

2004 Program Evaluation Findings Report

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MIT OpenCourseWare
2004 Program Evaluation Findings Report

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I. Executive Summary

A. About MIT OpenCourseWare

MIT OpenCourseWare (OCW) is a large-scale, web-based electronic publishing initiative, accessible on the Internet at ocw.mit.edu. Through OCW, MIT makes its core teaching materials—lecture notes, problem sets, syllabi, reading lists, simulations, etc.—openly available for non-commercial educational purposes. OCW publishes those materials in standards-based formats for anyone with access to the Internet.¹ OCW has a dual mission:

- 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 OCW and the opencourseware concept.

B. Historical context

The MIT OpenCourseWare project includes three phases: a pilot phase (now complete) that encompassed the publication of the first 500 sets of course materials; an expansion phase (currently underway), during which OCW will publish 1,300 additional courses, including virtually all of MIT's curriculum; and a steady-state phase in which OCW will continue to update and improve the site contents as an ongoing activity of the Institute.

OCW published a proof-of-concept site in September 2002 that included materials from 50 courses, followed by 463 additional courses in September 2003. The September 2003 publication marked the completion of the pilot phase and was accompanied by significant media coverage. OCW has since completed two additional six-month publication cycles, including materials from 190 and 214 courses respectively, bringing the total number published to 915² in September 2004. This milestone marks the inclusion of half of MIT's curriculum.

C. Evaluation design

In order to understand the extent to which OCW is meeting its goals and establish a thorough and continuous feedback process, we have integrated a substantial evaluation program. Evaluation is essential for two reasons:

- Tracking both the usefulness and usability of OCW, as well as our internal efficiency, will help us to make improvements to OCW features and services and to set longer term direction to keep OCW relevant over time.
- By measuring the use and by demonstrating the impact of OCW and the course materials MIT offers through it, we can persuade others to consider sharing their materials through similar efforts.

We segment the OCW evaluation strategy into *program* evaluation and *process* evaluation. Within each category, we have devised an "evaluation portfolio" approach that comprises a variety of data collection methods in order to achieve both breadth and depth in the evaluation. This report presents findings from the program evaluation activities conducted from October 1 through December 31, 2004. Appendix 2 describes the logic model that structures this evaluation. The evaluation probes three general areas of user behavior and user profile:

- Access. Who is accessing OCW, what are their profiles (educator, student, self-learner, other), what are their disciplines (or other interests), and where are they located?
- Use. How do educators and learners use OCW and is OCW designed appropriately to facilitate that use? To what extent and in what ways are MIT course materials adopted or adapted for teaching purposes?

¹ See appendix 1 for more background information on the OCW initiative at MIT.

² 2 courses have been retired from the site.

- Impact. What effects—positive or negative, intended or unintended—are being realized through the use of OCW?

D. Evaluation data sources

OCW undertook this evaluation from October 1 through December 31, 2004. We used multiple data collection strategies (an integrated “portfolio approach”) that included the following data sources:

- Web analytics. Akamai, OCW’s web hosting and content distribution network provider, captures aggregate usage data such as page views, object views and user location. Akamai also offers a more sophisticated analytic tool called SiteWise,³ which OCW employed starting November 1, 2003. Most web usage statistics in this report have been drawn from the SiteWise tool, with the notable exception of geographic traffic information, which is drawn from Akamai due to its greater accuracy. Unless otherwise noted, web statistics for this report cover the period of November 1, 2003 to October 31, 2004.
- Online intercept surveys. Between October 25th and November 22nd, 2004, a survey tool invited (via pop-up window) 103,741 of the 253,597 OCW visitors for the period to complete an online survey.⁴ Of those prompted, 14,308 people began the survey, and 5,000 completed it fully, with a dropout rate of 60% and an overall completion rate of 4.8%. The sample provides a margin of error of not more than 1.5%. Self-learners—as opposed to educators and students—were more likely to complete the survey once started.⁵ Geographically, overall completion rates do not vary significantly from distribution of OCW traffic; note that in the 2003 evaluation, completion rates were higher from English-speaking regions.⁶ The sample significantly over represents returning as opposed to first time visitors. Returning visitors are 11% of all OCW visitors, and make up 52% of survey respondents. For the 2003 survey, returning visitors were 58% of respondents.
- Interviews. Interviews were conducted with a small subset of people in various target groups and geographies to gather textured qualitative data about the use and impact of OCW. Interviewees were selected from those whose responses sparked the curiosity of the evaluation team. Members of the OCW research team conducted 18 in-depth interviews with willing participants from intercept survey respondents, distributed across several target regions (Latin America, China, Sub-Saharan Africa, and the Middle East and North Africa) and educational roles (educators, students and self-learners). The interview questions and protocol are included in Appendix 4. In addition, 2 follow-up interviews with subjects from the 2003 program evaluation were conducted to gather information on how their use of OCW and their attitudes about the impact of the OpenCourseWare project have changed. Candidates were selected from 2003 interview subjects based on geographic distribution, user role, and insightfulness of prior responses.
- Site feedback. OCW has implemented a database to support the processing and analysis of user e-mail feedback. The system includes e-mail feedback collected since October 1, 2003. The feedback system allows users to self-identify role, geographic region and type of feedback; further, the system supports tagging of e-mail feedback by topic, correlation of feedback to related course sites, and full-text searches of feedback messages. We have contacted users as appropriate to gather additional insight into access, use, and impact. Unless otherwise noted, e-mail feedback addressed in this evaluation is the 3,722 feedback messages collected from November 1, 2003 to October 31, 2004.

³ SiteWise tracks users anonymously via cookies, and so identifies unique visitors by browser; for the evaluation period, the SiteWise system reported 7.9% of OCW traffic had cookie support disabled. SiteWise also relies on JavaScript; for the evaluation period, the SiteWise system reported 1.7% of OCW traffic had JavaScript disabled.

⁴ See Appendix 3 for the complete text of the intercept survey. Note that the online survey is built with research logic that dynamically presents a logical subset of the survey questions based on the respondents’ answers.

⁵ Self-learners made up 7.0% less of partially completed surveys than fully completed surveys; students accounted for 5.3% more of the partially completed surveys than fully completed surveys; educators made up 2.4% more of the pool of partially complete surveys than fully completed surveys. These figures are comparable to those from the 2003 evaluation.

⁶ In the 2003 evaluation, North American respondents accounted for 47.0% of completed surveys and 34% of partially completed surveys; Pacific region respondents made up 1.4% of fully complete surveys and 0.8% of partially complete surveys; in all other regions, ratios were either statistically equal or indicated a higher percentage of partial respondents by 3-6%.

- MIT student surveys. In order to better understand the usefulness of OCW to MIT students as a window into the sustainability of opencourseware projects, OCW surveyed MIT undergraduate students using a web survey and e-mail invitation. On November 8, 2004, 3,153 upperclass undergraduates were invited to complete the survey; by November 19th, 800 students had begun the survey and 708 had completed it fully, for a dropout rate of 11.1% and an overall completion rate of 22.4%. The margin of error for the results is calculated to be no greater than 3.2%. The text of the student survey is included in Appendix 6. In addition, OCW included a limited number of questions on a general Institute freshman survey administered to the 1,081 2004 incoming freshmen. 869 students returned the survey, and 597 responded to the OCW questions, providing a 55% response rate. Margin of error for these responses is calculated to be no greater than 2.7%

The data sources employed for this evaluation provide a rich statistical picture of site usage through the web analytics and intercept survey, complemented by qualitative information from feedback e-mails and interviews, with no apparent contradictions.

E. Summary of findings

1. Access

a. Traffic to the OCW site is steady, increasing, and progressively global.

- In total, 2.3 million unique visitors came to the site from November 1, 2003 to October 31, 2004, generating nearly 4.2 million visits.
- The site averaged 348,000 visits per month; monthly visits ranged from 235,000 in November 2003 to 523,000 in October 2004.
- Returning visitors were 11% of all visitors, and generated 46% of all visits; returning visitors averaged 6.8 visits per month.
- 36% of OCW visitors come from North America; 16% each come from East Asia and Western Europe; 11% each from Latin America and Eastern Europe; and the remaining 9% from the Middle East, Africa, the Pacific, Central Asia and the Caribbean combined.
- OCW distribution affiliates Universia, OOPS and CORE⁷ generated an estimated 1.3 million visits (31% of MIT OCW traffic) to translated MIT OCW content.

b. Most users continue to locate the site via online and offline media.

- 32% of visitors report learning of the site via online media, and 23% learned of the site from offline media.
- Nearly 60% of visits to the OCW site came as referrals from other sites, largely the main MIT site, search engines, OCW-affiliated sites, news sites, and technical community forums.
- The percentage of visitors locating the site via search engines increased from 10% in 2003 to 18% in 2004, and the searches used are increasingly topic searches rather than variants of "OpenCourseWare."

c. Visitor educational role distribution and profiles remain about the same.

- Self learners continue to make up the bulk of traffic to OCW (48%), followed by students (31%), and educators (15%).

⁷ Opensource Opencourseware Prototype System and China Open Resources for Education; see Sections IV. B. 2 and 3 for more information on these initiatives.

- 51% of OCW visitors come from North America or Western Europe; they typically hold a bachelor's or master's degree (66%); and they are most frequently interested in electrical engineering, business, management, physics and mathematics.
 - 55% of self learners come from North America or Western Europe; they typically hold a bachelor's or master's degree (74%); 60% have 10 years' or less professional experience; and they are most frequently interested in engineering, business/management, and sciences.
 - 49% of students come from North America or Western Europe; they typically hold bachelor's degrees or high school diplomas (62%); most attend 4 year colleges or graduate schools (86%); and nearly half are pursuing engineering degrees.
 - 42% of educators come from North America or Western Europe; 81% hold master's or doctorate degrees; 62% have been teaching for 10 years or less; and educators are most frequently interested in engineering and sciences.
- d. OCW visitors either speak English as a native language or read English as a second language very proficiently.
- 36% of OCW visitors speak English as a native language.
 - 84% of visitors who are not native English speakers rate their proficiency at reading English as "excellent" or "good."
 - 66% of visitors have their browser language preference set to English and 13% to Chinese.
- e. The OCW site receives significant traffic from educational institutions, the United States military, and high technology companies.
- 3,100 .edu or .ac domains generated more than 434,000 visits last year; the top 50 domains generated more than half of the visits.
 - US military domains generated 22,000 visits last year, 11th most of any domain and below only major commercial ISPs (e.g. Comcast, AOL, RoadRunner).
 - In total, Intel, Boeing, IBM, Raytheon, Motorola, and Hewlett-Packard generated nearly 35,000 visits last year.
- f. Visitors using a wide range of platform and connection types are overwhelmingly satisfied with the technical performance and usability of the site.
- 95% of visitors express satisfaction with the site organization, visual design, and performance.
 - Site enhancements requested include improved search function; downloadable compressed files of all contents for a course; and discussion forums.
- 2. Use**
- a. OCW use is centered on subjects for which MIT is a recognized leader.
- Courses from Electrical Engineering and Computer Science, Sloan School of Management, Mathematics, Physics, Economics and Mechanical Engineering together represent 35% of the content published on the OCW site, and attract 65% of the traffic.
 - 43% of course visits were to engineering courses, 24% to science courses, 18% to humanities and social science courses, 12% to management/business courses and 4% to architecture and urban planning courses.

- Courses averaged 9,520 per course visits for the year,⁸ with a median of 5,978; the most visited course received 100,653 visits, the least visited received 542 visits.
 - Course usage is largely determined by subject, special content types, and content completeness.
- b. Visitors largely use the site for previously identified scenarios of use.
- Self learners most frequently use the site to enhance personal knowledge (58%), keep current in field developments (18%) or plan a future course of study (11%).
 - Students primarily use the site to complement materials from a course they are taking (44%), enhance personal knowledge (32%) or plan a course of study (12%).
 - Educators primarily use the site to enhance personal knowledge (25%), develop a course (23%), prepare to teach a specific class (18%) or enhance research (14%).
 - Nearly a third of educators have already adopted materials from the site, and over half indicate they plan to do so in the future.
- c. Lecture notes, full text readings, assignments and syllabi are identified by visitors as the most useful types of content.
- 65% of visitors identified lecture notes as being among the most valuable types of content⁹; 42% chose full text readings, 24% selected assignments, 23% cited syllabi, and 21% identified lecture videos.
 - Educators found more value in syllabi than other roles; students cited lecture videos as valuable more often than other roles; self learners found more value in full text readings than other roles.
 - Calendars were cited by only 4% of visitors as being among the most valuable types of content, ranking last among content types.
- d. Visitors are generally successful at achieving their goals in coming to the site, and are largely satisfied with the breadth, depth and quality of site content.
- 91% of visitors are completely or somewhat successful in achieving their goals for visiting the site.
 - Of feedback e-mail that expressed an opinion about the site, 97.5 % has been positive and 2.5% negative.
 - 81% of visitors express satisfaction with site subject matter breadth; 73% express satisfaction with course materials depth; and 89% express satisfaction with course materials quality.
 - Visitors' suggestions for site content improvements include increased course content depth, additional courses, additional curricular information, more video/audio content, and translations of site content.
- e. More than half of incoming MIT freshmen are aware of the site and many indicate it influenced their decision to attend the Institute; MIT upperclass undergraduates are almost all aware of the OCW site, nearly three-quarters use the site for a range of educational activities, and nearly all feel the site has had a positive effect on their student experience.
- 53% of incoming MIT freshman are aware of the site; 12% of those aware have made more than 15 prior visits; 16% of those aware indicate that the site influenced their decision to attend MIT.

⁸ These figures include only the 511 courses published for the complete period of October 1, 2003 to September 30, 2004.

⁹ Respondents were asked to choose the three most valuable types of content.

- 92% of MIT upperclass undergraduates are aware of the MIT OCW site; 73% of MIT upperclass undergraduates report accessing the site; of that 73%, 54% use the site at least monthly.
- MIT upperclass undergraduates, when asked to identify all ways they have used the site, most often cited complementing materials from a current course (76%), planning a course of study (44%), reviewing materials from a previously completed course (36%) and enhancing personal knowledge (29%).
- 54% of MIT upperclass undergraduates rate the impact of OCW on their student experience as “extremely positive” or “positive”; a further 41% rate the impact as “moderately positive” or “somewhat positive.”

3. Impact

- a. Visitors indicate that OCW has already had significant impact on their teaching and learning and expect even greater impact in the future.
- 80% of site visitors indicate the site has already had extremely positive or positive impact on their educational activities, and a further 18% reported moderately positive to somewhat positive impact.
 - Almost 88% of site visitors expect extremely positive or positive impact in the future, and nearly 12% expect moderately positive to somewhat positive impact.
 - Site visitors strongly agree that the site has helped them be more productive (81%), helped them learn (88%), and increased their motivation to learn (80%).
 - 85% of educators strongly agree or agree they have improved their courses using OCW.
 - 93% of visitors would recommend OCW to others.
- b. MIT OCW content has been widely distributed beyond the MIT site through translations and mirror sites.
- MIT OCW translation affiliates OOPS and CORE are mirroring OCW content in Taiwan and mainland China; a pilot mirror site has been established with OCW’s assistance at Makerere University in Uganda.
 - Unaffiliated mirror sites (<http://www.scientific-library.net>, <http://mit.handsbrain.com/>, <http://mit.blogchina.com/>) have been identified in Russia and China.
 - Universia.net has translated 80 OCW courses into Portuguese and 79 into Spanish; CORE has selected 95 courses for translation into simplified Chinese and completed 2; OOPS has selected 110 and completed 11.
- c. The opencourseware model is being adopted by institutions in the US and internationally, both through affiliations with MIT OCW and independently.
- MIT OCW is partnering with groups of universities in the United States, China, Japan and Spain who are actively adopting the opencourseware model.
 - Universities unaffiliated with MIT OCW in France and India are moving forward with opencourseware projects.

The OpenCourseWare site is attracting an increasingly global audience of self learners, students and educators including a core group of returning visitors who average more than one visit a week to the site. Self learners and students are incorporating the site into their learning routines, as well as using the site to plan for future learning. Educators are employing the site to improve their own subject matter expertise, plan courses, and prepare teaching materials; nearly a third of educators have already adopted OCW materials for use in their own teaching. Site visitors are highly satisfied with materials they find, indicate that the site has already had significant impact on their teaching and learning, and expect even greater impact in the future. Additionally, the site is providing significant benefits to internal audiences at MIT, which will support the sustainability of the project in the long term. OpenCourseWare is having a wider impact on the open sharing of educational resources, inspiring numerous institutions and organizations to undertake similar projects, and aiding many in these endeavors. These findings demonstrate continued progress toward the fulfillment of OCW's mission and provide data with which we can guide program planning and decision-making.

II. Findings: Access

The 2004 Program Evaluation includes the first full year of data collected for the OCW project following the launch of the pilot site in October 2003. At the highest level, the data related to access show:

- Traffic to the OCW site is steady, increasing, and progressively global.
- Most users continue to locate the site via online and offline media.
- Visitor educational role distribution and profiles remain about the same.
- OCW visitors either speak English as a native language or read English as a second language very proficiently.
- The OCW site receives significant traffic from educational institutions, the United States military, and high technology companies.
- Visitors using a wide range of platform and connection types are overwhelmingly satisfied with the technical performance and usability of the site.

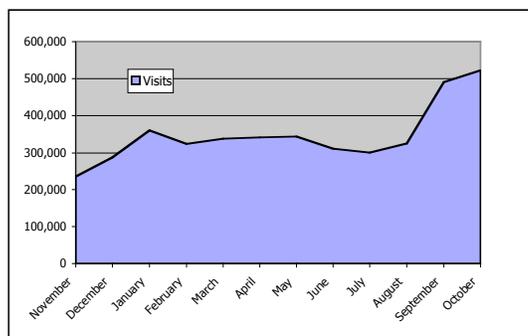
A. MIT OpenCourseWare content access levels

1. Overall OCW site traffic

In October 2003, MIT OpenCourseWare completed its pilot phase with the publication of materials from 511 MIT courses. The publication of these courses was accompanied by significant press coverage, which resulted in a significant spike in traffic.

By November 2003, this media-driven traffic spike had subsided, and OCW had also fully implemented its

Figure 1. Monthly visits



Source: SiteWise

web metrics software, SiteWise. Between November 1, 2003 and October 31, 2004, OCW collected its first full year of site traffic data.

As seen in Figure 1, traffic patterns in the first year appear to be influenced by the North American and Western European academic calendar, with lower traffic levels during December holidays and summer months, and higher traffic during the spring school term. In September and October 2004, MIT OpenCourseWare received significant national and international coverage on CNN, resulting in dramatically increased traffic.

2. First time and returning OCW traffic

Throughout the period from November 1, 2003 to October 31, 2004, the OCW site received an average of 188,000 of monthly first time visitors; as with overall traffic, these figures (see Figure 2 below) were relatively stable from January through May 2004, and slightly lower in June, July and August. Sharp increases in September and October coincided with coverage of the site on CNN.

As illustrated in Figure 3 below, a similar pattern exists for returning visitor levels, with an average of 24,000 monthly returning visitors coming to the site.

OVERALL SITE TRAFFIC

In total, 2.3 million unique visitors came to the site from November 1, 2003 to October 31, 2004, generating nearly 4.2 million visits.

The site averaged 348,000 visits per month; monthly visits ranged from 235,000 in November 2003 to 523,000 in October 2004.

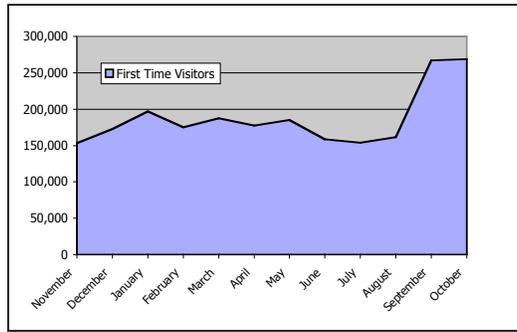
FIRST TIME AND RETURN TRAFFIC

The site averaged 188,000 first time visitors per month, which ranged from 153,000 in November 2003 to 258,000 in October 2004.

OCW received an average of 24,000 returning visitors per month, which ranged from 14,000 in November 2003 to 37,000 in October 2004.

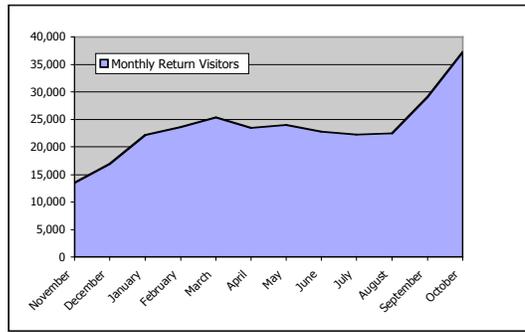
Returning visitors were 11% of all visitors, and generated 46% of all visits; returning visitors averaged 6.8 visits per month.

Figure 2. Monthly first time visitors



Source: SiteWise

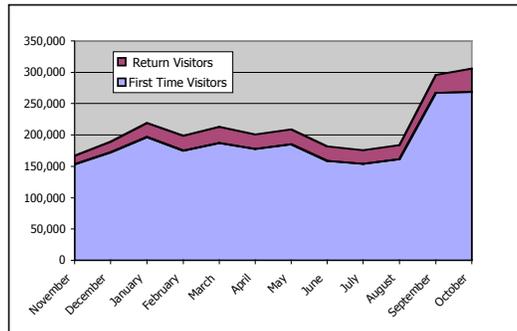
Figure 3. Monthly returning visitors



Source: SiteWise

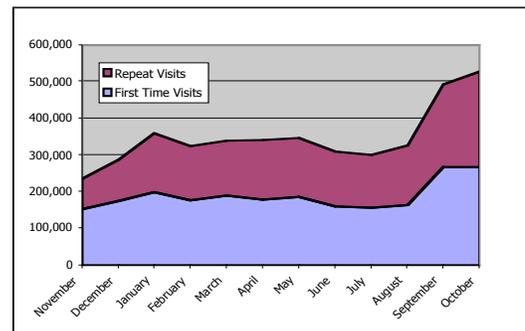
As shown in Figures 4 and 5 below, returning visitors are 11% of all visitors coming to the site, but account for almost half of all visits. All (first time and returning) visitors average 1.6 visits per month, a figure that reflects the large volume of first time visitors coming to the site. When considered alone, returning visitors average 6.8 visits per month. For additional information on user frequency of visits, see section II. C. 6. below.

Figure 4. First time and returning visitors



Source: SiteWise

Figure 5. First time and repeat visits

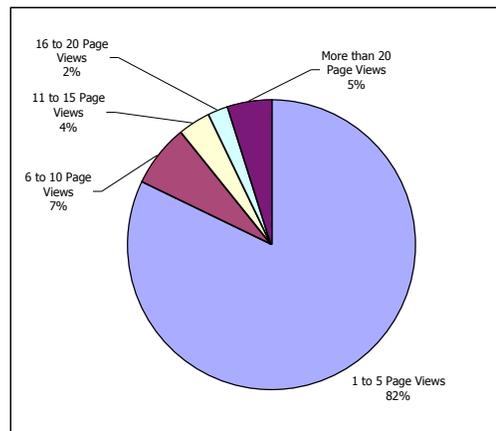


Source: SiteWise

3. Page views per visit

The average page views per visit to the OCW site was 9.36, but this figure includes only HTML page views and not PDF downloads or access to other file formats. By file counts, roughly one third of OCW content is in HTML format, but the HTML pages are largely used to format links to PDF documents that contain the bulk of educational

Figure 6. Distribution of page views per visit



Source: SiteWise

PAGE VIEWS PER VISIT

Visits to the OCW site averaged 9.36 HTML page views; access to PDF and other file formats was not tracked.

The majority of visits (82%) included between 1 and 5 HTML page views, and 5% of visits included more than 20 page views.

For example, a typical lecture note section page will generally contain a minimum of

educational information, but will link to 24 or more PDF lecture note files, which provide detailed content.

As shown in Figure 6, the majority of visits include between 1 and 5 HTML page views, which reflects in part the large number of single-page first-time visits (for example, the site home page recorded 717,000 single-page visits for the evaluation period) and return visits to pages bookmarked deep within the site containing frequently accessed content (the video lectures page for Linear Algebra, for instance, recorded 22,300 single-page visits).

4. OCW visitor geographic origin

As measured by the 2003 and 2004 intercept surveys, the OCW audience appears to have grown more international in the past year. The percentage of visitors located in the North America has declined from 47% in 2003 to 36% in 2004 (see Table 1 below). East and South Asia have each increased their proportion of OCW traffic by 5%. For comparison, world population and Internet use figures are included in Table 2 below.

VISITOR GEOGRAPHIC ORIGIN

36% of OCW visitors come from North America; 16% each come from East Asia and Western Europe; 11% each from Latin America and Eastern Europe; and the remaining 9% from the Middle East, Africa, the Pacific, Central Asia and the Caribbean combined.

Table 1. Visitor geographic distribution

Region	04 Survey	03 Survey
North America	35.8%	47.0%
East Asia	16.4%	11.9%
Western Europe	15.6%	16.8%
South Asia	10.8%	5.5%
Latin America	10.8%	10.0%
Eastern Europe	4.3%	5.2%
Middle East/N. Africa	2.3%	1.0%
Pacific	1.6%	1.4%
Sub-Saharan Africa	0.6%	0.4%
Central Asia	1.6%	0.6%
Caribbean	0.3%	0.2%
Total	100.0%	100.0%

Source: 2003 and 2004 Intercept Surveys

Table 2. World population and Internet use¹⁰

Regions	Population (2003 Est.)		Internet Users (2003 Est.)		Regional Use %
	#	%	#	%	
North America	424,881,000	6.7%	201,380,066	29.6%	47.4%
East Asia	2,035,833,000	31.9%	192,331,291	28.3%	9.4%
Western Europe	391,084,905	6.1%	177,565,811	26.1%	45.4%
South Asia	1,404,438,000	22.0%	17,499,000	2.6%	1.2%
Latin America	501,235,300	7.9%	34,055,167	5.0%	6.8%
Eastern Europe	127,213,700	2.0%	13,696,800	2.0%	10.8%
Middle East/N. Africa	409,778,800	6.4%	14,145,100	2.1%	3.5%
Pacific	31,528,887	0.5%	13,058,832	1.9%	41.4%
Sub-Saharan Africa	729,394,700	11.4%	5,948,000	0.9%	0.8%
Central Asia	278,834,700	4.4%	8,500,700	1.3%	3.0%
Caribbean	40,130,100	0.6%	1,411,419	0.2%	3.5%
Total	6,374,353,092	100.0%	679,592,186	100.0%	10.7%

5. Access to translated OCW materials

In addition to OCW materials accessed directly from the OCW site, visitors are accessing OCW materials through other channels in large numbers. Through three translation affiliates—Universia (Spain), OOPS (Taiwan), and CORE (China), more than 160 translated versions of OCW courses are available on the Internet.

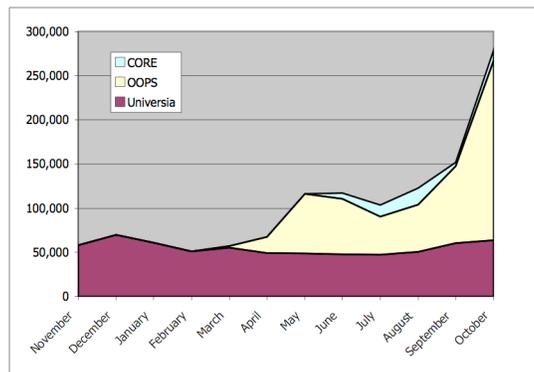
These translations are hosted on sites external to the MIT OpenCourseWare site and have recorded an estimated 1.3 million visits during the evaluation period. In November 2003, monthly visits to translated content equaled 25% of monthly visits to the

AFFILIATE AND OFFLINE ACCESS

OCW distribution affiliates Universia, OOPS and CORE generated an estimated 1.3 million visits (31% of MIT OCW traffic) to translated MIT OCW content.

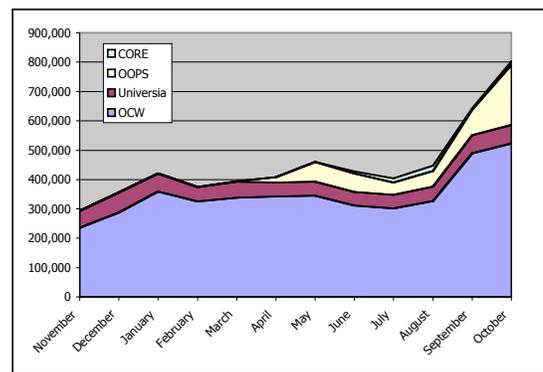
49,000 pages of HTML OCW content have been identified as residing on visitors' local computers, which could represent as many as 6,000-7,000 unique copies of OCW courses.

Figure 7. Monthly visits to translated content



Source: Translation affiliates

Figure 8. Monthly visits to OCW and translated content



Source: SiteWise and translation affiliates

¹⁰ Estimates of total number of Internet users from www.Internetworldstats.com. Underlying usage information comes mainly from data published by Nielsen-NetRatings, ITU, and local NIC and ISP sources.

MIT OpenCourseWare site; by October 2004, monthly visits to translated content equaled 53% of visits to MIT OCW. For more information on OCW translation affiliates, see Section IV. B. below.

6. Offline access to OCW materials

In addition to online access to OCW materials through other sites, there is growing evidence of a high level of offline use of OCW materials. 133 of 3,722 feedback emails received during the evaluation period were inquiries into methods of downloading OCW content; indications are that many more visitors are technically savvy enough to copy OCW materials on their own.

The javascript OCW uses to track site traffic remains active when visitors download copies of site HTML pages using programs such as Teleport Pro. If a visitor then accesses a local page while connected to the internet, the javascript will record the local page view as though it were a page on the live MIT OCW site. These local copies appear as unique pages accessed in the SiteWise system, and for the evaluation period, 49,000 such pages of HTML OCW content have been identified as residing on visitors' local computers. These could represent as many as 6,000-7,000 unique copies of OCW courses downloaded. This probably underrepresents the level of offline use, as these figures only include local pages accessed while the user is connected to the internet, and most visitors who create local copies likely do so for use while they are not connected to the internet.

Additionally, the OCW site received 4,267 visits during the evaluation period from Avantgo.com, a domain that provides online content for personal digital assistants (PDAs), indicating the visitors are downloading OCW content for use on these handheld devices (see section II. D. 2. below). As illustrated in Table 3 below, OCW content is being used offline numerous ways for which no usage statistics are available.

Table 3. Use cases: Offline uses of OCW materials

A high school student in New Jersey made CDs from the lectures of one OCW class and listens to them on the way home in his walkman.

The Guardian (UK) published an article, primarily about the Apple iPod, in which the author describes downloading OCW content: "I'm undertaking my evening runs while listening to Professor Schneider's lectures on neuroscience and behaviour."

A Boston-area educational technologist saved the complete content of a course as PDF documents on his hard drive to study during his two-hour commute.

A self learner in Ghana printed over 1,000 pages of OCW content.

