers also
- Value comes from user contributions youtube (video), twitter (lifestreaming), facebook (social networks), delicious (tagging), digg (ranking), diigo (annotating), wikis (wikipedia)

Web 2.0 and Learning

- Basic insight: Students do a lot (a real lot) of learning through peer-to-peer interaction learning is in this sense "social"
- This peer learning is done both on the web and ftf
 the two can complement each other
- Support for these social interactions and creation of content can create learning contexts
- Web 2.0 tools like wikis, blogs, tagging, rankings, annotating can be useful here



The Social View of Learning

we participate therefore we are standing is socially constructed

The Long Tail in Learning



Supporting the rise of an ecology of learning/doing niches



Ah, I am passionate about this niche topic. I want to learn/do more!

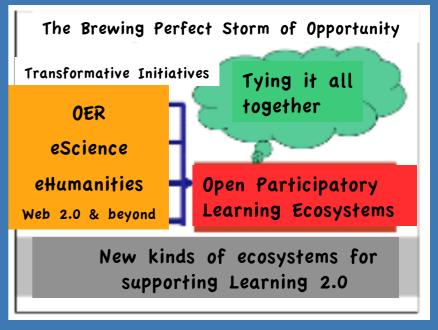


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EDUCAUSE Review, vol. 43, no. 1 (January/February 2008)

Minds on Fire:
Open Education, the
Long Tail and
Learning 2.0



OCW as Institutional Commitment to Learning 2.0

- "An MIT education is not a bag of books."
- We can make all this universally available syllabi, lecture slides, notes, reading lists,
 readings, exams, questions (answers), study
 notes, recordings of lectures, student projects, ... and you will still need to come to MIT to get an
 MIT education.
- Because it is through the interaction with our faculty and among our students that you learn.

Scholarship 2.0

- I would suggest this is an exceptionally clear, strong, public re-commitment to the mentor/ apprentice relationship and what we are coming to call social learning.
- It is our responsibility in the academy to see that this next generation of learning reflects our traditional commitments to the scholarly values of well-warranted, open argument in the search for truth, within an open community.
- Open Educational Resources can help us focus
 on this.

University of Auckland

- Emerging infrastructure for support of learning activities in student-chosen contexts, eg, facebook, myspace,...
- Recognition of peer to peer learning in physical spaces (media commons) as well as support for social software
- Development of eScience and open data efforts
- Willingness to experiment and innovate
- Recognition that it is neither the platform, nor the content alone that is the critical value-add, it's the community "...it's not the information, it is our

So

- The foundations seem to be well in place here.
- Why exactly would the University of Auckland find this valuable?
- What would a University of Auckland OCW/OER effort look like?

Thank you very much