Source: Visitor interviews

B. Visitor awareness of OCW

1. Overall visitors awareness channels

Visitors primarily become aware of the OCW site via online and offline media. Almost 55% of visitors discovered the site via either online or offline media; a further 26% learned of the site through

Table 4. OCW visitor awareness channels

Awareness channel	% of visitors
Colleague or peer	20.4%
Educator	5.8%
Offline media	22.6%
Online media	32.3%
Search engine	18.9%
Total	100.0%

Source: SiteWise

personal referral from a colleague, peer, or educator (see Table 4). The percentage of visitors becoming aware of the site through search engines changed most significantly in the past year, increasing over 8% since the 2003 evaluation.

VISITOR AWARENESS OF OCW

32% of visitors report learning of the site via online media, and 23% learned of the site from offline media.

Nearly 60% of visits to the OCW site came as referrals from other sites, largely the main MIT site, search engines, OCW-affiliated sites, news sites, and technical community forums.

Referring domains provide additional insight into how visitors are finding the OCW site. As shown in Table 5 below, nearly 2.5 million of the 4.2 million visits (almost 60%) recorded during the evaluation period were referrals from either search engines or other web sites. These included large numbers of visits referred from the main MIT site itself; Google sites from around the world; sites affiliated with the OCW project (including mit.ocw.universia.net, www.mitocw.net, and www.creativecommons.org); news sites such as economicstimes.indiatimes.com and www1.folha.uol.com.br; and technical community sites such as slashdot.org and in.rediff.com. Other significant referring sites listed include the Virtual University of Pakistan (vulms.vu.edu.pk) and www.scientific-library.net, a mirror of OCW content published in Russia (see Section IV. B. 5. for more information on this mirror site).

Table 5. Top referring sites

Rank	Referring site	Visits	% of visits	Rank	Referring site	Visits	% of visits
1	www.google.com	368,057	15.00%	27	aolsearch.aol.com	5,522	0.23%
2	www.mit.edu	209,021	8.52%	28	www.google.com.tr	5,127	0.21%
3	web.mit.edu	131,833	5.37%	29	www.webbyawards.com	5,026	0.20%
4	search.yahoo.com	89,629	3.65%	30	www.google.com.br	4,795	0.20%
5	www.google.co.in	36,320	1.48%	31	www.google.com.sg	4,699	0.19%
6	images.google.com	32,590	1.33%	32	www.google.co.jp	4,386	0.18%
7	mit.edu	28,821	1.17%	33	www.e-book.com.au	4,379	0.18%
8	www.google.ca	22,722	0.93%	34	www.emagister.com	4,129	0.17%
9	search.msn.com	20,753	0.85%	35	www.universiabrasil.net	3,883	0.16%
10	mit.ocw.universia.net	18,170	0.74%	36	www.google.com.mx	3,846	0.16%
11	aka-ocw.mit.edu	17,898	0.73%	37	www.google.com.pk	3,812	0.16%
12	slashdot.org	16,253	0.66%	38	in.rediff.com	3,794	0.15%
13	www.mitocw.net	12,540	0.51%	39	www.google.com.my	3,742	0.15%
14	search.mit.edu	12,068	0.49%	40	www.ocw.mit.edu	3,541	0.14%
15	www.twocw.net	11,121	0.45%	41	www.google.nl	3,480	0.14%
16	www.google.co.uk	10,641	0.43%	42	www.altavista.com	3,450	0.14%
17	www.google.de	9,979	0.41%	43	www.brudirect.com	3,105	0.13%
18	www.google.com.au	9,395	0.38%	44	images.google.ca	2,939	0.12%
19	www.google.fr	8,532	0.35%	45	www.google.com.hk	2,939	0.12%
20	economicstimes.indiatimes.com	7,506	0.31%	46	www.google.co.kr	2,908	0.12%
21	www.google.com.tw	7,197	0.29%	47	www1.folha.uol.com.br	2,882	0.12%
22	www.google.it	6,767	0.28%	48	www.google.co.th	2,851	0.12%
23	www.sublimedirectory.com	6,538	0.27%	49	www.scientific-library.net	2,847	0.12%
24	www.google.es	6,314	0.26%	50	www.linuxforum.net	2,774	0.11%
25	vulms.vu.edu.pk	5,934	0.24%		Subtotal of top 50	1,112,511	45.33%
26	creativecommons.org	5,912	0.24%		Total referred visits	2,454,036	100.00%

Source: SiteWise

2. Visitor awareness via search engines

The percentage of users locating the site via search engines increased from 10% in 2003 to 18% in 2004, but more significantly, the searches used to locate the site are increasingly topic searches rather than variants of "OpenCourseWare." This indicates that search engines are increasingly a channel for visitor discovery of the site, rather than a mechanism for locating the site once they have heard about it through other channels.

SEARCH ENGINE USAGE

The percentage of visitors locating the site via search engines increased from 10% in 2003 to 18% in 2004, and the searches used are increasingly topic searches rather than variants of "OpenCourseWare."

For the evaluation period, SiteWise recorded 335,412 different search phrases used by visitors referred to the site from search engines; in total, these phrases generated 692,287 visits. 15% of these search phrases contained "MIT" and/or "course," indicating the user was aware of OpenCourseWare or of MIT expertise in a given field. These search phrases resulted in 272,370 visits, or 39% of those generated by search phrases. This indicates that at this point the majority of visits generated by search phrases are topic-based.

In 2003, virtually all of the top 100 search phrases used to locate the site were variants of "MIT" or "OpenCourseWare." For the current evaluation period, 22 of the top 100 search phrases were topic-based; these search phrases are listed in Table 6 below. Strikingly, several of the topic-based search phrases relate to topics

for which MIT is not widely known, including psychology, American politics, and English literature. This suggests that these topic-based searches are increasing global awareness of MIT's academic work in these areas.

Table 6. Top topic-based search phrases

Rank	Search Phrase	Visits generated	Rank	Search Phrase	Visits generated
1	marketing management	807	12	strategic management	334
2	economics	515	13	introduction to biology	310
3	linear algebra	464	14	introduction to psychology	307
4	product design	427	15	Jendrassik maneuver	303
5	batallas en el desierto	426	16	american political system	292
6	psycholinguistics	411	17	introduction to linguistics	290
7	computer system architecture	398	18	architecture courses	278
8	introduction to electronics	387	19	english novels	275
9	introduction to algorithms	374	20	negotiation	265
10	management accounting	356	21	las batallas en el desierto	262
11	introduction to marketing	337	22	mechanics of materials	255

Source: SiteWise

C. Visitor educational roles and profiles

1. Educational role distribution

As was found in the 2003 evaluation, visitors to the OCW site predominantly identify themselves as self learners. As shown in Table 7, nearly half of visitors responding to the 2004 survey were self

Table 7. Visitor educational role distribution

Role	04 Survey	03 Survey
Educator	15.3%	13.1%
Student	31.4%	30.9%
Self learner	48.2%	51.6%
Other	5.1%	4.4%
Total	100.0%	100.0%

Source: SiteWise

learners, 31% were students, and 15% were educators. These results appear to be shifting slightly toward students and educators.

Geographically, higher percentages of educators use the site in the developing regions of Latin America, Eastern Europe, the Middle East and North Africa, and Central Asia, likely reflecting the availability of Internet access in those regions. Interestingly,

however, Sub-Saharan Africa has a role distribution more similar to developed regions such as North America and the Pacific region (primarily Australia).

VISITOR ROLE DISTRIBUTION

Self learners continue to make up the bulk of traffic to OCW (48%), followed by students (31%), and educators (15%).

Table 8. Visitor role distribution by region

Role	All Regions	North America	East Asia	Western Europe	South Asia	Latin America	Eastern Europe	Middle East/North Africa	Pacific	Sub-Saharan Africa	Central Asia	Caribbean
Educator	15.3%	10.0%	11.8%	17.9%	15.3%	29.4%	23.4%	24.3%	13.2%	9.0%	32.1%	17.6%
Student	31.4%	28.1%	32.1%	34.0%	35.5%	29.4%	42.6%	32.4%	36.8%	28.2%	25.0%	23.5%
Self Learner	48.2%	56.2%	53.3%	41.4%	43.1%	38.1%	30.6%	39.6%	42.1%	56.4%	35.7%	52.9%
Other	5.1%	5.7%	2.9%	6.7%	6.1%	3.0%	3.3%	3.6%	7.9%	6.4%	7.1%	5.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: 2004 Intercept Survey

2. Overall visitor profile

As noted in Section II. A. 4. above, 36% of OCW traffic comes from North America, 90% of which is from the United States. A further 16% of overall traffic comes from Western Europe. The education level of visitors coming to the site has remained very consistent with the levels from the 2003 evaluation, with 33% holding bachelor's degrees and 32% holding master's degrees (see Table 9).

Table 9. Overall visitor education level

Degree	%
High school	13.3%
Associates	6.6%
Bachelors	33.3%
Masters	32.2%
Doctorate	11.7%
Other	2.9%
Total	100.0%

Source: 2004 Intercept Survey

For all visitors to the site, electrical engineering and computer sciences continue to be the dominant areas of interest or disciplines, with nearly 27% of visitors identifying one of these as their primary field (see Table 10 below).

Business and management were each identified as the main area of interest or discipline by 7% of OCW visitors; 6% of visitors indicated physics and 5% chose mathematics. As further discussed in Sections II. C. 3, 4, and 5 below, the strong interest in electrical engineering and computer science is largely driven by students, 32% of whom identified these as their discipline. Self learners expressed the strongest interest in business and management topics, choosing each as their area of interest 8% of the time. 8% of educators identified physics as their discipline and 7% indicated mathematics, rates higher than other roles.

Table 10. Overall visitor area of interest/discipline

Subject Area	All Roles	Subject Area	All Roles
Electrical Engineering/Computer Science	26.6%	Architecture	1.1%
Business	6.8%	Foreign Languages & Literatures	1.1%
Management	6.8%	Philosophy	1.1%
Physics	5.9%	Political Science	1.0%
Mathematics	5.4%	Biological Engineering	1.0%
Other	5.2%	History	0.9%
Mechanical Engineering	5.1%	Linguistics	0.9%
Economics	4.4%	Media Arts and Sciences	0.9%
Aeronautics and Astronautics	3.2%	Writing and Humanistic Studies	0.9%
Biology	2.5%	Earth, Atmospheric, Planetary Sciences	0.8%
Civil and Environmental Engineering	2.5%	Literature	0.8%
Science, Technology and Society	2.3%	Ocean Engineering	0.5%
Engineering Systems	2.2%	Anthropology	0.4%
Health Sciences and Technology	1.9%	Comparative Media Studies	0.3%
Chemistry	1.7%	Nuclear Engineering	0.3%
Brain and Cognitive Sciences	1.7%	Music	0.3%
Material Science and Engineering	1.7%	Theater Arts	0.1%
Chemical Engineering	1.4%	Total	100.0%

Source: 2004 Intercept Survey

As discussed in Sections II. A. 2. and 3. above, visitors averaged 1.6 visits per month to the site, and viewed an average of 9.36 HTML pages during each visit. Returning visitors averaged 6.8 visits per month; no statistics on page views per visit are available for returning visitors only.

3. Self learner profile

Self learners more than any other group are coming to the OCW site from developed regions. As detailed below in Table 11 below, more than half of the self learners coming to the site are from North America and Western Europe. Over 17% of all site visitors are North American self learners, making them the single biggest constituency of visitors to the site. Together, self learners from North America and Western Europe constitute almost 24% of visitors to the site.

OVERALL PROFILE

51% of OCW visitors come from North America or Western Europe; they typically hold a bachelor's or master's degree (66%); and they are most frequently interested in electrical engineering, business, management, physics and mathematics.

Visitors averaged 1.6 visits per month to the site, and viewed an average of 9.36 HTML pages during each visit.

SELF LEARNER PROFILE

55% of self learners come from North America or Western Europe; they typically hold a bachelor's or master's degree (74%); 60% have 10 years' or less professional experience; and they are most frequently interested in engineering, business/management, and sciences.

East Asia has seen the biggest increase in percentage of overall self learner visitors, increasing from 10% in 2003 to 18% in 2004. Sub-Saharan Africa also increased substantially, from 0.2% in 2003 to 2% in 2004, though margins of error for the surveys make this a less certain finding. As noted above, the distribution of educational roles in Sub-Saharan Africa is more typical of a developed rather than a developing region.

Table 11. Self learner geographic origin

Region	%
North America	41.7%
East Asia	18.1%
Western Europe	13.4%
South Asia	9.6%
Latin America	8.6%
Eastern Europe	2.7%
Middle East/North Africa	1.9%
Sub-Saharan Africa	1.9%
Pacific	1.4%
Central Asia	0.4%
Caribbean	0.4%
Total	100.0%

Source: 2004 Intercept Survey

Table 12. Self learner education level

Degree	%
High school	9.0%
Associates	6.2%
Bachelors	38.9%
Masters	35.3%
Doctorate	7.9%
Other	2.6%
Total	100.0%

Source: 2004 Intercept Survey

Table 13. Self learner professional experience

Years of Experience	%
Less than 6	39.9%
6 to 10	20.2%
11 to 15	12.3%
16 to 20	9.5%
More than 20	18.0%
Total	100.0%

Source: 2004 Intercept Survey

Table 14. Self learner area of interest/discipline

Subject Area	%	Subject Area	%
Electrical Engineering/Computer Science	25.5%	Media Arts and Sciences	1.3%
Management	7.8%	History	1.2%
Business	7.8%	Philosophy	1.2%
Mathematics	5.6%	Literature	1.2%
Physics	5.0%	Material Science and Engineering	1.2%
Mechanical Engineering	4.9%	Chemistry	1.1%
Other	4.5%	Political Science	1.0%
Economics	4.0%	Chemical Engineering	1.0%
Aeronautics and Astronautics	3.9%	Linguistics	1.0%
Science, Technology and Society	2.5%	Biological Engineering	0.8%
Civil and Environmental Engineering	2.4%	Earth, Atmospheric, Planetary Sciences	0.7%
Engineering Systems	2.2%	Ocean Engineering	0.6%
Brain and Cognitive Sciences	2.2%	Comparative Media Studies	0.5%
Health Sciences and Technology	2.0%	Nuclear Engineering	0.4%
Biology	1.7%	Music	0.3%
Foreign Languages and Literatures	1.6%	Anthropology	0.2%
Architecture	1.4%	Theater Arts	0.0%
Writing and Humanistic Studies	1.3%	Total	100.0%

Source: 2004 Intercept Survey

Over 90% of self learners coming to the site hold some sort of higher education degree, with 74% holding bachelor's or master's degrees (see Table 12 above). This suggests that some level of exposure to higher education is generally required for self learners to organize the course materials for self study.

As shown in Table 13 above, the majority (60%) is in their first ten years of work in their field, a distribution similar to educators. As with other roles, the largest percentage of self learners is interested in electrical engineering and computer sciences; self learners express a slightly stronger interest in business and management topics than other roles (see Table 14 above). Table 15 below provides profiles of site visitors who came to the site during the evaluation period.

Table 15. Use cases: Self learner profiles

A software engineer from California, employed at Boeing, who holds a bachelor's degree in computer science and has 20 years' experience in his field.

A Nigerian employee of the Nestle Corporation who holds a bachelor's degree in pharmacy and has more than six years' experience marketing infant formula.

A South Korean telecommunications company employee who holds a bachelor's degree in computer and information science and has four years' professional experience.

A design engineer for an air conditioning manufacturer in Iran, who has earned two bachelor's degrees and a master's degree and has been working in his field for ten years.

A German visitor employed in corporate function business development who holds an MBA and PhD in business.

A traffic engineer for a telecommunications and network company in Argentina who has recently earned a bachelor's in electrical engineering and has two years' work experience.

Source: Visitor interviews and feedback e-mail

4. Student profile

As shown in Table 16 below, 32% of students using the site are located in North America; this figure is 8% lower than in 2003, indicating a geographic diversification of student visitors. In particular, the percentage of students from South Asia has increased by 5%, from 7.1% in 2003 to 12.1% in 2004; and students from the Middle East and North Africa now constitute 2.4% of all students as opposed to 0.8% a year ago.

STUDENT PROFILE

49% of students come from North America or Western Europe; they typically hold bachelor's degrees or high school diplomas (62%); most attend 4 year colleges or graduate schools (86%); and nearly half are pursuing engineering degrees.

Students largely study at four year colleges and graduate schools (see Table 18); not surprisingly, higher percentages of graduate students come from developed regions. 65% of students who identified their institution as a technical or trade school were from South Asia or Western Europe.

Table 16. Student geographic distribution

Region	%
North America	31.9%
Western Europe	16.9%
East Asia	16.7%
South Asia	12.1%
Latin America	10.1%
Eastern Europe	5.8%
MENA	2.4%
Sub-Saharan Africa	1.4%
Pacific	1.8%
Central Asia	0.5%
Caribbean	0.3%
Total	100.0%

Source: 2004 Intercept Survey

Table 17. Student education level

Degree	%
High school	26.3%
Associates	9.4%
Bachelors	35.8%
Masters	22.9%
Doctorate	2.2%
Other	3.4%
Total	100.0%

Source: 2004 Intercept Survey

Table 18. Student institution type

Institution Type	%
Secondary school	2.8%
2 year college	4.2%
4 year college	49.0%
Graduate school	36.7%
Tech. or trade school	3.7%
Other	3.7%
Total	100.0%

Source: 2004 Intercept Survey

As shown in Table 19 below, nearly a third of students list electrical engineering or computer science as their area of interest or discipline, making them the educational role most focused on this field. This figure is very similar to the 33.4% of students listing this area as their area of interest in the 2003 evaluation.

Table 19. Student area of interest/discipline

Subject Area	%	Subject Area	%
Electrical Engineering/Computer Science	31.6%	Brain and Cognitive Sciences	1.1%
Physics	6.7%	Health Sciences and Technology	1.1%
Business	6.2%	Earth, Atmospheric, Planetary Sciences	0.8%
Other	6.0%	Philosophy	0.7%
Management	5.5%	Anthropology	0.6%
Economics	5.4%	Architecture	0.6%
Mechanical Engineering	5.1%	Foreign Languages and Literatures	0.6%
Mathematics	4.5%	Media Arts and Sciences	0.5%
Aeronautics and Astronautics	3.0%	Ocean Engineering	0.5%
Civil and Environmental Engineering	2.6%	Linguistics	0.5%
Biology	2.5%	History	0.4%
Engineering Systems	2.4%	Music	0.4%
Science, Technology and Society	2.1%	Writing and Humanistic Studies	0.2%
Chemistry	2.1%	Comparative Media Studies	0.1%
Chemical Engineering	1.8%	Literature	0.1%
Material Science and Engineering	1.7%	Nuclear Engineering	0.1%
Biological Engineering	1.3%	Theater Arts	0.0%
Political Science	1.2%	Total	100.0%

Source: 2004 Intercept Survey

Table 20 below provides profiles of students who visited the site during the evaluation period.

Table 20. Use cases: Student profiles

A Metallurgical Engineering student at the Central University of Venezuela, in a five-year program leading to a master's degree.
A second-year undergraduate at the Middle East Technical University in Turkey studying Industrial Engineering.
A master's level student at Vilnius Gedimina's Technical University of Business Management in Lithuania.
A Ph.D. student in Electrical Engineering at Baghdad University in Iraq.

Source: Visitor interviews and feedback e-mail

5. Educator profile

Of all roles, educators are the most geographically diverse, with only 42% located in North America or Western Europe (see Table 24 below). This is dramatically lower than the 56% of educators from these regions recorded in the 2003 survey. Percentages of educators have increased most notably in South Asia (7% increase) and Latin America (7% increase). One in five educators coming to the site is from Latin America.

EDUCATOR PROFILE

42% of educators come from North America or Western Europe; 81% hold master's or doctorate degrees; 62% have been teaching for 10 years or less; and educators are most frequently interested in engineering and sciences.

Table 21. Educator highest degree earned

Degree	%
High school	2.3%
Associates	2.0%
Bachelors	13.1%
Masters	38.4%
Doctorate	42.2%
Other	1.9%
Total	100.0%

Source: 2004 Intercept Survey

Table 22. Educator institution type

School Type	%
Secondary school	6.8%
2 year college	8.0%
4 year college	48.0%
Graduate school	27.9%
Tech. or trade school	5.0%
Other	4.3%
Total	100.0%

Source: 2004 Intercept Survey

Table 23. Educator experience level

Years of Experience	04 Survey
Less than 6	42.8%
6 to 10	19.2%
11 to 15	13.3%
16 to 20	9.3%
More than 20	15.4%
Total	100.0%

Source: 2004 Intercept Survey

Table 24. Educator geographic distribution

Region	%
North America	23.4%
East Asia	12.6%
Western Europe	18.3%
South Asia	10.8%
Latin America	20.8%
Eastern Europe	6.6%
MENA	3.6%
Sub-Saharan Africa	0.9%
Pacific	1.3%
Central Asia	1.2%
Caribbean	0.4%
Total	100.0%

Source: 2004 Intercept Survey

Table 25. Educator area of interest/discipline

Subject Area	%	Subject Area	%
Electrical Eng./Computer Science	20.4%	Earth, Atmospheric, Planetary Sciences	1.5%
Physics	7.5%	Philosophy	1.5%
Mathematics	6.6%	Architecture	1.3%
Other	5.9%	Aeronautics and Astronautics	1.1%
Management	5.6%	History	1.1%
Mechanical Engineering	5.6%	Literature	1.1%
Biology	5.2%	Writing and Humanistic Studies	1.1%
Business	5.0%	Biological Engineering	0.8%
Economics	4.0%	Anthropology	0.5%
Health Sciences and Technology	3.5%	Foreign Languages and Literatures	0.5%
Chemistry	3.2%	Media Arts and Sciences	0.5%
Material Science and Engineering	3.2%	Nuclear Engineering	0.5%
Civil and Environmental Engineering	2.6%	Political Science	0.5%
Chemical Engineering	1.9%	Comparative Media Studies	0.4%
Science, Technology and Society	1.9%	Theater Arts	0.3%
Engineering Systems	1.7%	Music	0.1%
Linguistics	1.6%	Ocean Engineering	0.1%
Brain and Cognitive Sciences	1.5%	Total	100.0%

Source: 2004 Intercept Survey

The site is useful to a wider range of educators than was apparent in last year's evaluation. Educators most frequently identify electrical engineering and computer science as their discipline, but do so less often than other roles and less often in 2004 (20%) than in 2003 (26%). Educators are growing more distributed in levels of experience, with 57% having more than six years' professional experience in 2004 as compared to 51% in 2003. The site is being increasingly adopted by educators at graduate institutions (28% in 2004 versus 18% in 2003) as opposed to 4-year institutions (48% in 2004 versus 54% in 2003). Table 26 below provides profiles of educators who visited the site during the evaluation period.

Table 26. Use cases: Educator profiles

A professor of microbiology at the University of Ahvaz Medical School in Iran.
A professor in the Nanjing University Computer Science Department in China.
A professor of physics at the University of San Carlos and the University of Galileo in Guatemala.
An assistant professor at the University of Bari Information Services Center in Italy.
An engineering professor at the Transylvania University of Brasov in Romania.

Source: Visitor interviews and feedback e-mail

6. Prior visits and visit frequency by educational role

As detailed in Table 27 and Table 28 below, visitors show distinctly different patterns of prior visits and visit frequency based on their educational roles. Students are most likely to have high numbers of prior visits and visit the site with the greatest frequency; self learners have slightly lower numbers of prior visits and visit less frequently than students; and educators generally have made the fewest prior visits and visit least frequently.

These visit patterns correlate with prevailing patterns of use (see Sections III. B. 1., 2. and 3. below). Students primarily use the site to supplement materials from courses they are taking at their own institutions at a pace dictated by their course deadlines. Self learners are also largely engaged in ongoing learning, but do so on a less

PRIOR VISITS AND VISIT FREQUENCY

Among returning visitors, students have the most prior visits (33% have been to the site more than 25 times) and visit most frequently (51% visit at least weekly).

26% of returning self learners have been to the site more than 25 times, and 40% visit the site weekly.

Educators have the fewest prior visits (22% have been to the site more than 25 times) and visit least frequently (34% of returning educators visit weekly).

rigid schedule and often in response to a specific professional need. A significant percentage of educators use the site for course planning, which may only bring them to the site for a few weeks prior to the start of each term.

Table 27. Prior visits by role

Prior Visits	Educator	Student	Self Learner	All Roles
One	8.9%	6.6%	8.3%	7.9%
2 to 5	27.2%	20.2%	24.0%	23.0%
6 to 10	22.7%	20.9%	21.8%	21.8%
11 to 25	19.1%	19.6%	19.7%	19.4%
26 to 50	9.1%	16.9%	14.6%	14.6%
> 50	13.1%	15.8%	11.6%	13.4%
Total	100.0%	100.0%	100.0%	100.0%

Source: 2004 Intercept Survey

Overall, the percentage of visitors who have been to the site ten times or more has increased from 40% in 2003 to 47% in 2004; while in the same period, overall visit frequency has decreased from 58% of visitors coming to the site on a daily or weekly basis in 2003 to 43% in 2004. This likely represents a maturation of the site usage from the initial period of enthusiasm that followed the October 2003 launch; users continue to find the site useful, but have employed many of the resources immediately relevant to their educational objectives.

As shown in Table 29 below, a picture of typical monthly returning visitors emerges when we correlate visit frequency by role with the total number of return visitors for a given month. For instance, in October 2004 the SiteWise system recorded 37,281 return visitors. The visit frequencies reported in the 2004 survey would predict that of those visitors, 5,700 were educators, 11,700 were students, 18,000 were self learners, and 1,900 describe themselves otherwise.

Table 28. Visit frequency by role

Frequency	Educator	Student	Self Learner	All Roles
Daily	5.5%	9.8%	7.7%	8.0%
Weekly	29.4%	41.3%	31.6%	34.6%
Monthly	22.7%	20.0%	24.0%	22.3%
Occasionally	42.4%	28.8%	36.7%	35.0%
Total	100.0%	100.0%	100.0%	100.0%

Source: 2004 Intercept Survey

Table 29. October 2004 estimated returning visitors by role and frequency

Frequency	Educator	Student	Self Learner	Other	All Roles
Daily	311	1,154	1,391	99	2,955
Weekly	1,676	4,842	5,673	578	12,769
Monthly	1,290	2,344	4,309	409	8,352
Occasionally	2,417	3,379	6,605	804	13,205
Total	5,694	11,718	17,978	1,890	37,281

Source: SiteWise and 2004 Intercept Survey

As indicated above in Section II. A. 2., this group of returning visitors, while relatively small in comparison to first time visitor traffic to the site (returning visitors are 11% of all visitors), produces nearly half of the visits to the OCW site. Returning visitors, then, represent OCW's core audience. The monthly returning visitor figure, however, probably undercounts the size of that core group, given that 35% of returning visitors indicate that they visit less than once a month. Taking October's figures again, 13,200 of the 37,200 visitors indicated they came to the site occasionally. If a conservative assumption is made that occasional visits are made every other month, this would indicate that there were roughly 13,000 occasional visitors who did not come to the site in the month of October, making the total core audience approximately 50,000. This indicates that at this time MIT OpenCourseWare is an educational community roughly the size of a large college. One example of how visitors have incorporated the site into their daily routine is included in Table 30 below.

Table 30. Use case: Visit frequency

"Great initiative by MIT. Every day I start my day at work with visiting my bookmarks from MIT web site. There has been significant improvement in my software skills, since I came to know about OCW." (Self learner, India)

Source: Feedback e-mail

D. Visitor language and English proficiency skills

36% of visitors coming to the site speak English as a native language (see Table 31 below). During the evaluation period, the site attracted visitors with browsers set to more than 50 different languages,

Table 31. Visitor native language

Language	%
English	36.0%
Chinese	12.5%
Spanish	9.7%
Hindi	6.0%
Portuguese	4.7%
Italian	2.3%
Korean	2.3%
French	2.3%
Turkish	1.9%
German	1.7%
Other	20.7%
Total	100.0%

Source: 2004 Intercept Survey

including Urdu, Farsi, Vietnamese, Thai, Indonesian, Serbian, Norwegian, Hungarian, Hebrew, Albanian, Belarusian, Faeroese, Xhosa and Zulu. However, when non-native English-speaking visitors are asked to rate their ability to read English, 84% respond “excellent” or “good” (see Table 32).

These data indicate that is necessary for visitors to be able to read English reasonably proficiently in order to make use

of the site, but it is far from clear that English fluency is required. As illustrated in Table 33 below, anecdotal evidence indicates that site users who do not speak or write English well still find the site useful.

Table 33. Use case: English language proficiency

“I am a teacher of the Puebla University and I am looking for a course that help me in my classes, moreover I need to see how are the on line courses and your institute is very famous in Mexico... Sorry about my English is easy to me read, but certainly not write.” (Educator, Latin America)

Source: Feedback e-mail

E. Traffic by organization type

1. Visits from educational institutions

The extent to which visitors from other educational institutions come to the site is an important indication of OpenCourseWare’s effect on educational practice around the globe. In the short term, educational institutions represent the avenues through which OCW content can reach large numbers of students. In the longer term, use of the OCW site by members of other institutions builds support for open sharing of educational materials, stimulating the formation of other opencoursewares.

During the current evaluation period, visitors from more than 3,100 different educational organizations came to the OCW site, generating almost 435,000 visits. This total includes only those institutions whose domains contain “.edu” or “.ac,” conventions not universally used. The top 50 institutions account for over half of the total visits from educational organizations, with MIT itself generating the most visits by far. As shown in Table 34 below, many universities with large technical programs are included the top 50 institutions.

VISITOR LANGUAGES

36% of OCW visitors speak English as a native language.

84% of visitors who are not native English speakers rate their proficiency at reading English as “excellent” or “good.”

66% of visitors have their browser language preference set to English and 13% to Chinese.

Table 32. ESL reading skills self-assessment

Self Rating	Educator	Student	Self Learner	All Roles
Excellent	48.7%	42.7%	41.9%	43.8%
Good	40.0%	39.1%	40.6%	39.8%
Fair	9.3%	15.3%	14.4%	13.5%
Poor	2.1%	2.9%	3.2%	2.9%
Total	100.0%	100.0%	100.0%	100.0%

Source: 2004 Intercept Survey

VISITING ORGANIZATIONS

3,100 .edu or .ac domains generated more than 434,000 visits last year; the top 50 domains generated more than half of the visits.

US military domains generated 22,000 visits last year, 11th most of any domain and below only major commercial ISPs (e.g. Comcast, AOL, RoadRunner).

In total, Intel, Boeing, IBM, Raytheon, Motorola, and Hewlett-Packard generated nearly 35,000 visits last year.

Table 34. Top 50 .edu or .ac domains by visits

Rank	URL	Visits	Rank	URL	Visits	Rank	URL	Visits
1	mit.edu	65,253	19	utexas.edu	2,263	37	rutgers.edu	1,677
2	ntu.edu.tw	11,421	20	upenn.edu	2,236	38	ucla.edu	1,673
3	nus.edu.sg	11,007	21	umd.edu	2,180	39	u-tokyo.ac.jp	1,657
4	harvard.edu	5,889	22	cuhk.edu.hk	2,136	40	tnrc.edu.tw	1,655
5	stanford.edu	3,356	23	nthu.edu.tw	2,123	41	northwestern.edu	1,636
6	nctu.edu.tw	3,168	24	cmu.edu	2,121	42	ox.ac.uk	1,611
7	gatech.edu	3,117	25	iitm.ac.in	2,113	43	ohio-state.edu	1,582
8	columbia.edu	3,013	26	csu.edu.au	2,081	44	metu.edu.tr	1,570
9	purdue.edu	3,008	27	umn.edu	2,057	45	asu.edu	1,558
10	umich.edu	2,855	28	ufl.edu	2,016	46	surrey.ac.uk	1,537
11	uiuc.edu	2,794	29	psu.edu	1,937	47	wisc.edu	1,527
12	cornell.edu	2,785	30	duke.edu	1,865	48	ecu.edu.au	1,512
13	cam.ac.uk	2,665	31	bg.ac.yu	1,818	49	itu.edu.tr	1,498
14	tamu.edu	2,661	32	yale.edu	1,765	50	unsw.edu.au	1,478
15	berkeley.edu	2,655	33	kaist.ac.kr	1,746	—	Others	244,046
16	usc.edu	2,431	34	technion.ac.il	1,727	Total for 3,154 ISPs		434,630
17	washington.edu	2,373	35	nyu.edu	1,722	Source: 2004 Intercept Survey		
18	bu.edu	2,339	36	uiowa.edu	1,717			

2. Visits from non-educational organizations

Among non-educational organizations generating visits to the site, the top domains are largely commercial ISP’s such as Comcast, AOL, and RoadRunner. The site is also being used extensively by the US military; all US military domains together generated more than 22,000 visits during the evaluation period and would rank 11th on Table 35 below. The US Navy alone accounted for more than half of those visits, driven in part by a link from the new Navy learning portal, Navy Knowledge Online.

Table 35. Top non-educational domains by visits

Rank	URL	Visits	Rank	URL	Visits	Rank	URL	Visits
1	comcast.net	87,614	36	rcn.com	9,641	71	tiscali.it	5,097
2	aol.com	72,834	37	so-net.net.tw	9,248	72	eth.net	4,837
3	rr.com	66,696	38	localhost	8,984	73	tpnet.pl	4,737
4	attbi.com	46,706	39	newskies.net	8,656	74	t-ipconnect.de	4,661
5	pacbell.net	38,186	40	ntli.net	8,626	75	lmco.com	4,555
6	verizon.net	37,204	41	ttnet.net.tr	8,269	76	pacific.net.sg	4,555
7	cox.net	35,332	42	maxonline.com.sg	8,054	77	bigpond.net.au	4,542
8	hinet.net	29,311	43	blueyonder.co.uk	7,932	78	motorola.com	4,532
9	sify.net	27,360	44	bbtec.net	7,812	79	avantgo.com	4,267
10	ne.jp	26,000	45	intel.com	7,779	80	optusnet.com.au	4,164
11	interbusiness.it	22,141	46	bezeqint.net	7,722	81	ernet.in	4,157
12	rima-tde.net	21,382	47	cantv.net	7,575	82	hp.com	4,153
13	rogers.com	21,345	48	boeing.com	7,454	83	primus-india.net	4,134
14	optonline.net	20,621	49	singnet.com.sg	7,443	84	insightbb.com	4,050
15	bellsouth.net	20,271	50	speedy.net.pe	7,304	85	exatt.net	4,020
16	sympatico.ca	20,190	51	tfn.net.tw	7,195	86	mchsi.com	3,951
17	vsnl.net.in	19,837	52	giga.net.tw	7,010	87	af.mil	3,857
18	seed.net.tw	19,451	53	prod-infinity.com.mx	6,647	88	charterpipeline.net	3,843
19	t-dialin.net	19,260	54	uu.net	6,543	89	asianet.co.th	3,744
20	mindspring.com	18,001	55	prodigy.net.mx	6,410	90	sparqnet.net	3,724
21	adelphia.net	17,209	56	btopenworld.com	6,385	91	army.mil	3,550
22	netvigator.com	16,073	57	veloxzone.com.br	6,348	92	otenet.gr	3,414
23	shawcable.net	15,487	58	proxad.net	6,219	93	earthlink.net	3,271
24	swbell.net	15,465	59	skynet.be	6,207	94	info.com.ph	3,242
25	wanadoo.fr	14,672	60	touchtelindia.net	6,014	95	bluewin.ch	3,230
26	ameritech.net	14,280	61	btcentralplus.com	5,993	96	speakeasy.net	3,147
27	level3.net	14,099	62	hkccable.com.hk	5,811	97	u-bourgogne.fr	3,145
28	qwest.net	12,625	63	libero.it	5,598	98	telepac.pt	3,135
29	telesp.net.br	12,536	64	isu.net.sa	5,568	99	nipr.mil	3,122
30	navy.mil	11,546	65	pol.co.uk	5,564	100	telecom.net.ar	3,067
31	ebix.net.tw	11,431	66	ibm.com	5,524	Sub Total of top 100		1,227,842
32	charter.com	11,267	67	raytheon.com	5,303	Total for 37,604 ISPs		2,230,251
33	dsl-verizon.net	11,043	68	att.net	5,221	Total for Unknown		1,519,635
34	covad.net	10,362	69	brasiltelecom.net.br	5,207	Total		3,749,886
35	telus.net	9,725	70	videotron.ca	5,111	Source: SiteWise		

F. Visitor technical profiles, site performance and visitor recommended improvements

1. Visitor technical profiles

Almost all visitors continue to access the site from Windows-based computers using Microsoft Internet Explorer (see Tables 36 and 37 below). A strong majority (86%) of OCW visitors also reaches the site using high speed connections (see Table 38 below). These figures are very consistent with the 2003 evaluation results.

VISITOR TECHNICAL PROFILES

86% of visitors use high-speed Internet connections.

96% of visitors use Windows-based systems to access OCW; 88% use Microsoft Internet Explorer.

Table 36. Visitor operating system

Operating system	% of visits
Windows	95.9%
Linux	2.1%
Macintosh	1.8%
Sun	0.2%
Unix	0.0%
Other	0.0%
Total	100.0%

Source: SiteWise

Table 37. Visitor browser type

Browser	% of visits
Microsoft IE	88.1%
Netscape	8.9%
Opera	2.0%
Keynote	0.6%
Safari	0.4%
Other	0.1%
Total	100.0%

Source: SiteWise

Table 38. Visitor connection type

Connection Type	% of visitors
LAN	36.9%
DSL	27.0%
Cable modem	19.3%
Dial-up	13.7%
Other	3.0%
Total	100.0%

Source: 2004 Intercept Survey

2. Site technical performance

OCW visitors continue to be widely satisfied with site technical performance. 95% of visitors express satisfaction with site organization, visual design and performance (see Table 39), a figure that does not vary significantly by educational role or connection type. These figures are very consistent with the 2003 evaluation results.

SITE TECHNICAL PERFORMANCE

95% of visitors express satisfaction with the site organization, visual design, and performance.

Site enhancements requested include improved search function; compressed files of all contents for a course; discussion forums, and transcription of handwritten notes.

Table 39. Visitor satisfaction with site performance

Site Characteristic	Dial-up	Cable modem	DSL	LAN	Other	All connection types
Web site organization	94.1%	95.0%	94.3%	94.2%	96.5%	94.5%
Visual design	95.8%	96.6%	94.8%	95.5%	97.2%	95.6%
Performance	93.1%	96.4%	96.0%	95.4%	95.8%	95.4%

Source: 2004 Intercept Survey

Through the intercept survey and feedback e-mail, OCW received a large number of suggestions for technical improvements to the site. The most common suggestions include improved search capabilities, downloadable compressed files of course content, non-RealPlayer video formats, the addition of discussion forums, and transcription of handwritten notes on the site. Examples of user feedback are included in Table 40 below.

In response to visitor feedback, OCW is currently implementing improved search functionality, a downloadable format for course content and discussion forums. OCW has begun transcribing limited numbers of lecture notes, and is currently creating notes for a limited number of classes where none exist.

Table 40. Use cases: Visitor technical suggestions

<p>Improved search</p> <p>"At times the number of 'hits' returned for a specific search can be staggering, so I would recommend that OCW attempt to limit the number of results by returning more relevant pages. (i.e. when one searches for gravitational potential, the top dozen returns are for oceanographic engineering, when one expects that results relating to physics and astronomy would be returned)." (Student, North America)</p> <p>Downloadable course content</p> <p>"Make it easy to download the materials per course at once. Right now, I have to download every posted material one by one...(in my office it so hard just to pay attention to this particular task; being in a public university I have a lot of students asking for attention when at my office...)." (Educator, North America)</p> <p>RealPlayer</p> <p>"Sometimes realplayer will be irritating - it will not update to the right internet speed or something and play the lectures at a very slow speed. The sound will be correct but it skips every 10 sec. or so to a new 'snapshot' of the lecture. This can be frustrating to fix." (Student, North America)</p> <p>Discussion forum</p> <p>"I am curious to know if adding discussion groups to the course links is being considered. Some means of finding and aggregating students (and teachers) in my area to study a particular course would be greatly helpful." (Educator, North America)</p> <p>Transcription</p> <p>"Improve the quality of some lecture notes which are handwritten by typing them down; turning topic lectures to a well structured text." (Student, Latin America)</p>
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Source: 2004 Intercept Survey

The majority of OCW content is formatted as PDF documents, which have been well accepted by OCW visitors. While the PDF is a widely used document format, interviews and other qualitative data show PDFs use is not universal, requires significant download time in some cases, and presents challenges to visitors interested in creating derivative works (see Table 41 below).

Table 41. Use cases: Visitor experiences with PDF formats

<p>MISTI Program</p> <p>In the summer of 2004, an MIT student group, the MIT International Science and Technology (MISTI) Program, used OCW materials to teach biology, computer science, and environmental engineering to students at Qinghai University, located in rural China near the city of Xining. Their report, as excerpted below, details the challenges their students faced in using PDF documents.</p> <p>"Acrobat Reader was neither popular nor well-known among our students at Qinghai University. Each time the students accessed materials from the OCW website, they had to download and reinstall the Acrobat Reader software in order to view the files [because] the hard drives of the lab computers are reset to a standard format each day."</p> <p>Interview: Canadian mechanical engineering professor</p> <p>A Canadian mechanical engineering professor interviewed in fall 2003 described how he incorporates the OCW lecture note materials with materials from other sources, including industry web sites. To accomplish this, he downloads the PDFs of the lecture notes, and parcels out the sections he wants to use to students, who retype the material. He then creates PowerPoint lecture notes for his class. He mentioned colleagues who use the Corel WordPerfect screen capture function to extract text from OCW materials.</p>
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Source: MISTI 2004 Report and Visitor Interviews

III. Findings: Use

At the highest level, the data related to use show:

- OCW use is centered on subjects for which MIT is a recognized leader.
- Visitors largely use the site for previously identified scenarios of use.
- Lecture notes, full text readings, assignments and syllabi are identified by visitors as the most useful types of content.
- Visitors are generally successful at achieving their goals in coming to the site, and are largely satisfied with the breadth, depth and quality of site content.
- More than half of incoming MIT freshmen are aware of the site and many indicate it influenced their decision to attend the Institute; MIT upperclass undergraduates are almost all aware of the OCW site, almost three-quarters use the site for a range of educational activities, and nearly all feel the site has had a positive effect on their student experience.

A. Content use by subject

1. Use distribution by subject

Use of the OCW site continues to focus on subjects for which MIT is a recognized leader. For the period October 1, 2003 to September 30, 2004, courses from the departments of Electrical Engineering and Computer Science, Sloan School of Management, Mathematics, Physics, Economics and Mechanical Engineering together represent 35% of the content published on the OCW site, and attract 65% of the traffic (see Table 42 below).

This distribution is very similar to that observed in 2003, although traffic to these top six departments has grown more distributed, with less traffic to Electrical Engineering and Computer Science (-7%) and more traffic to the Sloan School of Management (+4%) and Mathematics (+2%).

USE BY SUBJECT

5.8 million visits to individual OCW course sites were recorded from October 1, 2003 to September 30, 2004.

Courses from Electrical Engineering and Computer Science, Sloan School of Management, Mathematics, Physics, Economics and Mechanical Engineering together represent 35% of the content published on the OCW site, and attract 65% of the traffic.

43% of course visits were to engineering courses, 24% to science courses, 18% to humanities and social science courses, 12% to management/business courses and 4% to architecture and urban planning courses.

Table 42. Site use distribution by discipline

Department	% published	% of visits	# of visits	Department	% published	% of visits	# of visits
Electrical Eng./Computer Science	10.3%	26.8%	1,569,792	Linguistics and Philosophy	2.6%	1.6%	91,102
Management (Sloan School)	9.7%	11.7%	684,778	Biology	1.0%	1.5%	87,704
Mathematics	3.6%	9.6%	561,851	Ocean Engineering	1.7%	1.3%	77,030
Physics	4.3%	6.7%	390,248	Nuclear Engineering	2.1%	1.2%	67,850
Economics	3.6%	4.8%	279,367	Health Sciences and Technology	1.9%	1.1%	63,893
Mechanical Engineering	3.0%	3.9%	225,709	Anthropology	1.3%	1.0%	59,874
Brain and Cognitive Sciences	8.8%	3.5%	204,377	Writing and Humanistic Studies	2.0%	1.0%	57,621
Aeronautics and Astronautics	3.6%	3.1%	182,646	Media Arts and Sciences	1.9%	1.0%	56,398
Foreign Languages and Literatures	4.4%	2.6%	151,855	Earth, Atmospheric, Planetary Sciences	1.7%	0.8%	46,410
Civil and Environmental Engineering	3.4%	2.2%	125,916	Science, Technology, and Society	1.1%	0.7%	42,068
Literature	4.4%	1.9%	108,601	Chemical Engineering	0.4%	0.7%	38,939
Architecture	3.9%	1.8%	103,363	Music and Theater Arts	1.0%	0.5%	31,006
Materials Science and Engineering	2.4%	1.8%	102,350	Biological Engineering Division	0.3%	0.3%	20,383
History	4.1%	1.7%	101,772	Engineering Systems Division	0.6%	0.3%	18,508
Urban Studies and Planning	5.6%	1.6%	96,278	Comparative Media Studies	0.1%	0.2%	10,440
Political Science	4.1%	1.6%	96,246	Total	100.0%	100.0%	5,848,409
Chemistry	1.1%	1.6%	94,034				

Source: SiteWise and OCW FileMaker Workflow Tracking

It has become clear, however, that site users value the range of content available on the OCW site, and often visit the areas of the site outside of their primary area of interest. As demonstrated in Table 43 below, many users described how they access content not related to their identified area of interest or discipline.

Table 43. Use cases: Cross-curricular uses of the site

<p>"[My goal is] to gain an understanding of curriculum outside of my discipline." (Educator, North America)</p> <p>"Especially for interdisciplinary studies like 'cognitive science' it is hard to stay at just one [site]. There is just too much knowledge of other disciplines (computer science, neuroscience, linguistics...) required. This is covered by your [site]." (Student Western Europe)</p> <p>"As a chemical engineering student, it's great to have somewhere I can come to get high quality notes and tutoring, including in math and other disciplines that intersect chemical engineering." (Student, North America)</p>
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Source: 2004 Intercept Survey

2. Course traffic levels

511 courses were published on the OCW site for the period from October 1, 2003 to September 30, 2004. For the year, these courses averaged 9,520 course visits. This ranged from 100,653 to 542. As shown in Figure 9 below, nearly half of these courses received between 500 and 5,000 visits; the median was 5,978.

The 46% of courses that received between 500 and 5,000 visits together recorded 15% of all course visits; the 9% of courses receiving more than 20,000 visits together recorded 35% of visits. The course recording the highest number of visits (100,653) accounted for 2% of all course visits.

Subject matter appears to be the single most important variable in determining traffic to a course. Of the top 20 courses by visits, 13 are Electrical Engineering and Computer Science courses, 4 are Mathematics courses, and 1

each are courses from Physics, Economics, and Chemistry. Special content types also appear to influence traffic to a course, with three of the seven courses containing full lecture videos ranking in the top 20 (numbers 1, 7, and 15); the 2nd most visited course includes audio lecture samples. The 9th course on the list includes an extensive set of java applets.

The completeness of materials, especially lecture notes, also appears to influence the level of traffic to a course. Of the top 20 courses, 14 include complete sets of lectures, 4 include partial sets of lectures, 1 course has no notes from lectures (although lectures were given in class), and 1 was note a lecture-based course. Courses with substantially incomplete lecture notes nonetheless receive significant traffic on

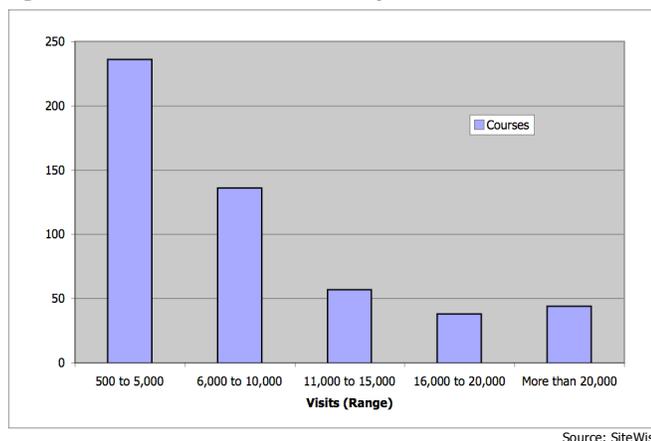
the strength of other types of content. The 8th most visited course, for example, includes notes from only 4 of 32 lecture sessions but includes 8 problem sets with solutions and 3 exams with solutions.

COURSE TRAFFIC LEVELS

Courses averaged 9,520 per course visits for the year, with a median of 5,978; the most visited course received 100,653 visits, the least visited received 542 visits.

Course usage is largely determined by subject, special content types, and content completeness.

Figure 9. Course traffic distribution by visits



Source: SiteWise

B. Scenarios of use by role

1. Self learner scenarios

As in the 2003 evaluation, the vast majority of self learners are using the site to enhance personal knowledge and generally come to the site looking for information on a particular topic. As demonstrated by the number of self learners who identified keeping current in field developments, self learner use of the site often occurs in a work related context (see Table 44 below).

Self learners report high levels of success in achieving their goals, with more than 91% of self learners reporting complete or partial success. Success rates are highest for the three most common scenarios.

SELF LEARNER USE SCENARIOS

Self learners most frequently use the site to enhance personal knowledge (58%), keep current in field developments (18%) or plan a future course of study (11%).

91% of self learners are completely or somewhat successful in achieving their goals for visiting the site.

Table 44. Self learner scenarios of use

Scenario	% of use	Completely successful	Somewhat successful	Not successful	Total
Enhance personal knowledge	58.1%	40.4%	50.9%	8.7%	100.0%
Keep current in field developments	17.9%	43.5%	48.1%	8.4%	100.0%
Plan future course of study	10.8%	43.4%	49.8%	6.8%	100.0%
Substitute for course not available	7.4%	41.1%	46.8%	12.1%	100.0%
Other	3.8%	35.7%	44.9%	19.4%	100.0%
Develop educational technology	2.0%	34.6%	53.8%	11.5%	100.0%
All scenarios	100.0%	41.0%	49.8%	9.1%	100.0%

Source: 2004 Intercept Survey

Survey respondents were asked to provide a free-text statement of their goal in coming to the site prior to identifying the scenario that most closely matched their goal. These goal statements provide a more textured understanding of how users interpret the above scenarios. For instance, visitors planning future study use the site both to prepare for formal study at educational institutions and to structure future self study. Samples of the goal statements for the top three self learner scenarios are provided in Table 45 below.

Table 45. Use cases: Self learner goal statements by use scenario

<p>Enhance personal knowledge</p> <p>"To learn about money and the role of financial intermediaries." (Sub-Saharan Africa)</p> <p>"I am interested in design controllers for robot manipulators. I have already mastered some important techniques on open kinematic chain synthesis and currently I'm trying to gather information on rotary joint tribology." (Latin America)</p> <p>"Taking a free course about philosophy to educate myself, and looking for a way to improve my knowledge and scholarship later." (East Asia)</p> <p>Keep current in field developments</p> <p>"Collecting latest trends in design and construction of Civil Engineering structures, in particular, those relating to major Hydro-electric Projects." (South Asia)</p> <p>"To update many knowledges I got many years ago when studying my master's degree and finding literature about new topics I need for my daily work." (Latin America)</p> <p>"I am a management accountant working with a public limited company. I would like to keep myself abreast and also refresh my learning in costing, accounting and finance." (South Asia)</p>

Source: 2004 intercept Survey

Table 45. Use cases: Self learner goal statements by scenario (cont.)

Plan future course of study
"To know details about available research areas in the faculty of electrical, electronics & computer engineering." (South Asia)
"To learn about biology, and specifically, how I should systemically approach the study of the subject by myself." (East Asia)
"I would like to look at different classes to prepare myself and get an idea of courses I would like to take to get my Bachelors in Engineering." (North America)

Source: 2004 Intercept Survey

E-mail feedback provides further insight into how self-learners are employing the site. Examples of such feedback are included in Table 46 below.

Table 46. Use cases: Self learner e-mail feedback

"This is a fantastic program. I now have access to course information and may use the resources at work to augment my understanding of the material. For example: I may download the mechanical engineering pdf files and then discuss topics with mechanical engineers at my company. The combination of lecture material plus discussions with multiple professionals will greatly impact my understanding of science. It helps to know the source lectures came from MIT. I have full confidence that I am being exposed to the best quality lecture notes available in the world!" (North America)
"It has been really a wonderful learning. The best part out of it that currently I am trying to implement the entire negotiation and conflict management technique module on our team and it is working out well." (India)

Source: E-mail feedback

2. Student scenarios

Students use the site primarily to complement courses they are taking, and secondarily to enhance their personal knowledge outside the context of those courses. A significant number also identify planning their course of study as their goal for accessing the OCW site (see Table 47 below).

Students indicate success levels similar to other roles, with 91% of students reporting complete or partial success. Students, however, are notably less successful at complementing course materials than other scenarios. This appears to relate to students' satisfaction ratings with the depth of materials available on the site; in complementing materials from a course they are taking, students seek very specific subject matter dictated by the requirements of their class and the materials already available to them. Students therefore have greater difficulty finding the materials they are seeking, and are least able to use related materials.

STUDENT USE SCENARIOS

Students primarily use the site to complement materials from a course they are taking (44%), enhance personal knowledge (32%) or plan a course of study (12%).

91% of students are completely or somewhat successful in achieving their goals for visiting the site.

Table 47. Student scenarios of use

Scenario	% of use	Completely successful	Somewhat successful	Not successful	Total
Complement current course	43.7%	33.7%	54.8%	11.4%	100.0%
Enhance personal knowledge	32.1%	35.9%	55.4%	8.6%	100.0%
Plan course of study	12.4%	46.8%	46.3%	6.9%	100.0%
Substitute for course not offered	8.2%	42.3%	51.2%	6.5%	100.0%
Other	3.7%	41.1%	53.6%	5.4%	100.0%
All scenarios	100.0%	37.0%	53.6%	9.4%	100.0%

Source: 2004 Intercept Survey

Student free-text statements of their goals in coming to the site provide a more textured insight into how they interpret the above scenarios (see Table 48 below).

Table 48. Use cases: Student goal statements by scenario

<p>Complement a current course</p> <p>"My goal is to download the Lectures on AI. I am studying AI and I wanted a deeper understanding of it." (Western Europe)</p> <p>"Research on Kafka's book <i>The Trial</i> and State Law." (Latin America)</p> <p>"Learning about implementation of algorithm of matrix algebra." (South Asia)</p> <p>Enhance personal knowledge</p> <p>"I've started to reach the point in my education as an engineering graduate student where teaching myself is often a more efficient use of my time than taking classes, and I'm looking to see what's available here." (North America)</p> <p>"Looking for motivation into new research topics, and groundwork for my under grad thesis." (South Asia)</p> <p>Plan future course of study</p> <p>"I am hoping that the MIT OCW Web site will help me decide what mathematics courses I'll be taking in the near future." (Middle East and North Africa)</p> <p>"To find general information to decide what will be my major in college. To see if this is a useful source of information for my study later." (East Asia)</p>

Source: 2004 Intercept Survey

3. Educator scenarios

Educators primarily use the site to enhance personal knowledge (25%), develop a course (23%), prepare to teach a specific course (18%), or enhance research (14%) (see Table 49 below). While these were the top four scenarios cited by educators in 2003, the percentages of educators coming to the site for these purposes has changed somewhat. In 2003, 36% of educators were developing a course, 22% enhancing personal knowledge, 11% enhancing research, and 11% were preparing to teach a specific course.

Educator success rates are very similar to other roles; 91% of educators reporting complete or partial success across all scenarios. Educators were slightly less likely than other roles to succeed at enhancing personal knowledge, which is consistent with their higher level of education. Educators were particularly successful at enhancing research and advising students.

EDUCATOR USE SCENARIOS

Educators primarily use the site to enhance personal knowledge (25%), develop a course (23%), prepare to teach a specific class (18%), or enhance research (14%).

Nearly a third of educators have already adopted materials from the site, and over half indicate they plan to do so in the future.

91% of educators are completely or somewhat successful in achieving their goals for visiting the site.

Table 49. Educator scenarios of use

Scenario	% of use	Completely successful	Somewhat successful	Not successful	Total
Enhance personal knowledge	25.0%	34.0%	55.2%	10.8%	100.0%
Develop a course	22.8%	34.1%	56.2%	9.7%	100.0%
Prepare for a specific class	17.8%	43.8%	46.5%	9.7%	100.0%
Enhance research	13.8%	39.8%	54.9%	5.3%	100.0%
Develop curriculum	9.3%	36.5%	52.7%	10.8%	100.0%
Advise students	4.3%	54.3%	42.9%	2.9%	100.0%
Develop educational technology	3.6%	41.4%	48.3%	10.3%	100.0%
Other	3.4%	46.4%	42.9%	10.7%	100.0%
All scenarios	100.0%	38.3%	52.4%	9.2%	100.0%

Source: 2004 Intercept Survey

Educator free-text statements of their goals in coming to the site provide a more textured insight into how they interpret the above scenarios.

Table 50. Use cases: Educator goal statements by scenario

<p>Enhance personal knowledge</p> <p>"Search more new information for a class I used to teach, also I am writing a book about project management." (Latin America)</p> <p>"I follow different courses in their details. I buy textbooks, work through all the homeworks, take tests (when available), and archive my results. Sometimes I use elements of my own learning in classes I teach." (North America)</p> <p>Develop a course</p> <p>"I'm specially focused on bibliographical references for disciplines I teach... I do sometimes explore disciplines (from OCW) not directly related to my research goals but of my interest." (Latin America)</p> <p>"We are post graduate training institution inviting Central Asian Professors for short training courses in different economic disciplines. The free textbooks are quite useful methodological and educational framework for most of the guests." (Western Europe)</p> <p>Prepare for a specific class</p> <p>"To search for in depth discussion on luminescence fundamentals, color centre, generation color centres in glasses and etc." (South Asia)</p> <p>"To get some fresh ideas on how to communicate better in the field of electronics education." (Western Europe)</p> <p>Enhance research</p> <p>"To learn more about operational research and quantitative decision making." (Eastern Europe)</p> <p>"I'm looking for lectures on cognitive sciences." (Latin America)</p>
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Source: 2004 Intercept Survey

As shown in Table 51 below, nearly a third of educators have already adopted or adapted materials for their teaching, indicating that OCW materials are being widely seen by students who never visit the site. In the month of October 2004, for example, an estimated 5,700 returning educators came to the OCW site (see Table 29 above). Nearly 1,800 of these, then, can be expected to have adopted materials; if each teaches a conservative estimate of 50 students in a given term, this would suggest that they are sharing OCW materials with about 90,000 students. This dramatic multiplying effect is expected to increase as 57% of educators plan to adopt or adapt materials in the future; a further 38% are not sure if they will. Only 11% of educators indicate they have no plans to adopt or adapt OCW materials.

Table 51. Educator adoption of site materials

	Adoption	Yes	No	Not Sure	Total
2004	Have you adopted?	31.2%	54.7%	14.1%	100.0%
	Do you plan to adopt?	57.3%	11.0%	31.7%	100.0%
2003	Have you or do you plan to adopt?	48.7%	12.5%	38.8%	100.0%

Source: 2003 and 2004 Intercept Surveys

Educator descriptions of how they have adopted or adapted materials provide insight into the usefulness of OCW materials and the ways in which educators must modify them for use. These descriptions indicate that educators are able both to directly employ site contents—by bringing them into the classroom or referring students to the

site—and use the materials as building blocks in the creation of new teaching materials. As illustrated in Table 52 below, free text descriptions of adaptations indicate they are often made to account for cultural and academic variations in the local educational environment.

Table 52. Uses cases: Educator adoption and adaptation of site materials

<p>Adoption</p> <p>“I post (and posted) links to lecture notes on my home page, and I recommend students to read this lecture notes. In some parts of my courses I followed the paths of these lecture notes. Sometimes I use exercises (correctly cited, of course) from OCW.” (Western Europe)</p> <p>“I translate many texts; I use figures and pics; I also use occasionally exams questions. I find specially useful the access to full-text readings (for seminars of the students), otherwise unable to obtain freely in the web.” (Latin America)</p> <p>Cultural adaptations</p> <p>“Modify[ing] the context so that is more applicable to Malaysian environment.” (East Asia)</p> <p>“By recommending some of the readings that might be useful to cover the objectives of the course. Please remember that the socio-economic context is quite different from the one observed in the US.” (Latin America)</p> <p>Curricular adaptations</p> <p>“I have adopted materials that suit the academic level of my students in a teaching context.” (East Asia)</p> <p>“The style for designing exams is very challenging, I have tried to adapt it to my reality.” (Latin America)</p>

Source: 2004 intercept Survey

C. Material use by role

1. Overall materials use

Survey respondents were asked to indicate the three types of site content that were most useful in achieving their goal for accessing the site. As shown in Table 53 below, visitors of all roles cited lecture notes most often as being valuable. Overall, 65% of visitors indicated lecture notes were valuable to the completion of their goals in visiting the site. In particular, lecture notes were most helpful to students supplementing materials from a course they were taking (73%) and to educators preparing to teach a specific course (74%), enhancing personal knowledge (70%), and developing a course (69%).

Overall, 42% of visitors selected full text readings, 24% chose assignments, 23% indicated syllabi and 21% picked lecture videos as being among the most valuable types of content. Various types of learning activities content including exams, exam solutions, project assignments, project examples, and tools (simulations, sample code) were each cited by about 10-20% of visitors. Calendars were selected least often of any content type, by only 4% of visitors.

MATERIAL USE

65% of visitors identified lecture notes as being among the most valuable types of content ; 42% chose full text readings, 24% selected assignments, 23% cited syllabi, and 21% identified lecture videos.

Educators found more value in syllabi than other roles; students cited lecture videos as valuable more often than other roles; self learners found more value in full text readings than other roles.

Calendars were cited by only 4% of visitors as being among the most valuable types of content, ranking last among content types.

Table 53. Material type use by role

Material Type	Educator	Student	Self learner	All Roles
Lecture notes	64.8%	67.7%	62.7%	64.7%
Full text readings	35.9%	41.0%	44.4%	41.9%
Assignments	25.7%	24.8%	22.9%	24.0%
Syllabi	30.1%	18.0%	24.7%	23.4%
Lecture videos	19.2%	24.9%	19.0%	21.0%
Tools	16.7%	15.3%	15.1%	15.4%
Project examples	14.7%	15.7%	14.4%	14.9%
Reading citations	15.1%	12.9%	15.5%	14.5%
Exams	15.5%	17.6%	11.8%	14.3%
Assignment solutions	9.7%	16.2%	14.0%	14.0%
Projects	13.6%	13.7%	13.2%	13.4%
Exam solutions	9.7%	14.9%	10.6%	11.9%
Related links	7.9%	10.8%	10.4%	10.2%
Labs	7.4%	7.4%	5.5%	6.4%
Calendars	3.4%	3.3%	4.9%	4.1%
Other	1.3%	1.9%	2.1%	1.9%

Source: 2004 Intercept Survey

Due to the low rates of prior success at obtaining permission to publish such content, MIT OpenCourseWare made a conscious choice not to include full texts of non-MIT faculty articles and books, providing citations instead to such works. It was hoped at the time that students and educators would be able to obtain such materials from local resources such as libraries, and self learners could take advantage of web resources. Anecdotal evidence illustrates visitors' unanticipated difficulties in obtaining full text materials (see Table 54).

Table 54. Use cases: Visitor difficulties in obtaining referenced full text material

A Nigerian self learner, who'd been collecting a small library of texts relating to OCW content, said that while he'd like to order books online, credit cards were simply not used in Nigeria, so he was unable to do so.

In order to obtain textbooks via Amazon.com, a Guatemalan physics educator had to order them to a post office box in Miami and pay for a courier to hand carry them to her, because Guatemalan customs agents destroyed any books she ordered directly.

Source: Visitor Interviews

2. Materials use by self learners

Patterns of materials usage emerge for each of the roles. Self learners place particular emphasis on full text readings, an indication of the increased difficulties they face in obtaining referenced articles and books without the library access afforded students and educators. 54% of self learners who use the site as a substitute for a course not available to them cited full text readings as valuable. Lecture videos are also most valuable to self learners using the site as a substitute for a course not available to them; 28% of self learners choosing this scenario selected lecture videos as among the most valuable types of content. As illustrated in Table 55 below, feedback e-mail provides insight into how visitors employ site materials for self learning.

Table 55. Use case: Self learner materials use

"For all courses, I read the calendar first, and then read the lecture notes and/or the book (which I have purchased or already own) in order and attempted to do the homework assignments and exams in the order that a 'real' student would have done them. I go at my own pace, however, so my timescale is different, but the order is the same. I skip the projects because of time constraints and because they're generally quite open, and I can't get any feedback on them. On the homeworks, I try to do every problem, but a few get skipped because I don't have certain software." (North America)

Source: E-mail Feedback

3. Materials use by students

Students value lecture videos, exams, and exam solutions more highly than other roles. The higher demand for video lectures was largely driven by students using the site as a substitute for a course not offered at their institution; 32% of students who chose this as their scenario placed lecture videos among the most valuable types of content. Exams and exam solutions were most valuable to students supplementing materials from courses they were taking at their institutions; of these students, 19% selected exams and 18% selected exam solutions. Exams were also cited as valuable by 20% of students planning a course of study.

4. Materials use by educators

Educators place significantly greater emphasis on syllabi, largely a reflection of their use of site materials for curriculum and course development. 54% of educators who chose “planning curriculum” as their scenario of use ranked syllabi as among the most valuable types of content; 35% of those who chose “developing a course” selected syllabi.

D. Visitor satisfaction

1. E-mail feedback

Visitors are overwhelmingly positive in their opinion of the OCW site. Of the 3,722 feedback e-mails received during the evaluation period, 974 were expressions of support or positive opinions of the project and 24 were negative e-mails (the rest were inquiries that contained no opinion, suggestions for improvement, or reports of technical issues). Positive e-mails were often effusive in their praise of the project, and expressed tremendous gratitude. Negative e-mails generally expressed the opinion that the project should be providing more content. See Table 56 and 57 below for examples of positive and negative feedback.

Table 56. Use cases: Positive e-mail feedback

Positive feedback

“Saw you on the CNN yesterday, and I said that cannot be true. So early this morning, I accessed the site, and it is 4 hours ago, when I first landed on your site. I just took a break to tell you how pleased I am. You cannot even begin to imagine what you have unleashed on the world of knowledge. Congratulations to the OCW team. Can you imagine the wealth of information available just at the click of my index finger! This is a great day for me. Teaching has become cheese, and learning is now cake. Thanks again. I am going back to your site...bye bye to lunch and dinner!” (Educator, Sub-Saharan Africa)

“It’s an amazing and remarkable step! I am now currently a student of Computer Science, of BRAC University, Dhaka, Bangladesh and finds it very much useful to learn about my courses. I have always a dream to study at MIT, since I came to know about the institution, its unique teaching methods, but for many reasons I am not able to do so. This initiative gives me the opportunity to self-teach myself, at least I can reach what MIT teaches to their student. Though I miss the way MIT teaches, I know its a unique approach, but I feel better to access your course materials, to enrich my knowledge. To be truthful, I cannot find words to explain how I feel!! Kind of unexplainable feeling, like the feeling one feels, when someone falls in love!” (Student, South Asia)

“This is amazing! I have been looking at subjects under Brain and Cognitive Sciences to Mathematics. This makes so much more sense. Instead of taking a test filling out an application and being deemed fit to learn, I can learn what I want to learn. I thought institutions were elitist to even assume the role of guardians at the gates of knowledge. This changes everything. This is the future.” (Self learner, South Asia)

VISITOR SATISFACTION

Of feedback e-mail that expressed an opinion about the site, 97.5 % has been positive and 2.5% negative.

81% of visitors express satisfaction with site subject matter breadth; 73% express satisfaction with course materials depth; and 89% express satisfaction with course materials quality.

Visitors’ suggestions for site content improvements include increased course content depth, additional courses, additional curricular information, more video/audio content, and translations of site content.

Source: E-mail Feedback

Table 57. Use cases: Negative e-mail feedback

Negative feedback
<p>"I don't see how you can claim that 500 courses are available online, with the material I find here (slides and exercises) I'm not able to learn anything, what I need are the courses, written documents describing the subject, like in a book!" (Self learner, Western Europe)</p>
<p>"OCW sounded like an inspiring idea to me but after visiting the website and browsing the published course material, I am little bit disappointed. Almost every university in USA, Canada and Europe have the websites for all the taught courses and the course material can be downloaded from there. What I fail to understand that what's so novel about your OCW program? Is it just streamlining of your course material for easy browsing or what? Because this type of facility (one like OCW) has been there in all good American Universities for decades, and still is !!!" (Educator, South Asia)</p>

Source: E-mail Feedback

2. Satisfaction by role

Visitors continue to be largely satisfied with the breadth, depth and quality of materials on the OCW site, with patterns of variation by role similar to those observed in the 2003 evaluation (see Tables 58 and 59 below). Self learners continue to be most satisfied of all roles with subject matter breadth. Students continue to be the most critical of the depth of materials, with 71% expressing satisfaction. As in last year's evaluation, educators express the highest levels of satisfaction with course materials quality (92%).

In interviews and e-mail feedback, students demonstrate that they are often seeking very specific information to supplement their own course materials and can become frustrated when they cannot locate exactly what they are seeking. This is a likely influence on the satisfaction levels they express concerning course material depth, and the increase in this figure reflects the increasing depth of OCW materials. Increases in student and educator satisfaction with breadth reflect the addition of 400 courses since last year's evaluation.

Table 58. 2004 Visitor site content satisfaction ratings

Content characteristic	% satisfaction all roles	% of educators	% of students	% of self learners
Subject matter breadth	80.8%	77.8%	78.4%	83.2%
Course materials depth	72.6%	74.6%	70.5%	73.4%
Course materials quality	89.0%	92.3%	88.0%	88.6%

Source: 2004 Intercept Survey

Table 59. 2003 Visitor site content satisfaction ratings

Content characteristic	% satisfaction all roles	% of educators	% of students	% of self learners
Subject matter breadth	79.4%	73.0%	73.7%	84.6%
Course materials depth	71.0%	73.6%	65.3%	72.8%
Course materials quality	92.2%	97.5%	86.7%	93.6%

Source: 2003 Intercept Survey

3. Suggested content improvement

Through both e-mail feedback and the intercept survey, visitors provided numerous suggestions for improvements to the content. Visitors' suggestions for site content improvements include increased course content depth, additional courses, additional curricular information, more video/audio content, and translations of site content. See Table 60 below for examples of visitor suggestions. In response to these suggestions, OCW has increased course materials depth by capturing notes, creating illustrations, and obtaining more third-party content permissions; increased curricular information by linking to the MIT online catalogue; increased video

through targeted recordings of lectures and special content; and provided translations through collaboration with translation affiliates (see Section IV. B. below).

Table 60. Use cases: Sample visitor site content improvement suggestions

<p>Increased content depth</p> <p>"Many courses have class notes are mostly presentation slides... One needs better notes to understand concepts that should help more than power point slides. That will really help. Also a description of textbooks used. Some courses does not even prescribe a book, they always should." (Student, North America)</p> <p>Additional courses</p> <p>"Simply expanding the number of courses and the volume of materials for each course would do it. This site is nearly too good to be true as it is." (Self learner, North America)</p> <p>Additional curricular information</p> <p>"Perhaps make a simple map that shows a course of study for a person. Sure it has course numbers and lets people know which are higher-division, but I didn't notice any prerequisites." (Self learner, North America)</p> <p>More video/audio</p> <p>"Is MIT ever going to publish the class videos? That's the real holy grail of self study." (Student, North America)</p> <p>Translations</p> <p>"Translate to other languages and improve marketing of the site in other countries." (Student, Latin America)</p>
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Source: 2004 intercept Survey

E. Special focus: MIT student use

1. MIT student access

OCW recognizes that although the site is intended to benefit educators, students and self learners outside of MIT, the project must also benefit MIT educators and students in order to be sustainable in the long term.

To better understand the benefits to MIT students, OCW surveyed the 1,081 incoming freshman in the Fall 2004 term, and received responses from 597 students. The responses indicate that more than half incoming freshman are aware of the OCW site, that many have visited the site a significant number of times, and for a substantial percentage the site influenced their decision to attend MIT.

As shown in Table 61 below, 53% of freshmen responding indicated that they were aware of the OpenCourseWare site. They largely became aware of the site from sources beyond MIT, including online media, peer referrals and, to a lesser extent, offline media and teacher referrals. 23% of incoming freshman aware of the site learned of it directly through MIT recruiting materials or the MIT home page (see Table 62). 12% of freshman aware of the site report visiting OCW more than 15 times. 16% of freshmen aware of the site indicate the site influenced their decision to attend MIT (see Table 64).

MIT STUDENT ACCESS

53% of incoming MIT freshman are aware of the site; 12% of those aware have made more than 15 prior visits; 16% of those aware indicate that the site influenced their decision to attend MIT.

92% of MIT upperclass undergraduates are aware of the MIT OCW site; 73% of MIT upperclass undergraduates report accessing the site; of that 73%, 54% use the site at least monthly.

Table 61. MIT incoming freshmen awareness

Awareness	%
Yes	52.8%
No	47.2%
Total	100.0%

Source: 2004 Freshmen Survey

Table 62. MIT incoming freshmen awareness channel

Channel	%
Online media	41.6%
MIT materials	22.6%
Peer	21.3%
Offline media	8.4%
Teacher	6.1%
Total	100.0%

Source: 2004 Freshmen Survey

Table 63. MIT incoming freshmen prior visits

Prior visits	%
0	19.9%
1 to 5	51.2%
6 to 15	16.9%
16 to 30	4.7%
>30	7.3%
Total	100.0%

Source: 2004 Freshmen Survey

Table 64. MIT incoming freshmen decision influence

Site influence on attendance	%
Yes	15.5%
No	84.5%
Total	100.0%

Source: 2004 Freshmen Survey

OCW also conducted a survey of 3,153 upperclass undergraduates who were invited by e-mail to access a web-based survey. The following data are based on 708 responses. Upperclass undergraduates at MIT are nearly all aware of the OpenCourseWare site (see Table 65 below), and 73% report using the site for one or more educational activities. As with incoming freshmen, the largest percentage of upperclassmen learned of the site via online media (see Table 66). Almost a quarter of students using the site do so on a daily or weekly basis, and 43% are using the site at least monthly (see Table 67).

Table 65. MIT upperclassmen awareness and use

	% aware	% using
Yes	91.5%	73.1%
No	8.5%	26.9%
Total	100.0%	100.0%

Source: 2004 MIT Student Survey

Table 66. MIT upperclassmen awareness channel

Channel	%
Online media	26.1%
MIT materials/MIT web site	24.3%
Peer	19.5%
Teacher	17.5%
Offline media	12.6%
Total	100.0%

Source: 2004 MIT Student Survey

Table 67. MIT upperclassmen visit frequency

Frequency	%
Daily	1.7%
Weekly	22.5%
Monthly	20.3%
Occasionally	38.3%
Never	17.2%
Total	100%

Source: 2004 MIT Student Survey

Table 68. MIT upperclassmen usage by major

Major	%	Major	%
Electrical Eng./Computer Science	17.0%	Earth, Atmospheric, Planetary Sci.	1.2%
Mechanical Engineering	11.6%	Ocean Engineering	0.8%
Biology	8.7%	Urban Studies and Planning	0.2%
Physics	8.1%	Anthropology	0.2%
Management	7.9%	Writing & Humanistic Studies	0.2%
Mathematics	7.1%	History	0.2%
Chemical Engineering	5.8%	Biological Engineering	0.0%
Aeronautics and Astronautics	5.4%	Foreign Languages and Literatures	0.0%
Brain and Cognitive Sciences	5.4%	Linguistics and Philosophy	0.0%
Materials Science and Eng	4.2%	Music and Theater Arts	0.0%
Chemistry	3.9%	Engineering Systems	0.0%
Civil and Environmental Eng	2.7%	Health Sciences and Technologies	0.0%
Nuclear Engineering	2.5%	Comparative Media Studies	0.0%
Other/Undeclared	2.1%	Literature	0.0%
Economics	1.9%	Media Arts and Sciences	0.0%
Political Science	1.5%	Science, Technology and Society	0.0%
Architecture	1.4%	Total	100.0%

Source: 2004 MIT Student Survey

2. MIT student use

MIT students were asked to identify all ways in which they use the site (intercept respondents were asked to identify only the use scenario that brought them to the site on the day they completed the survey). As shown in Table 70 below, 76% of students using the site do so to complement materials from a course they are currently taking, 44% use the site to plan a course of study, 36% use the site to review courses completed, and 29% use the site to enhance personal knowledge.

Student statements (see Table 69 below) demonstrate how they value the visibility across curriculum the site provides, which allows them to look back at courses completed, forward to what they might take next, and sideways at what other students are taking. This picture of student use is consistent with the levels of traffic coming to the site from the MIT domain. As shown in Figure 10 below, traffic spikes occurred during registration periods (early February and September), spring mid-term examinations (mid-March), and spring final examinations (late May). Traffic from the MIT domain likewise dropped off during breaks.

MIT STUDENT USE

MIT upperclass undergraduates, when asked to identify all ways they have used the site, most often cited complementing materials from a current course (76%), planning a course of study (44%), reviewing materials from a previously completed course (36%) and enhancing personal knowledge (29%).

The majority of MIT upperclass undergraduates express satisfaction with OCW site content breadth, depth and quality.

Table 69. Use cases: MIT upperclassmen most valuable aspect descriptions

"The ability to look ahead and see how material I'm using now will apply to future courses and research." (Electrical Engineering/Computer Science major)

"Courses I've taken in the past have had material up so I could review them as necessary for current classes." (Brain and Cognitive Sciences major)

"Exploring subject in other departments than my own. The uniform behavior and look for courses in all disciplines is most useful." (Mathematics major)

Source: 2004 MIT Student Survey

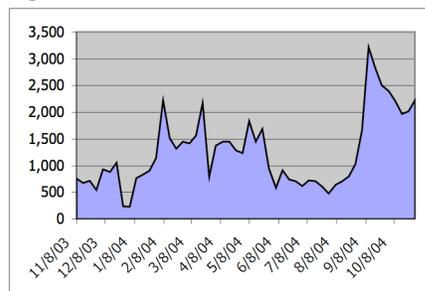
When asked to identify the three most valuable types of materials on the site, 57% of MIT upperclass undergraduates chose exam solutions, 52% selected lecture notes, 49% indicated assignment solutions, 42% cited exams, and 35% picked assignments (see Table 71 below). This presents a dramatically different emphasis than that expressed by external audiences, and likely reflects how closely the site content tracks the actual assessments MIT students must complete for their classes. This also demonstrates that if additional practice exams and assignments are readily available students will make use of them.

Table 70. MIT upperclassmen scenarios of use

Use scenario	%
Complement current course	76.0%
Plan course of study	43.9%
Reviewing completed courses	36.1%
Enhance personal knowledge	29.0%
Other	6.8%

Source: 2004 MIT Student Survey

Figure 10. MIT domain visits



Source: SiteWise

Table 71. MIT upperclassmen materials use

Material type	%
Exam solutions	56.6%
Lecture notes	52.1%
Assignment solutions	49.3%
Exams	41.8%
Assignments	34.5%
Syllabi	26.2%
Lecture videos	22.0%
Full text readings	17.4%
Calendars	6.8%
Projects	5.6%
Tools	5.6%
Labs	4.3%
Reading citations	3.1%
Related Links	1.7%
Other	0.7%

Source: 2004 MIT Student Survey

Student free text explanations of what they find most useful on the site (see Table 72 below) provide further insight into the materials they seek.

Table 72. Use cases: MIT upperclassmen material use descriptions

<p>"I go there to get practice exams. I also like looking at previous projects. I go there to check out assignments to help me with mine that I'm doing." (Electrical Engineering/Computer Science major)</p> <p>"Lecture notes are most useful. They give me a feeling of a professor's style and it gives an idea of what will be covered in class. It also serves as a good review and supplement for other classes." (Materials Science and Engineering major)</p> <p>"Projects completed by students in the past. It's like having a whole new library that is more accessible than most other resources (the graduate theses in Barker are nice, but it's much harder to find what you are looking for)." (Electrical Engineering/Computer Science major)</p>

Source: 2004 MIT Student Survey

Most MIT upperclass undergraduates are satisfied with the site content (see Table 73 below), though satisfaction levels are somewhat lower than for external audiences. This is to be expected, however, given the better visibility MIT students have into what materials are not yet on the site, both in terms of courses represented and materials from those courses.

Table 73. MIT upperclassmen site content satisfaction ratings

Content characteristic	Very satisfied/satisfied	Neutral	Unsatisfied/very unsatisfied
Breadth	60.0%	26.6%	13.3%
Depth	53.5%	31.2%	15.3%
Quality	63.3%	28.7%	7.9%

Source: 2004 MIT Student Survey

3. MIT student impact

As shown in Table 74 below, more than 95% of students indicate that the OCW site has had a positive impact on their student experience at MIT, including 54% who characterized the impact as "extremely positive" or "positive." Student comments (see Table 75 below) provide additional descriptions of the site's impact on student experience.

MIT STUDENT IMPACT

54% of MIT upperclass undergraduates rate the impact of OCW on their student experience as "extremely positive" or "positive"; a further 41% rate the impact as "moderately positive" or "somewhat positive."

Table 74. MIT upperclassmen site impact on student experience

	Extremely positive/positive	Moderately/somewhat positive	No positive
Impact on student experience	53.8%	40.9%	4.9%

Source: 2004 MIT Student Survey

Table 75. Use cases: Sample MIT upperclassmen impact statements

<p>"I wouldn't have to be at MIT to have access to everything on OCW. That's the point. This means, therefore, that I am at MIT for everything else. This realization has helped me focus and get the most out of my experience here. For example, you can get problem sets and take OCW tests. But you can't attend lectures and work with other students on homework problems. You can't go to interesting events on campus and partake in interesting conversations in the halls. By putting all of the course material online, MIT has shown that the information and problem sets themselves do not constitute an MIT education, and for a student here that is tremendously enlightening." (Earth, Atmospheric and Planetary Sciences major)</p>
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Table 75. Use cases: Sample MIT upperclassmen impact statements (cont.)

"I actually have some material on the OCW site (instructional chemistry videos) and I'm currently taking notes for an anthropology class site. I think it's good to get this information out there for both prospective students, current students, and people who perhaps don't have ready access to a top-notch education - and I think this altruism is what makes OCW worthwhile and meaningful to me." (Anthropology major)

"It has definitely helped me out [with] the classes I'm taking currently, esp. when the teacher doesn't thoroughly explain items. I can generally come here to find out info. that the lecturer failed to offer. Additionally, it's a great way to check out courses that you plan to take or are interested in; it's also a great review for past courses." (Biology major)

"I do use open course ware on an at least weekly basis. This has helped me to understand subject matter better. Furthermore, I'm spending the year abroad on the CMI exchange, and open course ware allows me to consult notes and problem sets from classes I've previously taken without bringing them all with me." (Physics major)

"It gives moral support to know the MIT community is really out there to help not only its own community but the rest of the world too. No other school is really so nice to everyone so it's touching to know I'm part of that nice-ness." (Management major)

"1. OCW has given me countless materials that have inspired me for projects, helped me complete related projects, and helped me understand course material. 2. My 6.111 report was posted on the OCW site. Since then, a student in Chile contacted me about it and we've been able to communicate across countries." (Electrical Engineering/Computer Science major)

Source: 2004 MIT Student Survey

IV. Findings: Impact

At the highest level, impact findings show:

- Visitors indicate that OCW has already had significant impact on their teaching and learning and expect even greater impact in the future.
- MIT OCW content has been widely distributed beyond the MIT site through translations and mirror sites.
- The opencourseware model is being adopted by institutions in the US and internationally, both through affiliations with MIT OCW and independently.

A. Visitor perceptions of impact

1. Visitor current and future impact ratings

Nearly all visitors to the OCW site report that the site has already had a positive impact on their education situation or scenario (see Table 76 below). 80% of visitors describe this impact as “extremely positive” or “positive” and a further 18% describe the impact as “moderately positive” or “somewhat positive.” As shown in Table 77 below, visitors predict even greater impact in the future, with 88% expecting an extremely positive or positive impact.

VISITOR IMPACT RATINGS

80% of site visitors indicate the site has already had extremely positive or positive impact on their educational activities, and a further 18% reported moderately positive to somewhat positive impact

Almost 88% of site visitors expect extremely positive or positive impact in the future, and nearly 12% expect moderately positive to somewhat positive impact.

Table 76. Current positive impact perceptions by role

Degree	Educator	Student	Self Learner	All Roles
Extremely positive/positive	78.4%	82.4%	79.4%	80.1%
Moderately/somewhat positive	18.0%	16.0%	18.5%	17.5%
No positive	3.6%	1.7%	2.1%	2.4%
Total	100.0%	100.0%	100.0%	100.0%

Source: 2004 Intercept Survey

Table 77. Future impact expectations by role

Degree	Educator	Student	Self Learner	All Roles
Extremely positive/positive	86.0%	88.9%	87.6%	87.6%
Moderately/somewhat positive	12.9%	10.7%	11.5%	11.5%
No positive	1.1%	0.4%	1.0%	0.9%
Total	100.0%	100.0%	100.0%	100.0%

Source: 2004 Intercept Survey

When compared to the 2003 evaluation data (see Table 78 below)—in which visitors were asked to assess current or future impact together—these figures indicate that visitor expectations for the project have not diminished.

Table 78. 2003 current or future impact perceptions by role

Degree	Educator	Student	Self Learner	All Roles
Extremely positive/positive	80.4%	83.4%	84.9%	83.7%
Moderately/somewhat positive	18.3%	15.6%	13.7%	15.0%
No positive	1.3%	1.1%	1.4%	1.3%
Total	100.0%	100.1%	100.0%	100.0%

Source: 2003 Intercept Survey

Visitor e-mail feedback (see Table 79 below) provides additional insight into how OCW is impacting visitors educational situations and scenarios.

Table 79. Use cases: Visitor perceptions of impact

"I think what MIT has done with OCW initiative has clearly manifested the saying that 'Knowledge triumphs in openness'. It really open up a 'huge vault' of knowledge to people all over the world who just want to know or learn something - to be knowledgeable. It is really a very 'unthinkable' noble effort by MIT. I refer to some of the materials for my teaching - for the purpose of improvement. Terima kasih ! (= 'Thank you' in Malay language)" (East Asia)

"A brilliant initiative, which would significantly help to lift up knowledge creation and delivery across the globe. It puts in a tremendous boundary pressure around faculty, researchers and students to work on excellence." (South Asia)

"I always wondered whether I'll see any mega revolution changing the total fabric of our earth during my lifetime. It is happening now in the shape of OCW. The biggest gift of USA to the world whose benefits are truly uncountable. Thank You MIT-- MIT is unique." (South Asia)

"This is so overwhelming, I want to cry! Thank you, thank you, thank you! I am nearly speechless at your generosity and good-will. I found out about your open course ware from looking up self-education and life-long learning. I am unable to go to school right now due to a disabling medical condition. You can not imagine what discovering your program's existence has effected me. The broader issue of an educated, thoughtful society has been advanced dramatically due to your actions. Thank you again!!!" (North America)

Source: E-mail Feedback

2. Visitor perceptions of impact on educational experience

When asked to rate their agreement with statements concerning impact of the site on various aspects of their educational experience, visitors overwhelmingly indicate that the site has provided motivation and assistance in their learning, and has increased their productivity and effectiveness. Visitor levels of agreement for all roles have increased over those recorded in 2003 evaluation (see Tables 80, 81 and 82). Perceptions of impact on educational experience increased most dramatically for educators.

IMPACT ON EDUCATIONAL EXPERIENCE

Site visitors strongly agree that the site has helped them be more productive (81%), helped them learn (88%), and increased their motivation to learn (80%).

85% of educators strongly agree or agree they have improved their courses using OCW.

92.5% of visitors would recommend OCW to others.

Table 80. Self learner perceptions of impact on educational experience

Statement	2004			2003		
	Strongly agree/ agree	Neutral	Disagree/ strongly disagree	Strongly agree/ agree	Neutral	Disagree/ strongly disagree
Helped me be more productive/effective	80.8%	18.0%	1.2%	76.3%	18.6%	5.1%
Helped me learn	89.8%	9.3%	0.9%	87.7%	9.2%	3.2%
Increased motivation/ interest in learning	84.0%	14.4%	1.7%	82.1%	14.5%	3.4%
I would recommend OCW to others	92.8%	6.5%	0.7%	94.0%	3.3%	2.6%

Source: 2003 and 2004 Intercept Surveys

Table 81. Student perceptions of impact on educational experience

Statement	2004			2003		
	Strongly agree/ agree	Neutral	Disagree/ strongly disagree	Strongly agree/ agree	Neutral	Disagree/ strongly disagree
Helped me be more productive/effective	82.4%	16.1%	1.5%	73.0%	20.2%	6.7%
Helped me learn	88.1%	10.9%	1.0%	84.6%	10.1%	5.3%
Increased motivation/ interest in learning	78.2%	18.3%	3.5%	73.3%	20.2%	6.5%
I would recommend OCW to others	91.7%	6.6%	1.7%	90.8%	4.2%	5.0%

Source: 2003 and 2004 Intercept Surveys

Table 82. Educator perceptions of impact on educational experience

Statement	2004			2003		
	Strongly agree/agree	Neutral	Disagree/strongly disagree	Strongly agree/agree	Neutral	Disagree/strongly disagree
Helped me be more productive/effective	82.0%	16.2%	1.9%	68.4%	22.4%	9.2%
Helped me learn	84.1%	13.8%	2.1%	71.8%	18.8%	9.4%
Improved my courses using OCW	84.5%	12.9%	2.7%			
Increased motivation/ interest in learning	73.1%	22.9%	4.0%	67.8%	20.5%	11.6%
I would recommend OCW to others	93.6%	4.8%	1.6%	88.6%	5.4%	6.0%

Source: 2003 and 2004 Intercept Surveys

In the 2004 survey, 85% of educators indicated that they had improved their courses using OCW, and visitor comments (see Table 83 below) demonstrate the ways in which the site is already improving the quality of teaching and teaching materials around the globe.

Table 83. Use cases: Educator feedback of impact on teaching and materials

<p>"I teach courses of Statics and Strength of Materials at the Universidad Tecnologica de Panama, and the course Solid Mechanics has helped me to improve the quality of my courses. The reading of the material has allowed me to feel more confident in the way I present the examples and teach the lessons." (Latin America)</p> <p>"MIT OCW offers me a wonderful resource for continuing learning, and professional development. I often benchmark my course syllabi against the MIT OCW course syllabi. Thank you so much for this incredible tool." (North America)</p> <p>"As a teacher I am glad to look through MIT OpenCourseWare. It's very useful for my teaching. From it I recognized that method of thinking is more important than content of teaching." (East Asia)</p>

Source: E-mail Feedback

3. Visitor intent to return

Visitors' expressed intent to return to the site is a direct indicator of impact. As shown in Table 84, 94% of visitors expressed intent to return to the site, a figure comparable with the 95% recorded in 2003.

Table 84. Visitor intent to return by role

Return intent	Educator	Student	Self Learner	All roles
Will return	92.7%	94.6%	94.3%	93.9%
Unsure/mixed	6.5%	4.9%	5.3%	5.5%
Will not return	0.8%	0.5%	0.4%	0.6%
Total	100.0%	100.0%	100.0%	100.0%

Source: 2004 Intercept Survey

B. Distribution of MIT OCW content

Numerous organizations have contacted MIT OpenCourseWare since the October 2003 launch with proposals for alternate distribution methods for OCW content, largely to overcome technical and cultural barriers that inhibit use of the main site. The two most common proposals have been for translations of OCW content and for sites mirroring OCW content. Through such proposals, OCW has begun working formally and informally with organizations on pilot projects in regions consistent with our outreach strategy. The scope of these pilots, and the resources applied to them by partner organizations, demonstrate the expected impact of making OCW content more widely available.

MIRROR SITES

MIT OCW translation affiliates OOPS and CORE are mirroring OCW content in Taiwan and mainland China; a pilot mirror site has been established with OCW's assistance at Makerere University in Uganda.

Unaffiliated mirror sites (<http://www.scientific-library.net>, <http://mit.handsbrain.com/>, <http://mit.blogchina.com/>) have been identified in Russia and China.

1. Universia.net

Universia.net is an umbrella organization providing content and shared services to universities in Spain and Latin America, with 745 member institutions. Universia contacted MIT OpenCourseWare with a proposal to translate OCW content into Spanish and Portuguese, using its network of faculty as subject matter experts/translators. To date, Universia has translated 80 OCW courses into Portuguese and 79 into Spanish. Universia translations have been independently verified for quality and are currently cross-linked with the English versions on the MIT site. As noted in Section II. A. 5. above, the Universia translation site has received steady and significant traffic throughout the evaluation period, totaling approximately 660,000 visits. In addition, the Universia site was the origin of over 18,000 visits to the MIT OpenCourseWare site (see Table 5 above).

TRANSLATION AFFILIATES

Universia.net has translated 79 OCW courses into Spanish and 80 into Portuguese.

CORE has selected 95 courses for translation into simplified Chinese and completed 2.

OOPS has selected 110 for translation into traditional Chinese and completed 11.

Figure 11. Universia.net Spanish-language OCW homepage

The screenshot shows the Universia.net homepage for Spanish-speaking users. At the top, there is a navigation bar with links to various countries: Argentina, Brasil, Chile, Colombia, España, México, Perú, Portugal, Puerto Rico, and Venezuela. Below this is a search bar with the text "Buscador" and a button labeled "IR". The main content area features the MIT OpenCourseWare logo and a welcome message in Spanish: "Portal Universia y MIT les invita a utilizar gratuitamente esta selección de materiales de cursos del MIT traducidos al español." Below the welcome message, there is a list of available courses under the heading "CURSOS DISPONIBLES". The courses listed include Antropología, Arquitectura, Biología, Ciencias Cognitivas y del Cerebro (marked as "NUEVO"), Ciencias de la Tierra Atmosféricas y Planetarias, Ciencia, Tecnología y Sociedad, and Ciencias Políticas. A sidebar on the left contains a search box and a list of course categories. At the bottom of the page, there is a table comparing MIT OpenCourseWare to other educational programs.

MIT OpenCourseWare es:	MIT OpenCourseWare no es:
▶ Una publicación de materiales de estudio por parte del MIT.	▶ Un programa que ofrezca un título.
▶ Gratuito y abierto al mundo.	▶ Equivalente a una educación en el MIT.

2. China Open Resources for Education

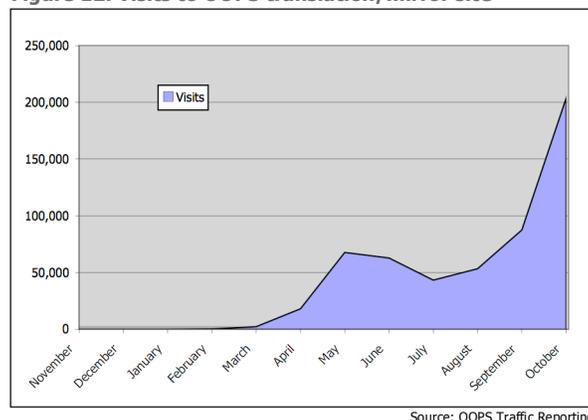
In 2003, China Open Resources for Education (CORE) was formed for the specific purpose of translating MIT OpenCourseWare content into simplified Chinese. CORE currently comprises ten major Chinese universities, and coordinates the translation and use of MIT materials within the Chinese educational system. CORE's objectives are ultimately to include 500 to 1,000 universities, educational institutions, and industrial partners; 10 to 20 million users; and more than 5,000 courses, modules, or subject items. The long-term goals of CORE are to enhance the quality of education in China and eventually offer Chinese courseware for sharing globally. CORE currently maintains a mirror of MIT OCW content. As noted in Section II. A. 5. above, the CORE site received 54,000 visits during the evaluation period.

3. Opensource Opencourseware Prototype System

OpenSource OpenCourseWare Prototype System (OOPS) is a Taiwanese initiative that both mirrors and translates MIT OpenCourseWare content. OOPS organizes volunteer translators and technical staff from around the world

via the Web to translate MIT OpenCourseWare into traditional Chinese. The volunteer staff currently includes 758 translators, 67 editors, 20-30 reviewers, 52 PDF specialists, and 35 web page designers. OOPS maintains mirror sites both in Taiwan and mainland China.

Figure 12. Visits to OOPS translation/mirror site



As noted in section II. A. 5. above, the OOPS site received dramatic traffic during the end of the evaluation period, totaling approximately 540,000 visits (see Figure 12). In addition, the OOPS site (www.twocw.net and www.mitocw.net) was the origin of nearly 24,000 visits to the MIT OpenCourseWare site (see Table 5 above).

4. Makerere University, Uganda

In partnership with MIT Professor Jesus del Alamo and his iLabs project, OCW established a mirror site at Makerere University in Uganda. Internet connectivity in Africa is a tremendous barrier to use of the OCW site. For all of Uganda, the current satellite gateway to the Internet can carry 25 MB/s, and the total campus bandwidth for Makerere University is 2.5MB/s. The total bandwidth for MIT, for comparison, is approximately 2,300 MB/s.¹¹ The site currently includes complete content from the first 701 courses published, and will soon be receiving an update of all 915 courses currently published on the MIT site. Because there is little physical infrastructure in Africa, mirror sites overcome local connectivity issues, but do not support regional dissemination of OCW content. The Makerere site, therefore, is seen as a proof-of-concept pilot that would need to be replicated in many site across Sub-Saharan Africa. The Makerere mirror site can be accessed at <http://makocw.mak.ac.ug/OcwWeb/>.

5. Unaffiliated mirror sites

During the evaluation period, MIT OpenCourseWare became aware of unaffiliated mirror sites in Russia (www.scientific-library.net) and China (<http://mit.handsbrain.com/>, <http://mit.blogchina.com/>). These mirror sites include the first 701 courses published on the OCW site. MIT OpenCourseWare has had contact to date with none of these sites, and so no traffic statistics are available. The Scientific Library site, however, generated over 2,800 visits to the MIT OpenCourseWare site (see Table 5 above).

6. Impact of OCW on developing regions

The goals of alternate distribution efforts often include providing access to OCW content for developing regions. While it is too soon to identify measurable impacts of the OCW project on developing regions, visitor e-mail feedback demonstrates the perceived impact of the project in anecdotal fashion. Table 85 below provides a small sample of the many feedback e-mails received during the evaluation period that express visitor opinions about how the site will benefit developing regions.

¹¹ Del Alamo, Jesus. "iLabs: Performing Laboratory Experiments Across Continents," Presentation, October 19, 2004.

Table 85. Use cases: Visitor perceptions of impact on developing regions

<p>"Thank you very much for OpenCourseWare! This is a wonderful initiative, something I've been dreaming about :) It gives great opportunities for studying new things and improving my current education. Commercial distant education is too expensive for people in the country, where I live, but what you did make quality education really available." (Self learner, Azerbaijan)</p> <p>"Your material has been very helpful to me. I am in Zambia and we are really out of resources. The net never meant much until I got to OCW. It is fantabulous. Really explosive. Now I can feel like am in a global village of cyber knowledge. Keep on keeping on..." (Student, Zambia)</p> <p>"So Awesome! I have been a mother and homemaker in the US Virgin Islands (Caribbean). I have a very high IQ and technical aptitude but was frustrated at the lack of opportunity to develop in this area of my life by the various environmental constraints. My desire is to become an engineer and these courses are enabling me to acquaint myself with theory and fields of study. I am very very happy and grateful to you for this gift!!" (Self learner, US Virgin Islands)</p> <p>"I almost feel like shouting: eureka! This is a great educational and training tool, and I will make it a point to spread the good news to many in Africa who still yearn for information but cannot access it. They will love to be in dialogue with the best at MIT through this virtual tool." (Educator, Rwanda)</p> <p>"I am a Chinese girl from changchun, a northeast city of China. I knew the MIT OCW in 2003, since then my study life has been changed. I can browse course settings and course readings which are related to my major or which i am interested in, from my PC, from very far away, China! That is impossible one and more year ago. It is a revolutionary, a tremendous, real revolutionary, by which people all over the world can share the research resource and the last production of the most distinguished scholar in our generation. It gives many students who dream to MIT a great virtually help, and the help may go on. Today, I proceeds my study through the internet and I hope someday I can be a member of MIT then I can help others by the same way, by my hard work." (Student, China)</p>
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Source: E-mail Feedback

C. Adoption of the opencourseware concept

1. Affiliated opencourseware projects

MIT OpenCourseWare is in the early stages of partnerships with universities in the United States, China, Japan and Spain who are actively adopting the opencourseware model. MIT OpenCourseWare is actively working with these institutions and delivering customized workshops to facilitate their opencourseware efforts. In addition, MIT OpenCourseWare has developed a "How-To" site (<http://ocw.mit.edu/OcwWeb/HowTo/index.htm>) to help facilitate other opencourseware implementations. The site includes over 1,000 pages of content, including how-to guides, lessons learned, checklists, templates, sample documents, and an executive summary of the MIT OpenCourseWare implementation.

2. Unaffiliated opencourseware projects

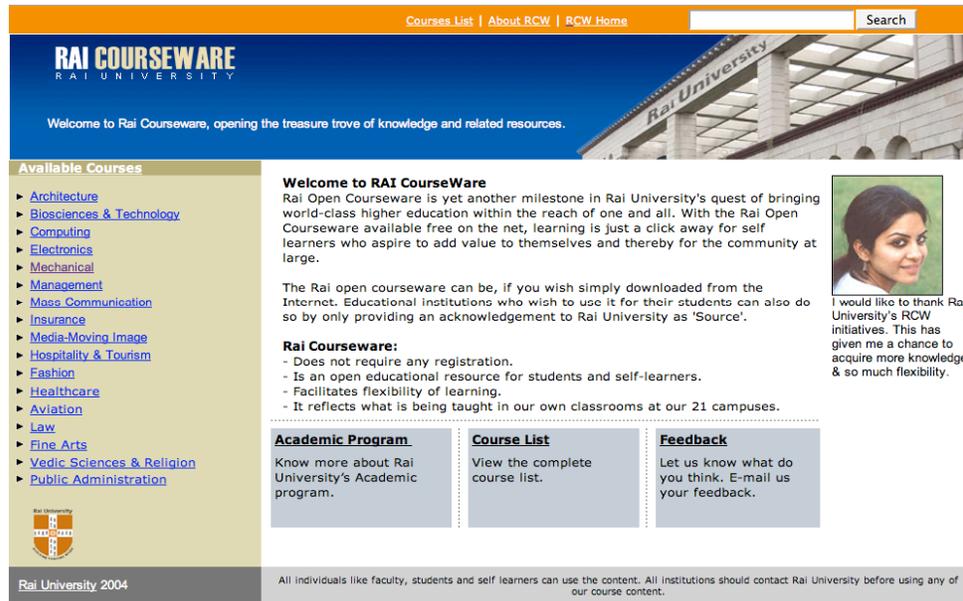
MIT OpenCourseWare has become aware of opencourseware projects underway in Vietnam, France and India that represent institutional adoption of the practice. The French effort involves a group of institutions including the Paris Institute of Technology. MIT OpenCourseWare has also become aware of two universities undertaking opencourseware projects in India, Rai University and Somaiya Vidyavihar. Rai University currently has content published at www.rcw.raiversity.edu.

OTHER OPENCOURSEWARES

MIT OCW is partnering with groups of universities in the Unites States, China, Japan and Spain who are actively adopting the opencourseware model.

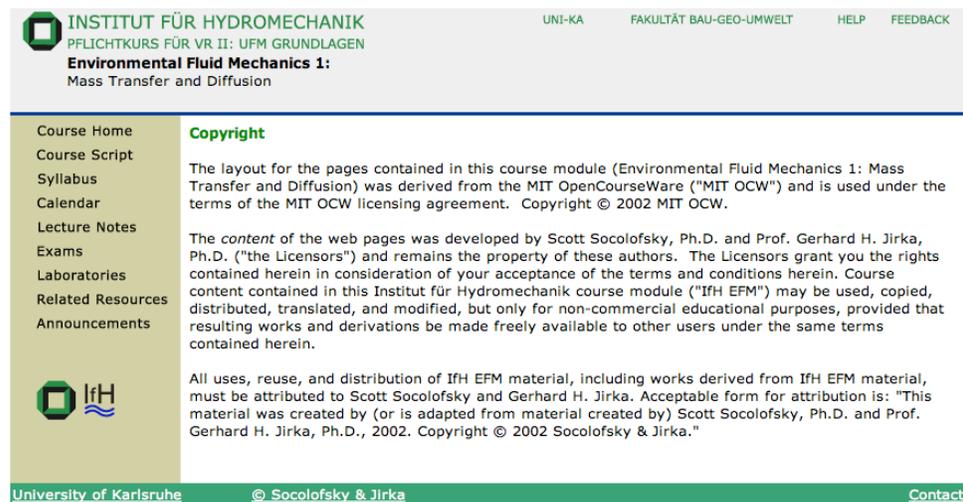
Universities unaffiliated with MIT OCW in Vietnam, France and India are moving forward with opencourseware projects.

Figure 13. RAI University opencourseware homepage



Beyond these examples of institutional adoption of open sharing practices, MIT OCW has become aware of individuals inspired by our project to share teaching and learning materials openly. Individual faculty members from the US Naval Academy and the University of Karlsruhe in Germany (see Figure 14 below) have created opencoursewares for individual courses.

Figure 14. OCW site for Environmental Fluid Mechanics 1: Mass Transfer and Diffusion class at University of Karlsruhe



Appendix 1 Background on MIT OCW

Overview

First announced in April 2001, MIT OpenCourseWare is a large-scale, web-based electronic publishing initiative. Its goals are 1) to provide free, searchable, coherent access to virtually all MIT course materials for educators, students, and individual learners around the world and 2) to create an efficient, standards-based model that other universities may emulate to publish their own course materials.

MIT's mission is to advance knowledge and educate students in science, technology, and other areas of scholarship that will best serve the nation and the world. OCW is an exemplary manifestation of the MIT faculty's deep commitment to this ideal. Through OCW, anyone may access and freely use MIT course materials for non-commercial educational purposes.

OCW is being developed with generous support from the William and Flora Hewlett Foundation, the Andrew W. Mellon Foundation, Massachusetts Institute of Technology, and the MIT Faculty.

Content of OCW

Ultimately, OCW will include the materials for approximately 1,800 undergraduate- and graduate-level courses taught in all five of the Institute's schools (School of Architecture and Planning; School of Engineering; School of Humanities, Arts, and Social Sciences; Sloan School of Management; School of Science). Publication began with the OCW Pilot—50 courses introduced on the OCW web site in September 2002. One year later, September 2003, marks the official launch, with 500 courses published. The remaining courses will be published over the next four years.

While the total number of MIT courses remains relatively constant over time, faculty create new courses and retire old courses at the rate of roughly 100 – 150 per year. OCW will continue to publish these new courses—and maintain an active, accessible archive of the old courses, permanently into the future. In addition, faculty continually revise almost all active courses, and OCW will publish these revised versions as they evolve. This ongoing publication strategy ensures that the MIT course materials available on OCW will always remain timely and relevant.

OCW includes all MIT's academic disciplines, including Aeronautics and Astronautics; Anthropology; Architecture; Biology; Brain and Cognitive Sciences; Chemical Engineering; Civil and Environmental Engineering; Comparative Media Studies; Earth, Atmospheric, and Planetary Sciences; Economics; Electrical Engineering and Computer Science; Engineering Systems Division; Foreign Languages and Literatures; Health Sciences and Technology; History; Linguistics and Philosophy; Literature; Materials Science and Engineering; Mathematics; Mechanical Engineering; Media Arts and Sciences; Nuclear Engineering; Ocean Engineering; Physics; Political Science; Sloan School of Management; Urban Studies and Planning; and Writing and Humanistic Studies.

The materials for a typical course include at least a syllabus, course calendar, and lecture notes. Most courses also have one or more additional categories of material such as assignments, exams, problem/solution sets, labs, projects, hypertextbooks, simulations, demonstration/learning tools, tutorials, and video lectures.

"OpenCourseWare looks counter-intuitive in a market-driven world. It goes against the grain of current material values. But it really is consistent with what I believe is the best about MIT. It is innovative. It expresses our belief in the way education can be advanced – by constantly widening access to information and by inspiring others to participate."

– Charles M. Vest,
President of MIT

Using MIT course materials

OCW materials are organized by course within department. However, OCW incorporates a rich “metadata tagging” scheme so that it is easy to search and retrieve materials across disciplines according to criteria specified by the user. OCW is designed with educators, students, and self-learners in mind, striving to anticipate the ways in which these audiences would use the materials.

MIT offers the materials under an open “Creative Commons” license that:

- Grants users the right to use and distribute the materials either as-is, or in an adapted form
- Allows users to create derivative works
 - Edit
 - Translate
 - Add to
 - Combine with or incorporate into other materials
- Obliges users to meet certain requirements as a condition of use:
 - Use *must* be non-commercial
 - Materials *must* be attributed to MIT and to original author/contributor
 - Publication or distribution of original or derivative materials *must* be offered freely to others under identical terms (“share alike”)

Accordingly, educators may adopt whole courses into their curricula, or they may adapt just those parts that fit well with local purposes. Students, self-learners, and researchers may use the materials as a supplement to other educational resources available to them.

World reaction

Electronic “visitors” to OCW have come from every corner of the globe. With well over 100 million “hits” since first publication of the OCW pilot in September 2002, traffic has come from 210 countries and city-states around the world.

OCW has received thousands of unsolicited messages in support of the initiative. Some examples:

“Let me tell you in this 1st feedback on this Sept 30 2002 that today is a Historic Day. It’s the Big Bang of the Knowledge Universe.”

– Algeria

“I think this pilot program is very easy and helpful, especially for those living in developing countries like Vietnam who are unable to study in the land of America.”

– Vietnam

“Once completed, the MIT OpenCourseWare will be akin to Gutenberg’s creation in importance. It is the boldest thing done in the name of freedom of knowledge in many years.”

– Britain

“Your free-of-charge OCW is something Brilliant – and unfortunately, very rare – in this commerce and money driven world of ours... [OCW] is returning to the very fundamental academic values of information open for all!”

– Spain

“I have to say this is one of the most exciting applications of the Internet to date. I look forward to taking advantage of this opportunity to ‘take a dip’ in MIT’s enormous reservoir of human intellect.”

– Nigeria

“The OCW site is the coolest thing on the Internet. It may very well be the coolest thing in human history.... This is the start of something big.”

– Seattle

Along with the official launch of the first 500 courses in September 2003, OCW is implementing a more comprehensive evaluation program to measure and report access, use, and impact in a more structured way.

Conclusion

OCW provides a new model for the dissemination of knowledge and collaboration among scholars around the world. It contributes to the "shared intellectual commons" in academia, which fosters cooperation and synergy across MIT and among scholars everywhere. MIT is publishing the materials for all its courses through OCW because this effort:

- Advances MIT's fundamental mission
- Reflects and embraces faculty values and provides an instrument for realization of faculty goals
- Stimulates innovation
- Counters the privatization of knowledge and champions the movement toward greater openness for the benefit of society.
-

MIT OCW encourages educators and learners to take full advantage of these materials to support teaching and spread knowledge throughout the world. OCW also encourages other institutions to adopt their own open courseware programs in this same spirit, and we are happy to share information about the systems, methods, and processes we have used to implement OCW at MIT.

For more information about OCW, please contact:

Jon Paul Potts
Communications Manager
MIT OpenCourseWare
77 Massachusetts Avenue, 9-235B
Cambridge, MA 02139
617-452-3621
jpotts@mit.edu
<http://ocw.mit.edu>

"Everybody knows that the way to make progress in science is by using the best results of others—standing on the shoulders of giants' is one way of expressing this idea. That's why we publish scientific results. OCW will let the same thing happen in education."

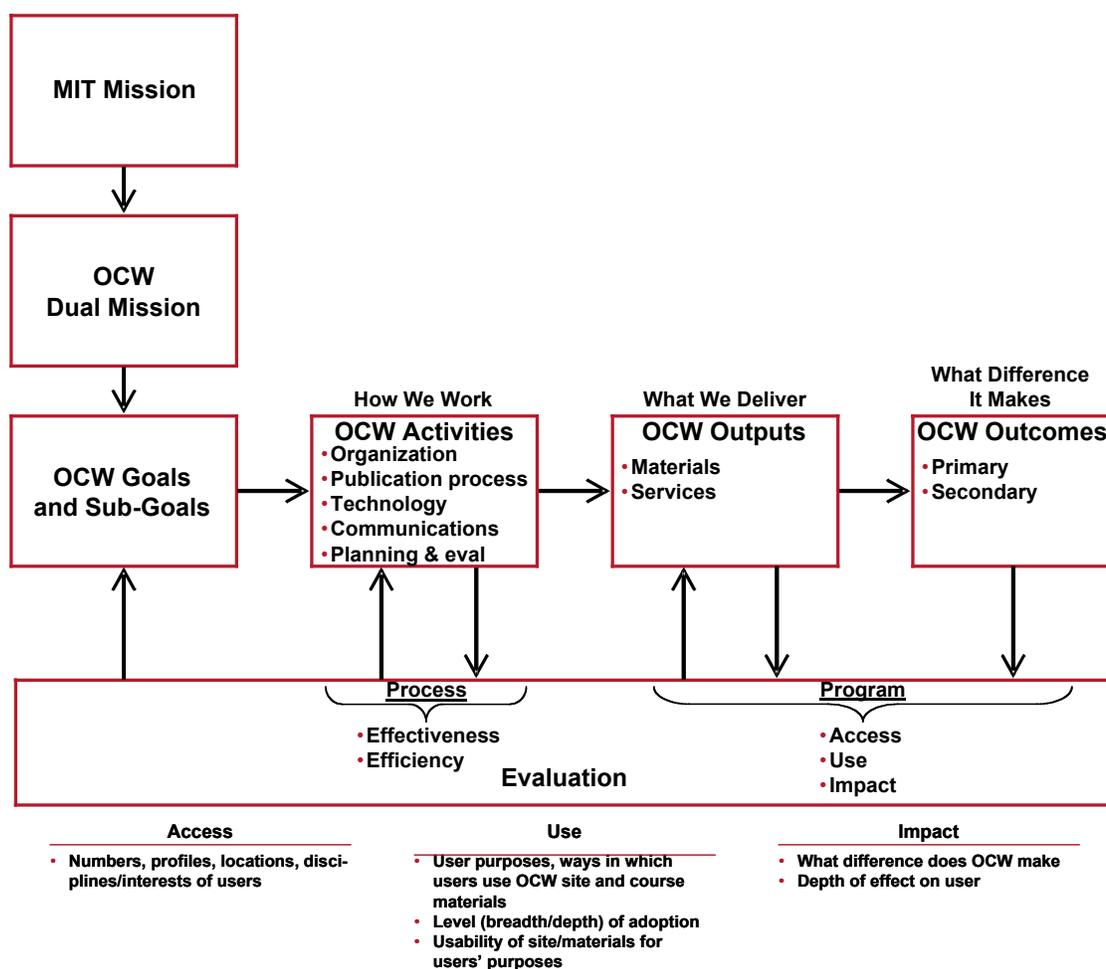
— MIT Professor
Paul Penfield

Appendix 2
Program Evaluation Methodology and Data Collection

OCW Logic Model

In order to structure and organize the evaluation, OCW developed a logic model that derives an array of questions and indicators from OCW’s mission and goals. The logic model has guided the design of the evaluation strategy. It has driven our initial hypotheses, structured the data we have sought to collect, and informed our choice of methods and instruments. The logic model ties every element of the evaluation back to MIT’s educational mission and OCW’s role in advancing it. Figure A2-1 below depicts the overall model:

Figure A2-1: Evaluation Logic Model



In Figure A2-1 above, primary outcomes flow directly from the OCW goals. These are the focus of the evaluation effort. These include, for example, the use of OCW by educators for course and curriculum development, and by students for supplemental learning. Secondary outcomes are those results—both positive and negative—that have no specific programmatic intent. These may include, for example, improvements to MIT teaching materials through faculty efforts to make them ready for publication.



Evaluation Background and Objectives

From its earliest conception, MIT OCW has always contemplated a rigorous evaluation component. The purposes of the evaluation effort are to:

- Provide feedback to allow continuous improvement of OCW features and services.
- Guide long-term direction to keep OCW relevant to a wide array of users over time.
- Show the impact of the “open courseware” concept and thereby encourage other institutions to share their materials through similar efforts.

OCW evaluation began with the original pilot in mid-2002, with initial focus on testing usability and refining early designs of the OCW web site. In spring and summer 2003, we developed a strategy for more comprehensive evaluation as a permanent activity of the OCW enterprise. The November 2003 document *OCW Evaluation Strategy and Plan* describes this strategy in detail. In preparation for the 2004 evaluation a similar strategy and plan document was also developed.

Key Questions and Scenarios

The discussion below explains what we mean by “access,” “use,” and “impact” as components of the program evaluation, and details the questions that the evaluation seeks to answer. All the data collection methods and instruments (described in Appendix 2 below) were designed to support our understanding of access, use, and impact. They allow us to differentiate results by educational role of the user (educators, student, self-learner), by educational and socio-geographic context, as well as by other dimensions.

Access

OCW materials are meant to be accessible to users across geographies using various web browsers accessing the Internet through high- and low-bandwidth connections. OCW intends that every user encounter a reliable technical infrastructure, and have technical access to the full range of content on the site. OCW has made, and will continue to make, efforts to improve access by providing translations, improving search functionality, and employing the techniques of “user-centered design.” OCW also engages in an ongoing communication effort (newsletter, press relations) in an effort to make people aware of the site. The evaluation measures the accessibility of OCW to users, and provides general demographic data about users that will help to identify and address gaps in accessibility. Key questions for evaluation of *access* include:

- Who is accessing OCW?
- Where, geographically, are OCW users coming from?
- What is the educational profile of the users?
- What are the technical contexts through which people access OCW?
- How well does OCW technical architecture perform in enabling people to access desired content and materials?
- What is triggering awareness of and access to OCW?

Use

Educators, students, and self-learners around the world are free to use OCW content for non-commercial educational purposes. By the terms of the OCW Creative Commons license,¹² users may adopt course materials as-is, or adapt them to their own needs by editing, translating, adding material, and incorporating them into their own materials. Given this flexibility, OCW hypothesizes that the site and its materials will be particularly useful for the purposes (scenarios of use) shown in Figure A2-2 below.

Figure A2-2: Scenarios of Use¹³

<i>Educator Scenarios</i>
<ul style="list-style-type: none"> • Curriculum development. Establishing or revising overall curriculum organization and content; establishing or improving course offerings within disciplines. • Course development. Planning, developing or improving a course. Developing or enhancing methods and techniques for teaching particular content; establishing or revising course syllabi, calendars, etc. • Course delivery. Integrating new materials into an existing course; adding elements (demonstrations, problems sets, assignments, etc.) to a course or specific class. • Advising students. Providing feedback to students about courses of study and curriculum options. • Advancing research. Understanding current state of knowledge in a research subject area; connecting with colleagues with shared interests and research agendas. • Subject matter learning or reference. Exploring new areas or gaining new insights; understanding the current state of knowledge in an area of interest; connecting with academics who have similar interests; using OCW as a reference tool. • Educational technology development. Planning or developing an educational web site or related technology initiative using OCW content.
<i>Student Scenarios</i>
<ul style="list-style-type: none"> • Subject matter learning in support of current studies. Gaining new and complementary insights and alternative study materials related to a subject currently being studied. • Subject matter learning in support of courses that are not available. Providing access to course materials that are not provided or otherwise available through the current program in which they are enrolled. • Personal interest subject matter learning or reference. Exploring new areas or gaining new insights; re-learning or reviewing materials from previous educational interactions; using OCW as a reference tool. • Planning courses of study. Exploring the range of subject matter in a particular discipline; making personal decisions about academic path. • Advancing research. Understanding current state of knowledge in a research subject area; finding links to information related to a research topic.
<i>Self-Learner Scenarios</i>
<ul style="list-style-type: none"> • Personal interest or professional related subject matter learning or reference. Exploring new areas or gaining new insights; re-learning or reviewing materials from previous educational interactions; using OCW as a reference tool. • Subject matter learning in lieu of courses that are not available. Providing access to course materials that are otherwise not available to the learner. • Planning future courses of study. Exploring the range of subject matter in a particular discipline; making personal decisions about academic paths. • Educational technology development. Planning or developing an educational web site or related technology initiative using OCW content.

The site is designed to support these scenarios. The evaluation measured the degree to which the site is successful in that regard, and identified other, hitherto unanticipated uses of OCW. Key questions for evaluation of *use* include:

- What are people attempting to accomplish by interacting with OCW?

¹² For terms of the full license, see the [Legal Notices](http://www.ocw.mit.edu) page at www.ocw.mit.edu.

¹³ This table is updated from the Evaluation Strategy document dated 11/05/03 to reflect further developments in hypothesis about user scenarios.

- What do people expect from OCW?
- How useful is OCW?
- How well does OCW support people in achieving their goals and completing their scenarios and tasks?
- What areas and aspects of OCW draw the most/least interest and use?
- How do people use/reuse OCW content offline/outside of OCW?¹⁴
- How effective and usable is the OCW site and content for users?

Impact

Once people access and use OCW, the question becomes: what difference does it make? The ultimate goal of ongoing the ongoing evaluation process is to understand and measure the various effects OCW has on its audiences of educators and learners. We wish to know how individuals' teaching and learning experiences change (if at all) through the use of the site. We also want to understand what broader effects OCW may have, noting, of course, that OCW is still in its infancy, a substantial number of courses was published just at the beginning of the evaluation period, and so our impact data at this point can only be prospective, and primarily anecdotal. Key questions for evaluation of *impact* include:

- What is the impact of OCW on individual teachers and learners?
- What is the impact of OCW on the open sharing of educational materials?

Program Evaluation Data Sources

In pursuit of a thorough and comprehensive evaluation, OCW has adopted an integrated “portfolio approach” to evaluation. This approach comprises a variety of evaluation methods including traditional surveys, interviews, on-line intercept surveys, and advanced web analytics. The combination of these methods helps us to achieve both breadth and depth in the evaluation. The table that follows summarizes the data sources used for the program evaluation.

Table A2-1: Summary of Program Evaluation Data Compiled

	Access <i>Who is using OCW?</i>	Use <i>How are they using it?</i> <i>Does it meet their needs?</i>	Impact <i>What outcomes result from this use?</i>
Web analytics (all site activity)	Traffic volumes, geographic origination, linked referral source, site entry points, site performance	Scenario attempts, usage patterns/behavior, frequently visited/downloaded areas, exit scenario/fallout analysis	NA
Online intercept surveys (random, representative sampling of users; self-reported)	User profiles (role [educator, student, self-learner, other], institution profiles, country/context of origin, technology	User goals/purposes/scenarios/tasks, user expectations, site usefulness/relevance, ability to complete intended tasks, level of	Leads for further follow up via interviews on significant outcomes

¹⁴ This can be addressed qualitatively as well as using an adoption>>adaptation dimension to understand and measure use/reuse (e.g., are people adopting courses, course elements, learning objects, etc. wholesale or are they repurposing/adapting them or some combination.) Understanding this can inform decisions about content priorities and publishing formats, as well as provide rich case studies to inform communications to promote increasing use/adoption of OCW.

	<u>Access</u> <i>Who is using OCW?</i>	<u>Use</u> <i>How are they using it?</i> <i>Does it meet their needs?</i>	<u>Impact</u> <i>What outcomes result from this use?</i>
MIT student survey (random representative sampling of users; self-reported)	context/means of access, reliability, usability, performance, referral source	adoption of materials, level and nature of adaptation	
	User profiles, department profiles, periods of higher/lower use, technology context/means of access, reliability, usability, performance, referral source	User goals/purposes/scenarios/tasks, user expectations, site usefulness/relevance, ability to complete intended tasks, level of adoption of materials, level and nature of adaptation	Leads for further follow up via interviews on significant outcomes
Interviews/case studies (targeted sampling of users; self-reported)	Complementary to surveys to gain in-depth insights for development of case studies of OCW use; also gives opportunity to request syllabi, etc., for content analysis		
Site feedback analysis (self-selected respondents)	Anecdotal supplement to data about access	Anecdotal supplement to data about use, especially usability and relevance of OCW for specific purposes	Anecdotal information about specific outcomes (may lead to further follow up)

Evaluation cycles

The OCW evaluation has been—and will continue to be—a permanent, ongoing aspect of the OCW initiative. For the program evaluation, capture of web analytic data (traffic and access measures) is a continuous process. In addition, our current plans are to perform:

One major evaluation study, similar to the one reported on in this document, every twelve to eighteen months, focusing on use and impact. This study will include a complete review of questions, indicators, and research instruments.

Periodic smaller studies to evaluate the effectiveness of the OCW site or to answer specific questions that may arise.

Ongoing review and analysis of real-time user feedback and Web analytic data from the SiteWise tool.

In addition the data and analyses summarized in this document, we also engaged in four types of evaluative analyses during the pilot phase of OCW (September 2002 – September 2003). These included:

Web trends analysis. We collected basic usage (web trends) data from Akamai to measure overall traffic levels to the OCW site and the origins of that traffic.

Site feedback analysis. Since the launch of the proof-of-concept pilot in September 2002, OCW has consistently invited voluntary user feedback, either via a feedback form on the OCW Web site, or simply through e-mail. This feedback has been mined for information on how people access and use OCW, and the impact that it has. This has resulted in a valuable set of anecdotal insights as well as an appreciation for how the OCW concept is being received by users around the world.

Usability research. We conducted a research effort to gain a preliminary, baseline understanding of how people access and use OCW. That baseline analysis helped shape not only our current evaluation logic model and hypotheses, but also provided valuable input into the OCW site design itself. We obtained data for this research from:

External Educators interviews. OCW conducted 12 in-person interviews with North American Educators members at a number of institutions. These in-depth conversations provided a detailed understanding of how Educators in the United States use OCW, and provided a framework for improving the content and information design.

In addition to the insights and design guidance these early evaluation efforts provided, they also extend the baseline data on which future evaluation efforts will build, enabling (among other things) development of longitudinal access data from the earliest days of OCW.

Appendix 3
OCW Intercept Survey

Methodology:

1. **Java tagging:** tag all OCW pages (see Netraker tagging methodology)
2. **Intercept sampling**
 - a. **Random sample from all initial entry points (across home page and any other entry points)**
 - i. **Intercept ratio: set to target 5000 completions over 20 day period**
3. **Research flow**
 1. Track all at entry
 2. Intercept invitation to random sample of visitors>
 3. pre-task survey questions (i.e., profile,) >
 4. User completes interactions with OCW >
 5. Post-task questioning (i.e., feedback, future intentions)>
 6. End



Intercept Survey invitation/intro and exit

[NOTE: the following text will appear on a pop-up invitation window]

Title: MIT OCW User Feedback
Online Survey

[SURVEY DISPLAY NOTES:

Display invitation in pop-up window (branded MIT OCW). If user indicates will complete, then display questions in frame, while continuing to display the initial OCW page that the visitor accessed.

Please take a moment to complete this survey. Your feedback will help us make improvements to MIT OpenCourseware.

This survey has two parts and takes 20 minutes to complete. Part 1 asks for background information, then invites you to explore OCW. Part 2 asks how effective you found the OCW site, and how valuable you find the MIT course materials you accessed. Of course, all information you provide is completely confidential.

*INSTRUCTIONS: Click the Continue button below to begin. Answer each question, and click the next button to proceed through the survey. Please do not close the survey window. If you inadvertently close it, you can restart the survey, with your previous answers saved, by going to the Netraker Control Window and clicking on the link: **Click here to open the survey window again.***

IF yes THEN continue with survey

IF no THEN close window

[SURVEY DISPLAY NOTE: Display questions in frame, while continuing to display the initial OCW page that the visitor accessed]

{SURVEY EXIT – THANK YOU}

We appreciate your taking the time to complete this survey. Please feel free to provide additional thoughts by clicking on the "Feedback" button on the MIT OCW Web Site, or through the Contact Us link.

[SECTION I: ENTRY QUESTIONS

-
1. Which of the following best describes your primary role in education and learning?
 - 1.a. Faculty (working within a formal educational institution or program)
 - 1.b. Student (currently enrolled in a formal educational institution/program)
 - 1.c. Self learner (independent learner not affiliated with/enrolled in a formal educational institution/program)
 - 1.d. Other Specify: _____

Research logic

*If 1.c. go to Question 5
If 1.d go to Question 5*

-
2. Are you formally affiliated with MIT?
 - 2.a. Yes
 - 2.b. No

Research logic

If (1.a AND 2.a), then 3; if (1.b AND 2.a), then 4, else go to Question 6

-
3. {MIT Faculty only} OCW conducted an MIT Faculty Survey last fall, and will conduct another one next year. We will obtain your feedback through that process, and therefore do not need to take your time today. You may also provide feedback through our site feedback page <http://ocw.mit.edu/OcwWeb/jsp/feedback.jsp> Thank you for your interest in helping OCW, and thank you in advance for responding to upcoming surveys. **END**

Research logic

EXIT (End survey)

-
4. {MIT Students only} Later this fall, OCW will send out a Student Survey. We will obtain your feedback through that process, and therefore do not need to take your time today. You may also provide feedback through our site feedback page <http://ocw.mit.edu/OcwWeb/jsp/feedback.jsp> Thank you for your interest in helping OCW, and thank you in advance for responding to the upcoming surveys. **END**

Research logic

EXIT (End survey)

-
5. Are you an MIT Alumnus/a?
 - 5.a. Yes
 - 5.b. No

Research logic

Go to Question 6

6. What **country are you currently located in**? [Show comprehensive alphabetized drop down list used last year.]

Research logic

Display list of countries (from XML file)

Go to Question 7

-
7. What is the **highest educational degree** that you have received?
 - 7.a. High school/secondary school diploma or equivalent
 - 7.b. Associates degree or equivalent 2 year college degree
 - 7.c. Bachelors degree or equivalent 4 year college degree
 - 7.d. Masters degree or equivalent
 - 7.e. Doctorate degree or equivalent
 - 7.f. Other. Specify _____

Research logic
Go to Question 8

-
8. What is your native language?
- 8.a. Afrikaans
 - 8.b. Albanian
 - 8.c. Arabic
 - 8.d. Basque
 - 8.e. Belarusian
 - 8.f. Bulgarian
 - 8.g. Catalan
 - 8.h. Chinese
 - 8.i. Croatian
 - 8.j. Czech
 - 8.k. Danish
 - 8.l. Dutch
 - 8.m. English
 - 8.n. Estonian
 - 8.o. Faeroese
 - 8.p. Farsi
 - 8.q. Finnish
 - 8.r. French
 - 8.s. German
 - 8.t. Greek
 - 8.u. Hebrew
 - 8.v. Hindi
 - 8.w. Hungarian
 - 8.x. Icelandic
 - 8.y. Indonesian
 - 8.z. Italian
 - 8.aa. Japanese
 - 8.bb. Korean
 - 8.cc. Latvian
 - 8.dd. Lithuanian
 - 8.ee. Macedonian
 - 8.ff. Malaysian
 - 8.gg. Norwegian
 - 8.hh. Polish
 - 8.ii. Portuguese
 - 8.jj. Romanian
 - 8.kk. Russian
 - 8.ll. Serbian
 - 8.mm. Slovak
 - 8.nn. Slovenian
 - 8.oo. Spanish
 - 8.pp. Swedish
 - 8.qq. Thai
 - 8.rr. Turkish
 - 8.ss. Ukrainian
 - 8.tt. Urdu
 - 8.uu. Vietnamese
 - 8.vv. Xhosa
 - 8.ww. Zulu
 - 8.xx. Other

Research logic
Drop-down menu of languages recorded on site
If 8 is not English, go to Question 9, else go to Question 10

-
9. Please rate your proficiency with understanding written English.
- 9.a. Poor

- 9.b. Fair
- 9.c. Good
- 9.d. Excellent

Research logic
Go to Question 10

{Technical context and domain questions}

10. What are the OS's and browser types of people accessing OCW?

Research logic
Hidden Question
Go to Question 11

-
11. Please describe your Internet connection
- 11.a. Dial-up
 - 11.b. Cable modem
 - 11.c. DSL
 - 11.d. LAN
 - 11.e. Other. Please Specify _____

Research logic
Go to question 12

What is triggering awareness of and access to OCW?

12. How did you **first become aware of** OCW?
- 12.a. Colleague or peer
 - 12.b. Educator
 - 12.c. Offline media (newspaper, magazine, television, radio)
 - 12.d. Online media (online news article, link, etc.)
 - 12.e. Search engine
 - 12.f. Other. Specify: _____

Research logic
Go to Question 13

13. Describe **your goal in visiting the MIT OCW Web site today**.
FREE TEXT: _____

Research logic
Go to Question 14

-
14. How often do you visit the OCW Web site?
- 14.a. This is the first time
 - 14.b. Daily
 - 14.c. Weekly
 - 14.d. Monthly
 - 14.e. Occasionally (less than once a month)

Research logic
If 13.a go to Question 16
Else go to Question 15

[Visit frequency question]

15. How many times have you visited the OCW Web site before today?

- 15.a. Once
- 15.b. 2-5 times
- 15.c. 6-10 times
- 15.d. 11-25 times
- 15.e. 25-50 times
- 15.e.1. More than 50 times

Research logic
Go to Question 16

16. What is the likelihood that you will visit the OCW Web site in the future?

- 16.a. Definitely will return
- 16.b. Probably will return
- 16.c. Unsure/Mixed
- 16.d. Probably will not return
- 16.e. Definitely will not return

Research logic
If 6 is in Target Region, then,
If 1.a go to Question 20
If 1.b go to Question 17
If 1.c go to Question 24
If 1.d (other) go to Question 24

Else if 6 is not in Target region, select 1 in 30 to go to question 17, 20, or 24 as above, else go to question 47.

[NOTE: Student profile questions]

17. Which of the following best describes the educational institution in which you are currently enrolled?
- 17.a. Secondary school (e.g., "high school")
 - 17.b. 2 year college, junior college or the equivalent
 - 17.c. 4 year college or university or the equivalent
 - 17.d. Graduate school
 - 17.e. Technical or trade school
 - 17.f. Other. Specify _____

Research logic
Go to Question 18

18. Where **is your educational institution located**?
 [Show comprehensive alphabetized drop down list from last year.]

Research logic
Display list of countries (from XML file?)
Go to Question 19

-
19. Which of the following best describes **your major field of study**? [Show drop down of all mid level educational departments/disciplines using MIT OCW org framework with "Other: Specify choice"]
- 19.a. Aeronautics and Astronautics
 - 19.b. Anthropology
 - 19.c. Architecture
 - 19.d. Biological Engineering Division
 - 19.e. Biology
 - 19.f. Brain and Cognitive Sciences
 - 19.g. Business
 - 19.h. Chemical Engineering
 - 19.i. Chemistry

- 19.j. Civil and Environmental Engineering
- 19.k. Comparative Media Studies
- 19.l. Earth, Atmospheric, and Planetary Sciences
- 19.m. Economics
- 19.n. Electrical Engineering and Computer Science
- 19.o. Engineering Systems Division
- 19.p. Foreign Languages and Literatures
- 19.q. Health Sciences and Technology
- 19.r. History
- 19.s. Linguistics
- 19.t. Literature
- 19.u. Management
- 19.v. Materials Science and Engineering
- 19.w. Mathematics
- 19.x. Mechanical Engineering
- 19.y. Media Arts and Sciences
- 19.z. Music
- 19.aa. Nuclear Engineering
- 19.bb. Ocean Engineering
- 19.cc. Philosophy
- 19.dd. Physics
- 19.ee. Political Science
- 19.ff. Science, Technology, and Society
- 19.gg. Theater Arts
- 19.hh. Writing and Humanistic Studies
- 19.ii. Other

RESEARCH LOGIC:
Go to Question 26

[NOTE: Faculty profile questions]

-
20. What best describes the educational institution within which you are a faculty member?
- 20.a. Secondary school (e.g., "high school")
 - 20.b. 2 year college, junior college or the equivalent
 - 20.c. 4 year college or university or the equivalent
 - 20.d. Graduate or professional school
 - 20.e. Technical or other trade school
 - 20.f. Other. Specify _____

Research logic
Go to Question 21

-
21. **Where** is your educational institution located?
[Show comprehensive alphabetized drop down list used last year]

Research logic
Display list of countries (from XML file)
Go to Question 22

-
22. **How many years** have you worked as a faculty member?
[Show drop down with choices Less than 3 years; every year from 4-20, greater than 20]
- 22.a. Less than one year
 - 22.b. 1-5 Years
 - 22.c. 6-10 Years
 - 22.d. 11-15 Years
 - 22.e. 16-20 Years
 - 22.e.1. Greater than 20 Years

Research logic

[Go to Question 23](#)

-
23. Which of the following best describes **your primary field of expertise**?
[Show drop down of all mid level educational departments/disciplines using MIT OCW org framework with "Other: Specify choice"]
- 23.a. Aeronautics and Astronautics
 - 23.b. Anthropology
 - 23.c. Architecture
 - 23.d. Biological Engineering Division
 - 23.e. Biology
 - 23.f. Brain and Cognitive Sciences
 - 23.g. Business
 - 23.h. Chemical Engineering
 - 23.i. Chemistry
 - 23.j. Civil and Environmental Engineering
 - 23.k. Comparative Media Studies
 - 23.l. Earth, Atmospheric, and Planetary Sciences
 - 23.m. Economics
 - 23.n. Electrical Engineering and Computer Science
 - 23.o. Engineering Systems Division
 - 23.p. Foreign Languages and Literatures
 - 23.q. Health Sciences and Technology
 - 23.r. History
 - 23.s. Linguistics
 - 23.t. Literature
 - 23.u. Management
 - 23.v. Materials Science and Engineering
 - 23.w. Mathematics
 - 23.x. Mechanical Engineering
 - 23.y. Media Arts and Sciences
 - 23.z. Music
 - 23.aa. Nuclear Engineering
 - 23.bb. Ocean Engineering
 - 23.cc. Philosophy
 - 23.dd. Physics
 - 23.ee. Political Science
 - 23.ff. Science, Technology, and Society
 - 23.gg. Theater Arts
 - 23.hh. Writing and Humanistic Studies
 - 23.ii. Other

[Research Logic](#)

[Go to Question 26](#)

[Self-learner primary interest question]

-
24. Which of the following best describes **your primary field of interest**?
[Show drop down of all mid level educational departments/disciplines using MIT OCW org framework with "Other: Specify choice"]
- 24.a. Aeronautics and Astronautics
 - 24.b. Anthropology
 - 24.c. Architecture
 - 24.d. Biological Engineering Division
 - 24.e. Biology
 - 24.f. Brain and Cognitive Sciences
 - 24.g. Business
 - 24.h. Chemical Engineering
 - 24.i. Chemistry
 - 24.j. Civil and Environmental Engineering
 - 24.k. Comparative Media Studies
 - 24.l. Earth, Atmospheric, and Planetary Sciences
 - 24.m. Economics

- 24.n. Electrical Engineering and Computer Science
- 24.o. Engineering Systems Division
- 24.p. Foreign Languages and Literatures
- 24.q. Health Sciences and Technology
- 24.r. History
- 24.s. Linguistics
- 24.t. Literature
- 24.u. Management
- 24.v. Materials Science and Engineering
- 24.w. Mathematics
- 24.x. Mechanical Engineering
- 24.y. Media Arts and Sciences
- 24.z. Music
- 24.aa. Nuclear Engineering
- 24.bb. Ocean Engineering
- 24.cc. Philosophy
- 24.dd. Physics
- 24.ee. Political Science
- 24.ff. Science, Technology, and Society
- 24.gg. Theater Arts
- 24.hh. Writing and Humanistic Studies
- 24.ii. Other

Research logic
[Go to Question 25](#)

-
25. How many years have you worked professionally in your field?
- 25.a. Less than 1 year
 - 25.b. 1-5 Years
 - 25.c. 6-10 Years
 - 25.d. 11-15 Years
 - 25.e. 16-20 Years
 - 25.f. Greater than 20 years

Research logic
[Go to Question 26](#)

-
26. {INSTRUCTIONS} Please continue your session on OCW. When you are done using OCW, click the "Next" button to continue with the second part of the survey.

We will then ask you a few more questions to get your feedback about our Web site and the course materials you've found here.

Research logic
Resize/minimize Netraker question frame (display horizontally at the top of the page and make it very narrow)
Show the web page from where the user was intercepted
When participant clicks Next button
[Go to Question 26, resize maximize Netraker question frame](#)

[SECTION II: Exit questions: USE – SCENARIOS, TASKS, SITE/CONTENT EFFECTIVENESS]

-
- {Scenarios of use}
 {Faculty scenario list}
27. Please indicate **the educational scenario, situation, or challenge that best describes why you visited OCW today.**
- 27.a. Developing or planning curriculum for my department
 - 27.b. Developing or planning a course
 - 27.c. Preparing to teach a specific class

- 27.d. Advising students about their course of study
- 27.e. Learning about subject matter to enhance my personal knowledge (not directly related to my teaching)
- 27.f. Learning about subject matter to enhance my research
- 27.g. Planning or developing an educational Web site or related technology
- 27.h. Other: please describe _____

Research logic
[Go to Question 30](#)

 {Student scenario list}

28. Please indicate **the educational scenario, situation, or challenge that best describes why you visited OCW today.**
- 28.a. Planning my course of study as a student
 - 28.b. Learning about subject matter to complement a course I am currently taking
 - 28.c. Learning about subject matter as a substitute for a particular course not offered at my educational institution
 - 28.d. Learning about subject matter to enhance my personal knowledge
 - 28.e. Other: please describe _____

Research logic
[Go to Question 30](#)

 {Self learner/other scenario list}

29. Please indicate **the educational scenario, situation, or challenge that best describes why you visited OCW today.**
- 29.a. Planning my future course of study as a student
 - 29.b. Learning about subject matter as a substitute for a course not available to me
 - 29.c. Learning about subject matter to enhance my personal knowledge
 - 29.d. Planning or developing an educational web site or related technology initiative
 - 29.e. Keeping current in professional field developments
 - 29.f. Other: please describe _____

Research logic
[Go to Question 30](#)

-
30. Please select the THREE types of materials that were most important to the completion of your objectives today in using the OCW site.
- 30.a. Syllabi
 - 30.b. Calendars
 - 30.c. Reading citations
 - 30.d. Full text readings
 - 30.e. Lecture notes
 - 30.f. Lecture videos
 - 30.g. Assignments
 - 30.h. Assignment Solutions
 - 30.i. Exams
 - 30.j. Exam Solutions
 - 30.k. Projects
 - 30.l. Labs
 - 30.m. Tools (e.g. simulations, animations, example code)
 - 30.n. Related Links
 - 30.o. Study Materials
 - 30.p. Other. Please specify: _____

Research logic
[Go to Question 31](#)

-
31. Were you able to successfully accomplish your objectives today using the OCW web site?

- 31.a. I was completely successful
- 31.b. I was somewhat successful
- 31.c. I was not successful

Research Logic

If 31.a go to Question 33, else go to Question 32

32. Which of the following factors limited your success in accomplishing your goals? **Select all that apply.**

- 32.a. Organization of the OCW web site
- 32.b. Visual design or presentation of the OCW web site
- 32.c. Performance of the web site (e.g., errors, responsiveness/speed, etc.)
- 32.d. Subject matter and course areas covered on the OCW web site
- 32.e. Types of course materials available for specific courses
- 32.f. Quality or nature of the course materials provided for specific courses
- 32.g. Other (Please Specify)

Research Logic

Go to Question 33

33. Please rate your satisfaction with the following aspects of the OCW site (Very Satisfied, Satisfied, Neutral, Unsatisfied, Very Unsatisfied)
- 33.a. Breadth of course and discipline subjects covered on the site
 - 33.b. Depth of materials available within individual courses
 - 33.c. Quality of existing materials available within individual courses

Research Logic

Go to Question 34

34. We are eager to understand the **impact** of OCW and the difference it makes for the educators and learners who access it. Please indicate the degree of **positive impact** that the OCW Web site has already had on the educational scenario, situation, or challenge that you identified earlier.
- 34.a. 5: Extremely positive impact
 - 34.b. 4: Positive impact
 - 34.c. 3: Moderately positive impact
 - 34.d. 2: Somewhat positive impact
 - 34.e. 1: No positive impact

Research logic

Go to Question 35

35. Please indicate the degree of **positive impact** that you expect the OCW Web site to have in the future on the educational scenario, situation, or challenge that you identified earlier.
- 35.a. 5: Extremely positive impact
 - 35.b. 4: Positive impact
 - 35.c. 3: Moderately positive impact
 - 35.d. 2: Somewhat positive impact
 - 35.e. 1: No positive impact

Research logic

Go to Question 36

36. Please explain your ratings for the previous two questions. Be specific—elaborate on the impact OCW has had or will have on you.

FREE TEXT: _____

Research logic
Go to Question 37

-
37. In your opinion, **how can we improve OCW to make it more useful, effective, or valuable** in helping you address your primary scenario/challenge?
FREE TEXT: _____

Research logic
Go to Question 38

-
38. Do you agree with the following statements as they apply to the OCW web site? Please rate your agreement on a scale of 1 to 5,
- 38.a. OCW has or will help me be more productive and effective
 - 38.b. OCW has or will help me learn
 - 38.c. As an educator, I was/will be able to improve my courses using OCW
 - 38.d. OCW has increased my motivation and interest in learning
 - 38.e. I would recommend OCW to others

Research logic
Go to Question 39

-
39. MIT is making these course materials freely available for non-commercial educational purposes, and encourages their use according to the "open" license terms in our legal notices page. Have you adopted or adapted any of the materials or pages from OCW for use in any courses that you teach?
- 39.a. Yes
 - 39.b. No
 - 39.c. Not sure
 - 39.d. Not applicable (I don't teach and do not anticipate teaching in the near future)

Research logic
Go to Question 40

-
40. Do you expect to adopt or adapt any of the materials or pages from OCW for use in any courses that you will teach in the near future?
- 40.a. Yes
 - 40.b. No
 - 40.c. Not sure
 - 40.d. Not applicable (I don't teach and do not anticipate teaching in the near future)

Research logic
If (39.b OR 39.d) AND (40.b OR 40.d) Go to Question 42, else go to Question 41

-
41. Please describe how you have or might possibly adopt or adapt these materials for use in a teaching context.
FREE TEXT: _____

Research logic
Go to Question 42

-
42. Have you communicated with others (e.g., colleagues, educators, etc.) about any of the specific materials or pages from OCW?
- 42.a. Yes
 - 42.b. No

42.c. Not sure

Research logic

If (42.b OR 42.c) go to Question 44

ELSE go to Question 43

43. Please describe your communications about OCW.

Be specific regarding what you have communicated about, who you communicated with (e.g., students, fellow educators, research colleagues, etc.), and how you communicated (e.g., emailed links or files, informed verbally, etc.).

FREE TEXT: _____

Research logic

Go to Question 44

44. Do you think OCW could be changed to make it more effective, useful and valuable to you?

44.a. Yes

44.b. No

Research logic

If (44.b) Go to Question 46

ELSE go to Question 45

45. Please describe what you would change to improve OCW.

FREE TEXT: _____

Research logic

Go to Question 46

46. How positively or negatively do you believe OCW reflects on MIT?

46.a. Very Positively

46.b. Positively

46.c. Neither positively nor negatively

46.d. Negatively

46.e. Very Negatively

Research logic

Go to Question 47

47. Please explain your rating: _____

Research logic

Go to Question 48

48. May we contact you in the future to learn more about your experiences using MIT OCW?

If you are willing to be contacted, please provide your email address below.

As described in our privacy policy, we will not share your contact information with anyone. Providing your email address does not obligate you to participate in future surveys.

If you do not wish to be contacted, simply click on the "Done" button below

Research logic

Display Survey Exit (Thank You message after this)

Appendix 4 **Interview Protocol**

What is an interview protocol?

Interview guides, or “protocols,” are sets of high-level questions that the team will explore in interviews with research participants. Protocols are not rigid scripts. Rather, they are flexible tools that help researchers guide conversations. Often, research participants share significant perspectives and insights that researchers had not previously contemplated. Aided by the protocols, researchers adapt their inquiry to explore new topics as they arise. A protocol provides a baseline level of consistency across interviews and among researchers. At the same time, it is a living, evolving tool that facilitates thought and invites insight.

Interview objectives and methodology

This protocol was created to guide interviews with educators and learners outside of MIT about MIT’s OpenCourseWare offering. It supports the overall goals and objectives of the 2004 OCW baseline evaluation, as outlined in the OCW evaluation plan. Interviews will be conducted with selected users of OCW to gather a textured understanding of how they use the tool and the impact it has on their learning and teaching. Interviews will provide a richer, deeper understanding of those issues than can be generated through other evaluation techniques, including surveys and Web analytics.

Interviewees will be selected from among respondents to the intercept and supplemental surveys who indicate a willingness to participate, and whose responses spark the curiosity of the evaluation team. Interviews will be conducted by the OCW research team as well as by OCW’s partner organizations around the world. The latter will conduct interviews with target users of the site who are hard to reach (due to location, infrastructure constraints, etc.) and/or who require that interviews be conducted in languages other than English. OCW will conduct approx. 20 in-depth interviews, with participants distributed across several target regions (Latin America, Africa, Asia, Eastern Europe, North America) and groups (faculty, students, self-learners).

Note: A small number of interview participants will not be at all familiar with the OCW tool at the time of the interview. For those people, there is a brief Web site exploration session built into the protocol.

Sections of the protocol

In keeping with the evaluation logic model, the interviews will cover three main areas, and provide answers to the following questions:

I. ACCESS. Who is accessing OCW? Are users of the site educators, students, self-learners, or others? What are their disciplines or areas of interest? Where are they located? What are the technical parameters of their connection to OCW? How well does the OCW technical architecture perform in enabling people to access desired content and materials? What is triggering awareness of and access to OCW?

II. USE. What are the general patterns of online use and interaction? How do various types of people in diverse locations use OCW? Is OCW designed appropriately to facilitate their use? To what extent, and in what ways, do users of the site adopt MIT course materials for teaching and learning? How do people use/reuse OCW content offline/outside of OCW?

III. IMPACT. What benefits are being realized through the use of OCW? How does OCW change the experience of teaching and learning for the people who use it? What is the impact of OCW on learning communities? What is the impact of OCW on the open sharing of educational materials?

Addressing issues of Access, Use and Impact requires that we develop a set of lower-level, more specific questions that we will pose to interview participants. This document details those questions. As we undertake the evaluation and learn more about how target users access and use the site and the impact it has on their teaching and learning, we may update the protocol questions. This is a living document, intended to evolve as our knowledge expands.

Notes:

Time allocations (in parentheses) are based on a 60-75 minute interview. They are approximate and intended to provide the interviewer with guideposts for the conversation.

Text in blue represents guidance for the interviewer.



ACCESS (15 min)

- Background information (Note: when interview participants have already completed an intercept or supplemental survey, we may already have this background information, and be able to skip this section).
 - Please tell us a little bit about yourself (name, age, geographic location, educational background)
 - Please describe your role at the university
 - For students: year, course of study, intellectual and extra-curricular interests, educational goals, career goals
 - For faculty: area of specialization, title, length of time at the university, career history and trajectory, research focus
 - How often do you visit OCW? How long, approximately, are your visits to the site?
 - Web site exploration session (Note: for interviewees with no prior knowledge of the OCW tool only).
 - Please take a few minutes to explore OCW Web site (<http://ocw.mit.edu>). Please review the homepage, and navigate to the site areas that are of most interest to you. (note: allow the interviewee to take ten minutes or so to focus on the site, especially if that person has never visited it).
 - Do any of the course materials here seem relevant to your pursuits?
 - How might you imagine using this site in the future?
 - Please leave the site open and refer to it over the next few minutes, as I ask you more detailed questions...
 - Awareness (Note: this section may be of minimal relevance to interviewees with no prior knowledge of the OCW tool).
 - How did you first learn about MIT|OCW?
 - Can you recall other places where you have heard about or seen reference to OCW?
 - Where else would you expect to find information about OCW? (e.g. educational journals, other Web sites, professional publications, etc.)
 - Have you mentioned OCW to others, or referred others to the tool? Why? In what context? How did that person respond to the site?
 - When was the last time you heard someone mention MIT|OCW? In what context?
 - What has prompted your visits to the OCW site? What have you expected to find there? Has the site met those expectations?
 - For non-users who have heard of the site: What has kept you from visiting OCW?
 - Technical specifications
 - How do you usually access OCW? From home? Work? School? What internet provider do you typically use to access OCW?
 - What kind of computer do you use? What is your internet browser of choice?
 - Please describe your internet connection (dial-up, broadband, LAN, etc.)
 - Do you ever have technical difficulties accessing OCW? If so, can you describe them? What do you do to fix these problems?
 - Describe the most recent technical difficulty you had connecting to OCW? What was the problem? And how did you solve it?
-

Use (30 min)

- Scenarios of use—Open-ended (Note: this set of questions is intended to query participants' use of OCW, with particular attention to the tasks and scenarios that are most important for them. The richest data comes directly from participants' personal experience of OCW; it is therefore desirable to linger on these few questions, and solicit as much unprompted feedback about how people use the tool as possible).
 - Please recall the last times you visited the OCW Web site. For each visit:
 - What were you trying to do on the site?
 - Were you able to accomplish your desired task?
 - Did you have any problems? What barriers prevented you from completing your task?
 - Were you satisfied with the outcome of your visit to the site? Why or why not?
 - What materials did you take away from the site, if any? How did you use/re-purpose them?
 - Do you plan to visit OCW in the near future? Why? What do you hope to accomplish using the site?
 - What do you regard as the most useful aspects of OCW? What could OCW do to improve the site and increase its usefulness? What do you see as the biggest hindrances on the site today?
- Scenarios of use—Specific (Note: this set of questions is intended to validate and expand upon some of the scenarios of use that we imagine may be of importance, and understand whether, why, and to what degree they apply for

individual participants; some areas may have been covered in the section above, and interviewers will use their judgment — and take the participants' lead — to guide the interview towards the most fertile topics of conversions)

FACULTY ONLY:

- Tell me about the last time you solicited course materials — syllabi, readings, problem sets, etc. — from colleagues.
 - What prompted you to do so?
 - What were you looking to learn or do with those materials?
 - Did they satisfy your needs? Why or why not?
- Do you, or could you imagine, using the OCW site for **curriculum development** at your institution? How might OCW help you improve course offerings? Establish or revise overall departmental organization? What do you see as the limitations of OCW with regard to curriculum development? What should OCW do to improve its offering in this regard?
- Do you, or could you imagine, using OCW to improve your own **pedagogical practices or techniques**? How might OCW help you develop methods and techniques for teaching particular content? Integrate new course materials? Establish or revise course syllabi? Have you repurposed OCW content to meet your own teaching needs? What do you see as the limitations of OCW as a resource for improving pedagogy? What should OCW do to improve its offering in this regard?
- Do you, or could you imagine, using OCW as a tool to help you **learn about specific subject matter**? How might OCW help you expand your base of knowledge using published course materials? Re-learn or review materials on specific topics? Might OCW serve as a sort of reference tool for you? What do you see as the limitations of OCW as an educational tool? What should OCW do to improve its offering in this regard?
- Do you, or could you imagine, using OCW to help you **advise students** on their courses of study? Make learning and teaching more efficient? What do you see as the limitations of OCW as a tool for curricular advising? What should OCW do to improve its offering in this regard?
- Do you, or could you imagine, using OCW to **advance your research**? Might it help you understand the current state of knowledge in your area of research? Connect with colleagues who have similar research interests and research agendas? What do you see as the limitations of OCW as a tool to help you advance your research? What should OCW do to improve its offering in this regard?
- Do you, or could you imagine, using OCW as a **model of open sharing** in academia? Might it help you envision possibilities for leveraging technology to improve teaching and learning? What do you see as the limitations of OCW as model of open sharing? What should OCW do to improve its offering in this regard?
- What do you think of the format of the OCW course materials? How do you find working with pdfs as opposed to other file formats? What can OCW do to make downloads and learning objects more useful to you?

STUDENTS ONLY:

- Think back to your recent visits to OCW. What prompted them? Have faculty members or other students recommended it to you?
- Do you, or could you imagine, using OCW as a tool to help you **learn about specific subject matter**? How might OCW help you expand your base of knowledge using published course materials? Re-learn or review materials on specific topics? Might OCW serve as a sort of reference tool for you? Have you repurposed OCW content to meet your own learning needs? What do you see as the limitations of OCW as an educational tool? What should OCW do to improve its offering in this regard?
- Do you, or could you imagine, using OCW to help you **plan your course of study**? Make personal decisions about your academic path? What do you see as the limitations of OCW as a tool for curricular advising? What should OCW do to improve its offering in this regard?
- Do you, or could you imagine, using OCW to **advance your research**? Might it help you understand the current state of knowledge in your area or major? Connect with students and educators who have similar interests? What do you see as the limitations of OCW as a tool to help you advance your research? What should OCW do to improve its offering in this regard?

- What do you think of the format of the OCW course materials? How do you find working with pdfs as opposed to other file formats? What can OCW do to make downloads and learning objects more useful to you?

SELF-LEARNERS ONLY

- Think back to your recent visits to OCW. What prompted them?
- Do you, or could you imagine, using OCW as a tool to help you **learn about specific subject matter**? How might OCW help you expand your base of knowledge using published course materials? Re-learn or review materials on specific topics? Might OCW serve as a sort of reference tool for you? Have you repurposed OCW content to meet your own learning needs? What do you see as the limitations of OCW as an educational tool? What should OCW do to improve its offering in this regard?
- Do you, or could you imagine, using OCW to **advance your personal or professional endeavors**? Might it help you understand the current state of knowledge in your area of interest? Connect with academics who have similar interests? What do you see as the limitations of OCW in this regard? What should OCW do to improve its offering?
- What do you think of the format of the OCW course materials? How do you find working with pdfs as opposed to other file formats? What can OCW do to make downloads and learning objects more useful to you?

IMPACT (30 min)

- We are eager to understand the impact of OCW—the difference it makes for the teachers and learners who access it.
 - Think back over the times you've used OCW. Have there been instances when it has made a significant difference in your teaching/learning? Please describe those instances.
 - Are you aware of instances when OCW has made a difference for your friends or colleagues?
 - Do you see opportunities for OCW to develop or evolve so as to become more responsive to your needs?
 - Can you think of instances when OCW has made a difference...
 - In developing course materials and evolving your pedagogical approach
 - In helping you learn about topics within or outside your specific
 - In providing a model for on-line learning
 - Would you recommend OCW to others? To whom and why?
 - What else, in your opinion, can OCW do to get the word out and encourage usage by others?
- MIT is making these course materials freely available for non-commercial educational purposes, and encourages their use according to the "open" license terms in our legal notices page.
 - Have you used or do you expect to use any of the materials or pages from MIT OCW in any courses that you teach or will teach in the near future?
 - Have you shared any of these materials with friends or colleagues?
 - Have you used these materials to establish or engage with specific communities of learning?

Appendix 5 Interview Notes

2004 Interviews

The following interviews were conducted by MIT staff from November 2004 to January 2005, with the exception of interviews conducted in Ghana during the summer of 2004 by MIT students participating in the African Internet Technology Initiative, a student-led effort to improve technology education in Africa. MIT OpenCourseWare greatly appreciates the assistance of the AITI students in gathering this data.

Region: East Asia

Role: Self learner

Country: China

Access: Subject is a self-learner in China. He works full-time at a company that provides equipment for customer support. He said his company is very small by Chinese standards (only 100 people). He was trained as a chemical engineer in Shanghai. Subject first learned about OCW from blogs related to his work. He uses a PC laptop and Internet Explorer as his browser. He said he uses a broadband connection and access is easy and fast. He always accesses OCW from work, because he said he works very long days and feels it is OK to spend some time surfing the web for work-related materials. He has told a number of his colleagues and friends about OCW. He goes to the OCW site weekly. He is most interested in lecture material and readings to increase his knowledge about semi-conductors to help his customers. "If I want to do my best in my work, I need to learn as much as I can about semi-conductors." When asked if he has found this type of information anywhere else, he said he can get some information from Stanford and other universities, but it is not easy to scan these sites for relevant material. OCW's standard interface makes it easy to search for exactly what he wants.

Use: The subject says he is always able to accomplish his desired task when he goes to OCW. He looks at lecture notes and reading materials and thinks the materials are very easy to find. He and his colleagues download lecture notes and read them offline on their laptops. He uses OCW materials on his own time, either at home or during lunch. He is not interested in videos access because he says he does not have time to watch them. He has suggestions for OCW. The subject thinks some of the material is too simple. "We need more detailed content. We hope OCW can provide more detailed materials in the future." For instance, some professors put equations in their lecture notes, but they do not include the source of the equations, only the results. Self-learners do not have access to faculty, so they find this frustrating. When asked what is most useful about the OCW site, he said, "It is very useful for my increasing my knowledge and competency. To know more and have more knowledge. This gives me more competencies and more authority in my company." In addition, he says OCW helps him to solve customer problems better and more easily. Although the subject likes the interface and thinks it is easy to find what he is looking for, he would like the search engine to be more powerful for using key words such as "emerging technology" and "nanotechnology." He would like OCW material to be searchable by key word in addition to course titles. He would like OCW to create a new section for emerging technology.

Impact: Subject said, "OCW enlarges my horizons." He thinks OCW's greatest impact in China will be in higher education. He said much of the technical material used in universities is very old. "OCW can help us to introduce updated material from MIT to Chinese universities." He said most scientific and technical disciplines have a great need to more current materials. Subject said he likes his work, but he likes nanotechnology more. "Maybe OCW will help me open my own company in nanotechnology and emerging technology. I am trying this now on my own, with a non-profit nanotechnology company. For my interest, I want to do something more useful and more needed!"

Region: Latin America

Role: Self learner

Country: Brazil

Access: The subject, an OCW self-learner, has an MS in electronics and communications. He is an engineering consultant who works on electronics automation projects for companies; his most recent project involved casino machines. In addition to his work in Brazil, he has spent some time working overseas in Germany on microprocessor-controlled systems in vending machines. His field is mechatronics, which he said was originally called robotic engineering. The subject has strong connections with the electrical engineering department at the Federal University of Bahia (FUB) in northeast Brazil. The department is about to launch a new mechatronics lab at the end of the month, and the subject will have an official affiliation



and an office there. He expects to be advising students on robotics projects and doing research with other researchers and faculty there, but he will not be teaching. He plans to make use of material from OCW in these interactions, to assist students in learning and also as a reference tool. A friend recommended OCW to the subject, and he took a look at the site, as he has always been interested in keeping up with what is going on at MIT - for instance in the AI Lab and the Media Lab. He does not, however, have any direct connection with anyone at MIT. The subject said that there has been mention of OCW in Brazil on

television and in magazines; he said people talk about it, but he's not sure they all check it out - he felt that telling professors by word of mouth was the best way to get the word out about OCW. The subject has recommended OCW to students and faculty he has interacted with at FUB and elsewhere; he likes telling people about it and feels it is important for them to know what is going on at MIT, both for the materials (syllabi, etc.) and information it provides, and because it is a helpful tool to use in assessing where a program stands academically. He accesses OCW only from the university. They have PCs there with a very fast DSL connection; he generally uses Internet Explorer to connect with OCW. He has experienced no technical difficulties when connecting to or downloading from OCW. He accesses OCW on a weekly basis; he said sometimes it's a quick look to check if there's anything new up, and sometimes he's looking for something specific. He mentioned that there are Portuguese translations available of some of the material - he thought they'd been done by some people in Brazil - and that this is really excellent, since some people don't have enough English ability to use the site otherwise; he said the translations are fine.

Use: The subject uses OCW primarily to enhance his knowledge for his work, and also (as noted above) for advising students. He considers it useful for both reference and learning. He mentioned, for instance, that he was having a problem with control (?) systems where he wasn't able to do things with diesel motors; OCW has been helping to fill his knowledge gap in this area. He feels that the most useful aspects of OCW are the connection with MIT, and the ability to see in detail what is being done in courses at MIT, to download materials, and to share and show materials both locally and with people in other places. The subject said that the practical aspects - experiments and labs - are the most important, as there are plenty of books and so on available in English to cover the theory. He feels that OCW could be improved through expanding what is available on the practical front, by making full use of the types of multimedia available online. For instance, he suggested that it would be very helpful to have videos of experiments so that students can see how experiments work in action, mentioning an experiment with magnets which has only photos of the experiment, whereas he felt that a video would be much more informative and helpful.

Impact: As noted above, OCW has been helping the subject in his consulting work, to fill in gaps in his knowledge. He also finds it extremely useful in advising students, and sees various opportunities for OCW to have a positive impact on faculty at FUB and elsewhere, in terms of the materials available and the possibility of using OCW as a self-assessment tool on the academic front.

Role: Student

Country: Venezuela

Access: The subject is a Metallurgical Engineering student at the Central University of Venezuela, in a five-year program leading to a master's degree. Spanish is his native language, but he is quite fluent in English. The subject first encountered the OCW site about a year ago as he was searching the MIT website for resources related to his studies. He recalls there being about 10-15 classes per department at the time, so it was likely after the Fall 2003 publication cycle. He indicates that he comes to the site weekly, and finds it to be a very useful resource. The subject has heard about the site subsequently from faculty members at his school, and has likewise recommended the site to faculty, students, and friends. He accesses the site using DSL and an iMac, and says he has encountered no difficulties with the site, and accesses the videos quite often. He says that PDFs are the "perfect" format for his needs, and would not recommend any changes. Downloads are for him "very very quick" better than many sites he accesses. He has no complaints about the site structure or navigation, but says he tends not to use search functions in general because he finds value in browsing around and finding related materials on the way to whatever he was looking for. He expresses concern over the variability in course site content (i.e. that some courses have more robust content than others.) He has also accessed the Universia site. He finds the translations there to be "very very good" but the limited number of courses available causes him to use the MIT site almost exclusively.

Use: In the survey, the subject expressed as his goal in visiting the site to watch Walter Lewin's video on angular momentum, which he identified as supplementing materials for a course he was taking. In conversation, he identified this as his primary scenario of use. He said that while the materials at his school were good, more information always helps. He appreciates that OCW allows him to understand the level at which students at MIT work, so he can gauge his own education. In addition to supplementing materials for classes he is taking, the subject also described self-learning activities. He stressed the importance of having a syllabus as a guide, lecture notes to give him the content and assignments or exams to help him understand how well he understood the material. He said that assignment solutions were helpful as well. The subject found the reading lists for the course to be less valuable as he had little success in locating the referenced texts through local libraries. He is also using the site in support of his thesis, for which he is creating a stereoscopic underwater camera for use in inspecting submerged structures. He finds the site useful not only for locating materials directly related to ocean engineering but also topics to which

he's had little exposure, such as image processing. In addition to these direct uses, he described additional uses he's observed, including reuse of OCW materials by two faculty members; he provided contact information for these. He also described how the site was being used by relatives of his (an uncle and a cousin) in support of a project called "Vecindades Nuevas" (New Neighborhoods) which provides assistance to the poor of Venezuela. He provided contact information for this as well. He does not use the site to plan his course of study as he has few electives in his program. He recommends more videos, learning community forums, and direct live links to MIT classrooms.

Impact: The subject says for him, the site has been a help in preparing him to study overseas. Through the site, he is able to see what students study at a top-tier institution, allows him to study more in English, and to study a wider range of topics. For his institution, he has observed that the site provides additional resources to both students and faculty members, and helps the community to understand the institutions position in the world with respect to other academic institutions. He says he'd like to see his and other schools share information in similar ways, because he observes that while most of the research projects undertaken at MIT are very interesting, they require too many resources to replicate at institutions like his. He says that many interesting projects are underway at his institution using far fewer resources, and he thinks that schools with similar constraints could benefit from sharing ideas on how to conduct projects. He sees a great potential for OCW to assist the larger population of Venezuela, most of whom will never be able to attend college. He feels that if the vast population of intelligent and motivated people in his country can access resources such as OCW, they will be inspired to improve their lives. He is exploring (with his cousin) low-cost ways to provide internet access to poor Venezuelans.

Role: Educator

Country: Mexico

Access: The subject is a professor of civil engineering, specializing in hydraulics, at the University of Chiapas in Mexico. He also teaches physics at the Tecnológico de Monterrey in Chiapas. He is 54 years old and has been teaching at Chiapas for more than 25 years. He was born in Mexico City and attended the University of Mexico. He taught several courses at the University of Mexico in his early years: civil engineering, fluid mechanics, hydrology, urban hydrology, channels, water works, and irrigation. The subject has also worked for the Federal Commission of Electricity, specializing in hydrology plants on the Grajales River. The subject first learned about OCW while working at the Tecnológico de Monterrey two years ago. The classrooms in Monterrey are equipped with internet access and monitors, and he accesses OCW in those classrooms at least weekly. He has only experienced technical problems two or three times. Students at Monterrey have good English language skills (this is a requirement for graduation), and the subject is able to show Walter Lewin videos to his classes to supplement their basic labs. He says that students really enjoying seeing and listening to Lewin, and because the labs at Monterrey are not very complete, it supplements their learning in important ways. The subject has tried to use OCW in his teaching at Chiapas, but OCW does not yet have course materials available in hydraulics. He will not be able to accomplish the same type of supplemental learning for students at Chiapas until more course materials are available on OCW.

Use: In addition to the Walter Lewin lecture videos, he uses materials from Stanley Kowalski's 8.01 Physics course. The subject uses Pearson education materials in English and Spanish published by McGraw-Hill, and he discovered Stanley Kowalski's physics book and corresponding videos at the same time he discover his course materials on OCW. He said, "I like how you schedule the subject in OCW, how you give students the rules, and the examinations. I say to my students, 'you want to be a good student, so look at what MIT students are doing....they have to study this material this way.'" The subject wants his students to say to him, "I want to be a better student than an MIT student!" He wants his students to make comparisons to MIT students, to set their goals as high as they can. "On OCW, you have different faculty like Lewin and Kowalski and have different resources to learn physics. This is a very good situation for me. I try to listen to Lewin and take my notes to try to improve my explanations for my classes as another way to understand and explain physics. When possible, I try to learn from OCW, but each professor has their own way to teach." At Monterrey, they do not have a complete physics lab. "I usually show the students the lab work and simulations in front of the class, and say 'What is happening here?' to encourage students to think about the problems. " The subject has also encouraged his daughter to use OCW for her studies. His daughter is an industrial engineering student, and he has pointed her to relevant courses in OCW to help her excel in her studies.

Impact: The subject has about 15 students this year who are very interested in physics. They have told him about their "visits" to Professor Lewin's lectures, and some of them have said they actually fixed some of their homework based on this experience. The subject would like them to branch beyond physics, and look at other areas, such as mathematics, just out of curiosity. He is disappointed that students are not taking advantage of more subjects on OCW because they say they prefer to learn in Spanish. (He said when he was in school, all the technical textbooks were in English. Now, students have their required textbooks in Spanish. He would like them to consult the original texts in English because he does not think the translations are as good or accurate, but most of his students are not interested in doing this.) The subject would like to use OCW for his research on urban hydrology. He is on sabbatical this year from Chiapas and is researching floods and flood plains, and watershed problems in urban hydrologic production. This is a big problem in the part of Mexico he lives in, and he is trying to develop a model to measure the economic impact of planting trees in watershed areas. OCW does not yet have any relevant material on this topic, but the subject would like to speak with MIT faculty who are interested in this problem. (I said I would look into making a connection if I can find a faculty member with this interest.) In concluding the interview, the subject said, "I

want to thank MIT for all of their effort. I appreciate OCW and use it very hard because it is a very well done job to give us your own courses for free.”

Role: Educator

Country: Guatemala

Access: The subject is a professor of physics at University of San Carlos (biggest public university in Guatemala) and University of Galileo (new private university with focus on information technology). The subject is very involved in teaching other physics instructors how to teach physics. She is very interested in the internationalization of education and searches the web for new ways of teaching from around the globe. Found the OCW site through a Google search two years ago, and also remembers seeing it on banner ad on the Scientific American site. Her friends have e-mailed her about the site as well. She connects to the site via a range of connection types (dial-up, LAN and DSL) depending on whether she is at home or at one of the schools. Dial-up has limitations in that her ISP cuts downloads that take longer than 20 minutes and some PDFs on the site take that long. TEAL simulations in particular will not download via dial-up. She finds the video files fairly easy to download. The private university has a much better infrastructure, so she often downloads things there for use at the public university. She uses a 600MHz IBM and IE to connect. She has recommended the site to others and has shared it as a resource at regional international conferences.

Use: The subject finds the materials to be very useful, especially when they coincide with a text she is using. She sometimes orders texts to accompany site materials, but has to order them to a PO box in Miami and have them hand-couriered to her because the Guatemalan customs agents destroy anything she orders directly. She has brought simulations and textbooks to her class. She finds the syllabi to be especially helpful in seeing how other instructors structure their approach to topics. She uses site materials in her PowerPoint slides and provided an example of a presentation she used at an international conference that included OCW content. The syllabi help her to gauge the level of content she is teaching. She is currently working to convince faculty to use the site for curricular planning but finds cultural resistance. She notes that her students have used the site to check materials from courses they had taken in the past (equivalent courses at their institution) and to gauge the level of the current courses. It is helpful to the students in filling gaps in their education. She is developing a particular methodology that she calls “holistic” and includes experiential learning as well as more traditional lectures, and incorporates simulations and applications of theory -- “use everything you have” -- She has tried to develop simulations on her own but does not have time to learn flash with her other responsibilities. She has a student taking a vacation to learn flash to create simulations. She knows of a student who used OCW video content in a presentation and tried to edit it. At the private university they use a blackboard-like tool and are attempting to get students to use the site; the public school does not use technology as extensively.

Impact: The subject is very involved in a project to establish research universities in her region in the next 2-5 years and sees OCW as a tremendous help in this effort.

Role: Student

Country: Columbia

Access: The subject is a student at Politecnico Colombiano, in his first semester studying engineering systems and computer science. The school is a 4-year institution. A friend told him about the site three years ago, and often speaks about the site in class and at work. Other industrial engineers at his workplace have accessed the site. He provides technical support for a nationwide chain of drug stores. He recalls an instructor asking for more information about the site. He connects to the site using a PC and a DSL connection. He was familiar with MIT from a textbook that described MIT’s role in developing UNIX. He is a weekly visitor to the site and says he has been to the site more than 50 times. His English is excellent, and he has no language issues in using the site, but he says fellow students struggle with the language barrier. “Not with mathematics,” he says, “because it is all formulas, but everything else.”

Use: The subject described two main ways he uses the site. First, he complements materials from courses he is taking with OCW materials. He described working with other students to create a presentation on human learning that incorporated OCW materials with materials from other sources. Second, he uses the site to learn on his own. He said that the site has helped him not only to find reading material, but through assignments and reading questions he has learned *how* to read the resources effectively. He locates full-text materials at the library, bookstores, and on line. He finds lecture notes to be the most useful type of content on the site, but also uses assignments and tests, as well as syllabi. The syllabi are helpful to him in planning self study, which he says “takes more discipline.” He believes the site will be a tremendous support for lifelong learning.

Impact: The subject is a big supporter of open knowledge: “Knowledge is like water. Maybe you have to pay to have it piped to your house, but everybody should get the water itself for free.” He believes that all schools should share their materials in this way, but says courses on the web must be affiliated with schools, so users can understand where the materials come from.

Region: Middle East/North Africa**Role:** Self learner**Country:** Lebanon

Access: The subject is 31 years old and lives in Beirut, Lebanon. He works full time as a sales manager for a food products company that supplies products to the Nestle Corporation. He has a B.A. from the American University in Beirut in environmental health. He is now working toward an MBA through an affiliate of the French University in Paris. When he completes his MBA, he plans to go back and finish a Masters in Public Health degree with a specialization in Health Services Administration (he has done some work toward this degree). He is a student, but he describes himself as a self-learner. The subject's ultimate professional goal is to run his own company. "My father taught me to go work for someone, learn from others' mistakes, make mistakes there, *and then* start your own company." In terms of general interests, the subject said that as a full-time sales manager, a part-time MBA student, and recently married, he has no time for hobbies. "I am trying to get through being married for now," he said. The subject took a course on business strategy as part of his MBA work and was not satisfied with the course or the instructor; and was concerned that he was not prepared for an advanced course on the topic he would need to take the following year. He wanted to supplement his knowledge about business strategy before he took the advanced course, so he surfed the web to find additional material. The subject first learned about OCW from the CNN report that he saw when he was in France (Leon) on vacation. He was excited to think that this was the answer to his quest. The next day, he went to the OCW site and learned a lot about Michael Porter. He spent about 2 hours on the site the first day, mostly absorbing Michael Porter information. Back in Beirut, he visits the OCW site as often as he can. He has mentioned the site to a few other students, but not yet to his faculty. The subject accesses OCW from school and from home. At home he has a Pentium III IBM desktop with broadband access. He uses IE as his browser and has no difficulty with access at all. In response to the question, "Does OCW meet your expectations?" The subject gave an enthusiastic, "yes!" He finds courses with lecture readings are very helpful. But courses without lecture readings are difficult because he is looking for as much material as possible as quickly as possible. The subject estimates that 80% of the time he can find the information he needs on OCW if he looks very carefully. The subject would like OCW to include as much information for every course as possible, including readings, notes, handouts, student notes and/or videos. He wants more guidance from faculty (through OCW) to interpret the course concepts.

Use: The first topic the subject was interested in was strategic management. He first went to the Sloan School section and checked out the topic "strategic management," and found a course on the topic. He accomplished his task quickly and easily and was satisfied with the experience. "OCW for me is like a light at the end of the tunnel. I was constantly searching for a reliable source of information—reliable and fast—for my areas of specialization. I had gone to a Harvard site where you can purchase articles but it was not very easy to work with courses. I had also used some Instead materials." The subject finds the format of the OCW site and hierarchy of information "practical and logically sequenced." The subject would like more interaction with OCW users through community groups or study groups. He suggested an OCW study room, beginning with a topic such as financial management, which could include an online chat room for people interested in the topic. He thinks that self-learners around the world should be able to contribute their own understanding of the materials. MIT provides the basic structure to access course-related materials, but self-learners should be able to learn and give something back. This theme, that OCW self-learners should give back, ran throughout the interview with the subject. "Since MIT is giving, through OCW, why not give back?" He said students and self-learners should help people working at MIT. "Say I'm experienced in business management, I may contribute my knowledge to a project at MIT that could benefit from my experience. Because I know this part of the world, I may be able to contribute my knowledge of this part of the world to an MIT project focused on this part of the world." He also suggests OCW Alumni Chapters in different geographic zones, such as OCW alumni in Europe, to foster interaction. These chapters could be accessed from a link off the main OCW home page, and could include information specific to those geographic zones. The subject thinks this could be a second phase in "getting the word out," following featured articles and word-of-mouth as the first phase.

Impact: OCW is helping the subject shape what he wants to do in the future. He said that his goals are vague now, but having access to all OCW's materials is helping him define what he wants to do. Though the subject is a student, he said he will probably use OCW materials to teach as charity work. There are many small business owners in Beirut who are not well educated, and could benefit from courses in business management. The subject would like to provide this education, using OCW, in the future. Probably because the subject is working on an MBA, he has thoughts on the MIT brand. He believes that OCW is adding value to MIT's luxury brand. "MIT faculty are so sure of themselves that they can just put their work on the web for the world to use."

Role: Educator**Country:** Iraq

Access: The subject is currently a Ph.D. student in Electrical Engineering at Baghdad University in Iraq. His research focuses on mobile communications. He received his B.Sc. from Baghdad University (Electrical Engineering) in 1999 and M.Sc. from Al-Nahrain University (Electronics and Communications) in 2001. Ever since he was a M.Sc. student, he has also been lecturing at

universities. From 2001 through 2003, he was a lecturer at Al-Mansour University in the Computers and Communication department. He taught time theory and labs of automatic control (lecture and lab-based courses). Since 2000, he has also been a lecturer at Al-Nahrain University, teaching electronics labs. Currently, at Al-Nahrain, he also consults his engineering services and is helping to construct a new computer control lab. He visits the OCW site approximately once per month. Each time, he spends between two and three hours per visit; one time, he remembers spending four continuous hours on the site. He learned about OCW from a search engine (he thinks it was Yahoo, but he uses multiple search engines). He entered keywords like "free lecture notes for automatic control and feedback systems" and the OCW site was returned as a search result. He has not seen any reference to OCW anywhere else. He noted that even satellite TV has never made mention of OCW. He has been using the site for about 1 year, and he has told all of his colleagues and students about the site. He has not really had any technical difficulties accessing the site, except that he has difficulty downloading large files due to his slow Internet connection.

Use: The subject uses the site primarily for two purposes: to improve the quality of his teaching materials and to use as a study aid for his Ph.D. studies. He uses OCW course materials to update his lecture notes on control and mathematics. When he visits the site to find lecture note material, he usually achieves his goal. Most of what he's looking for is found on the site. He incorporates parts of the OCW lecture notes into his own lecture notes, and adapts them to fit the structure of his own course. He also incorporates topics from exams and homeworks, though it's harder for him to adapt this material into his courses. It's easier for him to use elements of OCW's lecture notes. He will continue to use the site for this purpose. As a Ph.D. student, he used the site to prepare for his qualifying examinations. He also used OCW materials to complete a project for one of his courses. He's used approximately 13 courses on the site to date. The most useful aspect of the site is that it is well designed. The site could be improved by establishing a forum that enables researchers to discuss issues with their studies and seek advice with a user community. (He did not know about the learning communities, so I told him about the program and pointed him to the URL, and he was very happy to hear about it. He will definitely take a look at the site and see if he can participate.)

Impact: The subject feels that OCW has had a very positive impact on his teaching. The materials have greatly improved his teaching materials. His colleagues at the university who have used the site feel the same way. He also feels that it has the potential to have a great impact on curriculum development in Iraqi universities (at least in his specialty of Electrical Engineering and Computer Science). In order for OCW to have a greater impact in Iraq, The subject thinks we should use the universities to help spread the word about the program. Also, he thinks that high visibility through the famous search engines (such as Yahoo and Google) would help a great deal. He is very willing to help us spread the word about OCW in Iraq.

Role: Self learner

Country: Oman

Access: The subject moved to Oman two years ago from India. He works at a company called Poly Products Limited as a Production Manager and he has been with the company for two years. Prior to his time in Oman, he lived in India. He worked in India for 22 years in various engineering industries as a Production Manager, Project Manager, among other positions. He moved to Oman for monetary reasons, so that he could better support his family with higher wages. In Oman, after Arabic, English is the most widely used language, due to the large number of expatriates from India, Pakistan, and other countries. The Hindi language is also prevalent because of the Indian and Pakistani expatriates. He has three degrees: a B.S. in Production Engineering from Victoria Technical Institute (the oldest Indian university), a B.S. in Mechanical Engineering, and an MFM (Master's in Finance Management), as well as a post-graduate diploma in Systems Management. He received all of his education in Bombay, India. The subject visits the site almost every day, and spends between 1/2 hour and 1 hour for each visit. He learned about OCW through the "Times of India" newspaper. About a month ago, he read an article in there about MIT OCW. However, the article did not contain a URL for the site. He found our site by going to the Google search engine and typing "OpenCourseWare." To his knowledge, there has been nothing published in Oman about OCW- in general, the media there has no real interest in issues of technology and management. He feels that if he had been in India, he would have seen much more coverage about OCW. He has recommended the site to many people, including his daughter, who is an engineering student in IT at Bombay University. She has also told her friends and classmates about the site, and they are now using the site as a study tool to supplement their courses. He usually accesses the site from work. He has no Internet connection at home, so even though he has a laptop, he can't use it effectively from home. At work, he has a fast Internet connection (via satellite). He has never had any technical problems and he is able to open the PDFs with no problems.

Use: The subject mainly uses the site to broaden his personal knowledge of topics in Sloan School and Mechanical Engineering. In particular, he has found very updated and interesting topics in the Sloan courses. When he finds a course of interest, he usually reads the lecture notes first, as a brief introduction to the topics. He then visits the readings section for more details on the topics. Also, when doesn't understand certain topics presented in the lecture notes, he relies on the readings for further clarification. For the readings, if only citations are provided, he tries to find the resource online (or more details about the resource online. In contrast to India, which has vast sources of resources on technology, etc., in their libraries (and his home in India, which also contains many resources), Oman doesn't have access to many scholarly resources. As a result, he usually Googles the citations in order to find more information. To date, he has mainly used lecture notes and readings- he has not yet gone through any exams, projects, etc., though he is interested at looking at these resources as well. He usually visits the site with no specific goal, other than to broaden his knowledge on various topics. Sometimes he seeks information on topics related

to his work, but he also finds Sloan topics to be useful for general purposes. There have also been instances when he referred to the OCW site for solving work-related mechanical engineering issues. However, he doesn't rely on OCW to address very custom, specific issues related to his design work. Instead, he tries to purchase more specialized books through India or Europe (since they are not available in Oman). He will continue to visit OCW for these purposes. The most useful aspect of the site is the breadth of knowledge it provides, which is great for broadening one's horizons. However, he does not feel that the site is appropriate for increasing one's depth of knowledge. He feels that need is better addressed through specialized books, journals, etc. The site could be improved by even further expanding the breadth and offering more courses in IT, electronics, telecommunications, and biotechnology. The site currently doesn't offer enough materials on these very current and relevant topics. In addition, it would be much more useful to provide access to complete readings rather than just citations, especially in places like Oman where these books are not available in libraries or bookstores. The subject notes that OCW doesn't have to necessarily provide the entire book or reference, but the more content that is provided, the better. He believes that the PDF format is definitely useful. However, he has encountered certain PDFs with issues: in particular, for some PDFs with many equations, the font size is often too small and makes it difficult to read through the material. He has not downloaded any files to date- in the future, he thinks it would be useful to him to download local copies of materials.

Impact: OCW has had a significant impact on the subject's personal growth and learning. He finds it to be an extremely valuable knowledge base, with many topics covered. For example, by visiting the Sloan courses on the site, he has successfully expanded his knowledge of communications and linear programming. Although he had a background in those topics, he was able to substantially increase his knowledge by using those course materials. He has also used the materials related to quality management directly in his work. There are other topics of his interest that are not currently available on the site. OCW would become more responsive to his needs if the breadth of topics were increased, particularly in engineering (he feels Sloan is much more complete). He will continue to recommend OCW to his co-workers, especially to those with children close to college age, or those who are very interested in increasing their knowledge. He thinks that OCW is well publicized in India and that we should continue targeting audiences for journals and newspapers covering similar topics of interest. In Oman, he suggests reaching out to the "Oman Daily", which is the main newspaper in the country. He believes that there is a great need for OCW in Oman, but there is little exposure, due to the lack of access and facilities. Most professionals working in Oman would make great use of OCW if they knew about it. There is no language barrier in Oman for using OCW- most professionals there are expatriates and speak English. An Arabic version would probably be less effective, especially when you look at the education level of Gulf country natives (which have a low literacy rate, except for Kuwait and Bahrain). The higher-educated Gulf natives have gone to US, Europe, for education and they speak English fluently. The subject also suggested organizing conferences to bring together senior management from companies in the Gulf, as a means for exposing them to OCW.

Role: Self learner

Country: Iran

Access: The subject received three degrees, all in the U.S. He received a B.S. in physics from Alleghany College, a B.S. in Mechanical Engineering from the University of Pittsburgh, and after working for a few years, he received an M.S. in Metallurgical Engineering from the University of Pittsburgh. He returned to Iran in 1994 to help run the family business of air conditioner manufacturing. The business was established in the 1950s; after the 1979 Revolution, the government took over the company. In 1994, the government returned the company to his family, prompting his return to Iran. The company is called Saravel Corporation (<http://www.saravel.com>) (which happens to be a very well-known company in Iran). He started out as a project engineer, developing gas engine chillers, and he now runs the Design Engineering Department; in this capacity, he is responsible for shop floor procedure, tooling, and machinery design. Ever since he completed the survey, he has started to visit the site more frequently. He currently visits OCW three or four times per month. He spends between 45 minutes to an hour per visit. The first time he found out about OCW was through the main MIT site, right at the beginning of the project (very few courses published). However, his computer died shortly thereafter, and he lost contact with the site. Two years later, he typed OpenCourseWare in the search engine and found the site. He has not heard about OCW through any other sources. He has referred OCW to his co-workers. They informed him that they are very pleased with the site and have actually used the materials as part of their work. He usually visits OCW from home, not work, because he has more time at home to focus on the materials and the bulk of his reading and research occurs at home. He uses a dial-up modem to access the site. He has had some technical problems with the site. For one of the courses, he was unable to successfully download the lecture notes. The lecture notes were not in PDF format- each lecture was a package of multiple files (HTML, images, etc.). As a result, when he tried opening the files, all he would see is a bunch of random graphics with no supporting text. In other words, it was not clear to him how to combine all these files to view a cohesive lecture. In addition, large file downloads are difficult on his dial-up connection. In the past, he tried to download video lectures from Columbia University, and it was impossible. He estimates that files greater than 2.5 MB are almost impossible to download in Iran. In one specific instance, he was unable to download a complete textbook that was linked off of our site (course 2.51, Lienhard book, hosted on Athena locker, 8.8 MB file). Instead, he asked his friend in the States to download the book for him, burn it onto a CD, and send it with his mother to Iran.

Use: The subject uses OCW mainly for professional development. Typically, when he visits the site, he browses through every course to find what he wants. He usually starts from the Mechanical Engineering department page (he never uses the search engine) and browses courses. Once he finds relevant materials, he downloads them- lectures, textbooks (such as the 2.51

Lienhard book), and lab assignments (2.737). The last time he visited the site, the purpose was to browse through courses and see what caught his interest. In general, his main goal is to refresh his engineering background. Mechatronics (2.737) is the last course that caught his attention. He usually seeks topics that he engages in his work. He will continue to visit OCW for that purpose. The most useful aspects of the site are the lecture notes and fully downloadable textbooks. OCW could improve by better addressing the limitations of the developing world. For example, he suggests that we provide a method for distributing hard copy versions of lecture notes, books, and other materials. He asked to be contacted if OCW ever decided to sell hard copy or CD versions of its material- he would be very interested in purchasing these materials.

Impact: OCW has had a significant impact on his work. He has used the course materials on different occasions to help solve engineering problems at work. For example, he used the Lienhard textbook to solve heat transfer problems at work. He would look up the correct equations at home, write them down, bring the notes into work with him next day, and solve the equations at work, thereby improving his design work. For OCW to have greater impact in the future, he emphasized the ability to find alternative methods for distributing materials in developing countries where IT infrastructure is limited. He also thinks that we should leverage the worldwide MIT alumni network to help spread awareness and distribute the content. For example, in Iran, he thinks that MIT alumni would be more effective at outreach than universities in Iran, who would just distribute the materials to their own community. Although reaching out to individual alumni will be a more gradual process, it is more effective at reaching out to a wider audience. Sharif University (the MIT of Iran) has a business school, headed by Dr. Mashayeghi, who is a Sloan graduate (PhD). They are currently collaborating with Carlton University; the subject thinks that he could be a useful contact for collaboration, especially since he's an MIT alum. For OCW to have greater impact on the Iranian audience, the language barrier must be overcome. Except for a couple of universities (Sharif University, Shiraz University), students in Iran are not proficient in reading in English. Translation of OCW materials into Farsi would allow for much greater use in Iran. The subject suggests that we offer lecture series by MIT big names rather than course topics (e.g., "Lecture series by Lester Thurow," instead of "Lecture series on globalism"). Iranian students and educators would be more responsive to the site if the material were more strongly associated with the scholar, rather than the discipline. He believes that this is true for the majority of academia in the developing world. In addition, he notes that professionals would also be very interested in these videos. In Iran, there is a great need for vocational training, and a lecture series by a well-known Sloan professor, like Lester Thurow, would be highly useful for vocational training in Iran. The subject would be very interested in purchasing such videos if they ever became available.

Role: Educator
Country: Iran

Access: The subject lives in Ahvaz, Iran. He is a professor of microbiology at the University of Ahvaz Medical School. He has been a professor for 10 years. He currently teaches courses in bacterial genetics, virology, and molecular biology courses, to both Ph.D. and M.D. students. He holds three degrees: a Ph.D. in virology from Southampton University in England, an M.S. in Microbiology (from an Iranian university), and a B.S. in Biology (from an Iranian university). He also previously had a sabbatical at a university in Winnipeg, Canada. He visits the site on average once per week. His son, a high school student who's concentrating in physics, told him about OCW. His son found OCW by going to the MIT main site and searching for physics content. When his son wanted to download content from the site, he was unable to from home since they have a slow internet connection. He asked his father to download the materials from his work, at the university, which has a faster connection. Through this process of downloading material for his son, the subject began exploring the biology content, for his own purposes. He didn't know that MIT even had a biology department until he saw OCW. The subject often refers the OCW site to his students as a biology resource. At University of Ahvaz, the computer facilities are adequate. There are two main computer clusters, one for students and one for faculty, each with 50-60 computers. The Internet connection is not that fast, but it's faster than dial-up. The connection is also not continuous- they experience frequent disconnection. The university is planning to install a satellite Internet connection. He always has technical problems, involving downloading materials, but this is due to the ongoing Internet problems- he does experience fewer problems at work than at home.

Use: The subject's son uses the site to study for the International Physics Olympiad, which is an intensely competitive international annual competition for secondary school physics students. The OCW site contains Olympiad questions, which his son downloads and uses for practice. The subject strictly visits the Biology section of OCW. His main purpose for visiting the site is to find new experimental protocols. He is constantly checking and looking for updated protocols that he can use in his research. He typically goes to the Biology department page and looks for courses relevant to microbiology. He then browses through those courses, scanning for protocols. He uses these protocols mainly for research projects. He currently doesn't use the site for teaching. When he finds a valuable protocol, he downloads it and shares it with his researchers and students. He doesn't use the site for teaching, because our Biology courses don't have any lecture notes. If they did, he would definitely use them. He uses lecture notes from the Arizona State University site (many of them are provided for free). He also uses the Cold Spring Harbor Laboratory (NY) site (www.cshl.org) – they have a lot of useful biology content, including lecture notes, neat animations, and they are all free, but the site doesn't have protocols, which is why he uses OCW and other sites to supplement. Even in terms of protocols, OCW doesn't have much content. The University of British Columbia site has much more content and many more protocols. He will continue to use the OCW site as one of many he uses for the purpose of protocol research. The aspect he likes most about the site is the protocols. The aspect that needs improvement is mainly the content. He thinks

there should be more manual-type materials and instructions for microbiology techniques and methodologies. Also, he thinks that the material is not updated enough. For example, microarrays, a recent topic, are not covered on the site. He thinks that these new, cutting-edge techniques are the most useful for researchers and academics in Iran and other developing countries.

Impact: The subject is not certain that OCW will have much of an impact in its current state (at least in terms of the biology content). He believes that there are other sites that are more useful for teaching and learning. However, if we add more materials and improve the breadth and depth of the biology content, it will be much more useful. He informed me that some newspapers and recently published books in Iran contain a section focused on the latest web sites about research. Newspapers such as the "Sharq" newspaper introduce web sites in a special section, about once per week. Also, Iranian university students rely heavily on the Internet to find useful content sites. Google is HUGE in Iran. He suggests that we work to improve our visibility there. Most students usually just go to university home pages to find content. He also highly recommends the Cold Spring Harbor Laboratory (NY) site, and thinks that we should model our site after them.

Region: Sub-Saharan Africa

Role: Student

Country: Ghana

Access: The subject, 22, is a final year student at the University of Ghana, Legon. He did his high school education at Accra Academy. He is studying Computer Science and Physics. He likes to play the organ, scrabble, and he loves soccer. He passionately supports Manchester United. His ultimate career goal is to be doing information technology in the banking industry. The subject learnt about MIT Open Course Ware after taking part in MIT's Africa Internet Technology Initiative course. He researched into MIT and voila! He found MIT OCW. He expects to find information on MIT OCW at most university websites, as well as popular mail servers like Yahoo, Hotmail and Opera. He has been mentioning the OCW website to his course mates at school. He encourages them to access the educational material. The people he has referred it to have been enthusiastic about it. He normally accesses OCW through internet cafés, and he has no knowledge of which ISP he has been using. He uses a Windows PC, the brand is a Compaq, and it has a Windows 2000 operating system. He uses Internet Explorer and Mozilla web browsers with a Dial up connection. He has never experienced any technical difficulties at the cafes he has been to.

Use: The subject normally uses the website to check out lecture notes and problem sets of various courses, especially Computer Science. He always has a sense of accomplishment after he is done with his visit. He has not experienced any navigation problems. The subject stated that he was not so satisfied with his visit in a curriculum sense. This is because there are differences in the curriculum offered at his university and that of MIT. Hence, finding particular topics are quite difficult. The curriculum scope is also different so there is an absence of specific topics. He has been copying lecture notes and problem sets. He has particular interest in using them to figure out how practical notes are and how the theory in question is being applied. He plans to continue visiting the website. The course materials give him a lot of ideas about the practicality of the theories. He described course 1.00 in civil engineering, as a wonderful course. The subject intends to go through it and self-learn the material. The lecture notes are the most useful, according to the subject. He thinks that a lot of awareness must be created for students and faculty to access it. He would recommend it to his faculty because the materials there could improve the way some particular courses like Computer Science are thought in Ghana. He feels that the biggest hindrance to OCW is Internet access, the lack of it. The Internet café he used has a fast connection so downloading was easier. He thinks that depending on various IT skill levels, there are variances in the ability to download material. His interest in MIT led him to OCW and his faculty has not recommended it to him yet. The subject imagines using OCW to learn specific subject matter, which he feels, are straight to the point theories, concise. The course websites are great ways to self-learn material. It has all the information needed. He uses the website as a reference tool and has repurposed the course material for his own use. He thinks the limitations as an educational tool are its lack of awareness and internet access problems. He imagines using OCW to plan his course of study, per say banking. OCW arouses his interest in specific topics, etc. The subject could use it to make personal decisions about his academic path. He also imagines using OCW to advance his research and final year projects. He likes the OCW formats, which make downloading easier, and Adobe Acrobat Reader is readily accessible in Ghana. He thinks that PDFs are best because most of his own materials are in PDFs.

Impact: OCW has made a significant difference in his learning. He always learnt to pass exams. The courses in his university are structured in such a way that it makes him focus very much on exams and not other assignments. Final exams in MIT carry very little percentage (17%) while in Legon carries 70%. He thinks that there isn't a lot of hands-on practice for whatever subjects he takes at Legon. He is not really aware of OCW making significant differences in learning for his colleagues or friends. He thinks a little flesh should be put around the bare bones or bullets of information presented in lecture slides to make them more understandable and responsive to the educational needs of worldwide learners. The subject acknowledges course 1.00 which has helped him really learn Java and Object Oriented Programming. He also feels that OCW can be a model for online learning because he doesn't know of any other university that has any kind of web publication of its courses. However, he cited an example of <http://www.mysql.com> which has an interactive learning program where one can submit a query or project and find out the output and result. OCW does not have that and he would very much like to see it implemented. He

would recommend OCW to students, because he believes it will change their concept towards learning. He would also sell the idea of OCW to his faculty and those who plan educational policies; these people determine the curriculum of Ghana. "In the face of changing technology, when they see this model and how practical the courses are, it will help them make their own more practical and shift the focus of the subjects", said the subject. As far as publicity is concerned, he suggested that OCW use student groups and bodies to publicize it. He also stated that OCW could be publicized on the websites of educational institutions especially for students with working interests in MIT. He plans to use the online course material to teach. He has shared ideas he has picked up from the website but not the actual course materials. He has not used the materials in any specific community of learning.

Role: Educator

Country: Ghana

Access: The subject is a 48 year old Ghanaian from Accra. He has a Master's degree in Computer Science from the University of Ghana, Legon. The subject has been lecturing in Computer Science for close to 4 years at the same university. Prior to that, he had been programming for business and in the corporate industry. He also did some work with data management, processing and analysis. The subject first heard of the Open Course Ware website through MIT AITI (African Internet Technology Initiative) whose website is <http://web.mit.edu/mit-africa/www>. This happened because he was involved with MIT-AITI's Ghana 2004 program. He has not seen any OCW references anywhere else. He expects mostly to see OCW references at the MIT.edu website. He mentioned OCW to some of his students. Those who were computer illiterate and active users of the internet where enthused about it. However, some of his students who were not too computer savvy were not too interested. The subject accesses Open Course Ware from his office. He gets his internet access through satellite transmission from Denmark with a broadband connection. His web browser of choice is Internet Explorer. He uses a Dell PC with an Intel Pentium processor. The subject normally experiences slow internet connections and he thinks the solution is to browse at night after 6pm. Also, the electricity supply is not too reliable.

Use: When he used the website for the first time, he was trying to get material to review his course content at his department. He sees MIT OCW and as a source of information and he plans to download a lot of curriculum materials. In conjunction with other lecturers in the Computer Science Department, they plan to update their course material with current trends in technology. He and his colleagues are limited by the lack of human and capital resources to implement new course material found on the MIT OCW website. They are also going to discuss the lecture notes, add to and subtract from them to suit their own needs. He was very satisfied with his first visit to the website, it was user friendly and the interface was great. The subject thinks the various separate files make it a difficult process to download a whole lot of material. He aims to visit the website later on to download lecture notes and courses. Pertaining to the acceptance of OCW on a large scale in his institution, he thinks that if most of the lecturers came to know a lot about the website, they would be more appreciative. He would recommend the publications to various teaching assistants and lecturers for tutorials and also to students as reference. He stated how the curriculum in his institution differs from what is on the OCW site with regards to syllabi. The final exam takes about 70% leaving only 30% for homework and quizzes. The most useful aspects of OCW is that it is a state of the art tool for education and current technology trends. He believes that it is a great way to catch up tech wise and his students would be hungry for information and educational material. The subject feels that putting all course material into one easily downloadable Zip file would be very good. He would like to see more example problems, quizzes and homeworks. He hasn't run into any problems with the website yet. He thinks that PDF formats are convenient and better opened in a browser. Acquiring a CD Rom with a lot of the information would be appropriate. He would use the OCW publications for curriculum development. He would revise academic material and update them and would require resources (training, facilities) to introduce new courses. He recommends that OCW create something like a Lecturer's guide for lecturers to follow and use it to teach the material. A learner's guide would be very useful for the students and self-learners too. References can be made to other useful subject specific material. The subject would like to see some better packaging and technical knowhow on how to use the website. Also, a methodology of learning should be employed to ensure quality of OCW publication delivery. He also hopes to learn a specific subject in the future when thinking of new courses to introduce and he feels such a lecturer's guide would be extremely useful to first time users. He understands that the computer science field is dynamic and there is the absolute need to keep abreast with technological advancements. He craves a search engine on the OCW website as a reference tool for information. One limitation he sees is the lack of expertise available to guide users. "Who is to consult in times of difficulty?" he says. OCW would be an information hub to advance his research if appropriate and tuned to his particular area of interest. He mentioned Open Access College as another model of open sharing, which he feels, is better equipped. This model has a number of online simulations and much more practical experiences. He thinks OCW should become more practical for worldwide users to follow and benefit immensely from it.

Impact: The subject has not used OCW enough for it to make a significant difference in his teaching. Not yet as least, according to him. He feels that exposure to the material physically through teleconferencing and conferences are very important. He believes that OCW is capable of improving its website to suit his needs. He will recommend and publicize it to sister universities in Ghana and spread the word through conferences, workshops and seminars he attends. The pretext of recommendation would be MIT's reputation as a leader among technical universities and the fact that it is free with no barriers. He hopes that OCW can set up a regional academy locally at a university, preferably Legon. Other institutions OCW can work

with to publicize itself and make a great impact would be the National Accreditation board and the West African Examinations Council. The National Accreditation board accepts and gives universities in Ghana the go ahead to operate so it could use OCW or MIT course content as a model for curriculum material for new universities. The lecture notes would be used for his own teaching and courses. He hasn't shared any of the materials yet.

Role: Educator

Country: Ghana

Access: The subject is the head of the Computer Science Department at the University of Ghana – Legon. He has been the department head for 8 years, and is 51 years old. Before his current job, he was lecturing and consulting about IT around Ghana. The subject first learned of OCW from MIT-AITI, when he received an introduction about AITI's plans at Legon during the summer of 2004. That is, he has known about OCW for about 4 months now. Unfortunately, he has never seen OCW advertisements or heard of references to OCW outside of the AITI program. He also did not offer suggestions of where he would hope to find any advertisements, because he expects it only to be passed around by word-of-mouth and perhaps through the MIT website. Although the subject heard about OCW four months ago, he never felt obliged to visit the site until we held an information session about OCW (July 20, 2004). This means that at the time of the interview, he had visited the site only once, and had also never mentioned OCW to other members of staff, outside of a close circle in the Computer Science Department. His record of visiting the site and a slight lack of general OCW awareness is in stark contrast to his enthusiasm about using the site: he has assigned one of his staff members the task of downloading all of the OCW material relevant to the computer science department and has big plans to review/update the entire CS curriculum based on what material OCW presents! The subject has his own PC in his office, which has a broadband connection to the internet. All lecturers at Legon have a similar arrangement. Their ISP is in Denmark (via satellite connection), so the internet connection is often slow and even non-existent during times of heavy traffic. The computer he uses is a standard desktop computer with Windows XP and physical resources (RAM, disk space, etc.) that would be found on most machines purchased around the year 2000. He uses Internet Explorer when browsing.

Use: The use scenarios for the subject were hypothetical, because he hadn't actually used the site. He had only visited once, realized that searching for particular subjects was easy, realized that a lot of material was available, and realized that the basics of the MIT computer science curriculum were all on the website and seemed to encompass most of what is taught at Legon. However, it is worth noting that the subject had a specific timeline for using the website, starting the day of the interview, so we felt certain that he will be an active user in the future. The morning of the interview, the subject had assigned a professor to download all OCW materials, and begin the process of reviewing the CS department's curriculum. The Legon curriculum was in serious need of modernization, and one major component of their improvements was planned to come from OCW. The idea was to download all the content and give material to the lecturers currently teaching similar material. The lecturers were to check if the material meets their expectations, whether they can use some of it, and then they were to discuss with the department what they plan to teach. The curriculum revision plan was ambitious but manageable. At the time of the interview, the plan was not to redefine the entire curriculum, but merely to use the resources from OCW to refine the existing one with newer improved material. That way, professors would not have to be trained in completely new topics before teaching them, and the curriculum revision would have a higher chance of success. The subject imagined that in the future it might be possible for his department to use OCW to develop brand new courses. But, as one might expect, he wanted to first see how useful OCW is for refining the existing curriculum. The subject also thought that OCW could be used to advise students. The two most important ideas were: to help them plan their course of study, and to refer students to more material. The first idea was that students could be directed to the website, asked to look around for material that interested them, and then the department could help the student package a schedule based on that. Also, students could be advised to search OCW for further material to complement their class work. He did NOT think that it would be advisable for students to look on OCW if the material was exactly the same as what the teacher knew/taught. Finally, The subject agreed that OCW could be useful as a reference tool. The search function in the main page can help anyone find information they need.

Impact: OCW was sure to have a big impact on the Computer Science Department at Legon, especially if the current curriculum review is successful. The subject also saw it as potentially useful to sister universities like KNUST University and Cape Coast University. Ghana has ten public universities and five private ones, and most of them have computer science curriculums that he thinks would benefit from OCW. Because it has such great benefits to both parties, the subject plans to sell the idea to others in his school. He agrees that other departments would find it just as useful, but only if they understand what the website is about. The key to having a larger impact is a personal touch, the subject thinks. Meeting people at conferences that recommend the website, or getting introduced through colleagues or classmates is necessary to get people to visit. In person, the website is easy to recommend. The subject would personally recommend the website mostly to faculty, but also to selected students. One of his most impactful suggestions was that OCW should contact the Ghana Accreditation Board for Universities, because if they started basing standards on OCW, all other Universities in Ghana would catch on. OCW's advantages are varied, so it can be recommended under many circumstances. That is a great benefit. It can be sold to other universities as a "common standard" around the country. The West Africa region has many accreditation boards that could be contacted. The subject recommended that letting some professors visit MIT and learn about OCW and the courses available in person could do a lot to convince someone to sell the idea further to colleagues in Africa.

Role: Self learner
Country: Ghana

Access: The subject is 25 years old and was born in Accra, Ghana. At the National Vocational Institute, the subject studied electrical Engineering with a concentration in Power, Sound and Visual. He never attended high school, but did attend technical schools. His main hobby is experimenting with electronics. The subject's educational goals are to receive a MS computer science, and his career goals are to work in industry in the US and then start up a company in Ghana. The subject was introduced to OCW by a former Geekcorps volunteer and that's when the subject got interested in MIT. He also met someone online at the Cisco user group who also mentioned MIT-OCW as a resource. The subject has referred 3 other people to the MIT-OCW website. The subject thinks that an ad for OCW should be posted on Yahoo and/or Hotmail because those are the first two sites that Ghanaians go to. MIT-OCW is all over google, but google is mainly used by researchers and IT people in Ghana. The subject generally accesses MIT-OCW from his job and has not had difficulties accessing the website. He uses a Dell laptop and either Linux or Windows operating system and searches the internet with the Firefox web browser by Mozilla. The internet connection that is generally available to the subject at work is a broadband wireless internet connection. There are three main ISPs in Ghana 1) Nas Global 2) Busy Internet 3) a virtual ISP under internet Ghana.

Use: The subject primarily used MIT-OCW to upgrade his knowledge in network security and TCP/IP in general to develop some software for banks. He is also working on a Twi (the native Ghana language) version of Linux at <http://www.twinux.org>. The subject had some difficulty understanding some of the new technologies he saw on the OCW site, so he had to look up those technologies first and then go back to the OCW website. The subject is very satisfied with the website and has printed 2 reams, about 1,000 sheets, of paper with MIT-OCW content (so far). He will be visiting the site again particularly to help him develop an open lab online. The subject can imagine using OCW as a tool to help him learn about specific subject matter because there is nothing like MIT-OCW anywhere. For people that cannot afford to get to MIT, the MIT-OCW website can serve as a great resource. The subject used OCW to advance his personal endeavor of re-learning TCP/IP. He used OCW and google as a reference to prepare a presentation for Ghana telecom. Some of the limitations of OCW are when the subject is at home it is very difficult to download PDF files because of their size. It may be better to have the PDF file content in an html document. The subject would use OCW to plan his course of study. He views it as a great resource for choosing classes and to set a curriculum to follow. OCW will help to advance the subject's research and strengthen his knowledge. The subject has not seen any links on the MIT-OCW website that would connect him to an online community to discuss the site. Perhaps a link to an MIT-OCW online community can be placed on the homepage. Add more file formats; do not limit it to pdfs. While it may be easier to work with pdfs, the internet connection is not good enough to download large files. It would be better to have an HTML version and then the user can just copy the page and paste to word doc and print it! No download needed.

Impact: The subject was creating Linux servers for a client and the client was complaining about some protocols. The client wanted the protocols filtered on a particular channel. As a result, the subject had to research TCP/IP and was able to solve the problem for the client. This resulted in a paycheck for the subject. It would be nice to put the whole course into one downloadable file. For example, a topic could be computer networks and then when you select that topic all the related materials would be downloaded. MIT-OCW impacted the subject in two major ways. 1) He used it as a resource to prepare a presentation to Ghana telecom; 2) He used it to teach a course introduction to networks and TCP as a part of (Ghana) Accra Linux User group. He has used MIT-OCW to read materials outside of his specialties. He read something on nuclear science/engineering. The subject believes that MIT-OCW is different because of how they package their courses; it's different from Cisco website for example. It very nice to have the course syllabus and exams. The subject strongly recommends OCW to others. He would like to post a banner on one of his websites. The subject recommends OCW to university students because of the curriculum and syllabus. However the resources, such as books and equipment, would be critical to upgrading a Ghanaian university's curriculum. In order to follow the curriculum of one of MIT's courses one must have the software/hardware and whatever else is required to go through the MIT course. A great place to advertise is on Yahoo and hotmail. Also, it would be great if the MIT-OCW office could send stickers advertising OCW to Ghana. In The subject's experience, stickers have been working real well to as a publicity tool. The subject has only taken specific points, and has not used a whole document in any of the workshops he has participated in, but he might use a whole document in the future. He has only shared the web link with others. The subject has not used these materials to establish or engage with specific communities of learning. The main thing that needs to be improved about MIT-OCW is its publicity. OCW is a great resource that would tremendously improve Ghana.

Role: Self learner
Country: Nigeria

Access: The subject is a self learner employed by the Nestle Corporation in Ilupeju, Lagos, Nigeria. He is responsible for infant formula and nutrition communication and works directly with pharmacies and doctors, marketing Nestle products and communicating about nutrition issues. The subject became aware of the site via the CNN International piece, and logged on to the site the next day. He thought from the CNN piece that the site would be more detailed (more content within courses) but found it to be a very good guide for what to read. He is building his own collection of texts listed in courses of interest, but it is somewhat difficult for him. He notes that he cannot use Amazon or other web resources as credit cards are not used in Nigeria. The subject has recommended the site to colleagues and friends, but does not know of any who have actually visited

the site. He has not heard of OCW via any other media. The subject notes that videos are a problem for him because of the software required (RealOne Player) which he has been unable to download.

Use: The subject uses the site primarily for self-learning related to his job. In particular, he studies materials on the Sloan site to improve his marketing skills. He says his marketing skills have improved "40%" since starting to use the site. Typically he will try to complete the assignments for a given course, and then read back through the materials when he gets stuck. He is able to apply project assignments to his real-world problems marketing Nestle formula to pharmacies and doctors. His use of the site is limited by the lack of access to referenced materials, which are not widely available in Nigeria. As noted above, he cannot use Amazon or other web resources because credit cards are not used in Nigeria.

Impact: The subject believes that the site could have significant income, and mostly needs to be marketed better. Most people in his region think of the British education system when they think of higher education, so he thinks an awareness campaign would be needed to make them think of MIT. He sees the single biggest limitation of the site being the level of detail of course materials. He believes that the more detailed the materials are made, the more effective and impactful the site will be.

Role: Self learner

Country: Ghana

Access: The subject is a Ghanaian aged 28 who hails from and lives in Accra. He attended some college/university and has been doing a lot of self-learning in the past few years. He is currently not in school. He researches and learns a lot of Computer Science and engineering material. The subject learned about Open Course Ware from an MIT graduate called 'Bunnie Rabbit'. He learnt about him through gametutorials.com where Bunnie had taken apart an XBOX. The subject tracked Bunnie's MIT webpage and learnt about OCW there. He has also seen references to OCW at the MSN community website and the computer geek community in Yahoo. He expects to see OCW being publicized in major Ghanaian websites and online communities that believe in OCW's potential. These include <http://www.ghanathink.org>, <http://www.ghanaweb.com>, <http://www.myjoyonline.com>, <http://www.twinux.org>. The subject is really enthused about OCW and has been publicizing it to everyone who cares to hear. He believes in its strength as a major educational tool and a great way to have access to the excellent material that MIT offers its students. Many of the people he sold the OCW initiative to have expressed similar sentiments. The subject usually accesses OCW from his laptop computer when he is in his office/home and from internet cafes around Ghana. There isn't a particular ISP that he uses. His web browser of choice is Netscape. His internet connection is LAN. He uses a computer that has Windows and Linux installed. Due to the infant nature of the Ghana IT sector coupled with inadequate resources, his internet connection is frequently slow. Hence, he finds it difficult to access OCW at many times. To trump this, he normally has to seek a better connection to be able to explore OCW. Also, accessing the PDF's at OCW required a number of browser plugins that make the information accessibility difficult. He hopes that the PDF's can be made downloadable in an easy way. The subject requested for the material to be made available on CD ROMS and other accessible formats for those who do not have readily available internet access and are not internet savvy. He feels various stakeholders who use the website would be willing to buy the material. He mentions that the course material can be distributed to interested parties who would pay for packaging and shipping. He suggests PowerPoint as a good format for lecture slides, etc.

Use: The subject uses OCW to self-learn courses, access reference educational materials, books, etc and staying abreast with current trends in technology. Most of the information he seeks are found on the website. The problems which arose while using the website depended on what kind of information he was searching for. He did not recount specific topics but basically, MIT's curriculum doesn't have everything a self-learner may want. However, the subject has always been satisfied with the outcome of his site visits. This is due to the fact that most of the information he needs is there and he always learns new things. He normally takes away lecture notes as a reference for a course/discipline. He also records various links and resources he comes across. He saves the browser pages to be able to access them offline. "I plan to follow a full MIT course", he says which keeps his urge to visit the website. He realizes that most of the courses are outdated, as in materials from previous academic years. He would very much like to see them updated and up to par. "The lecture notes and references to other educational materials are the most useful aspects of OCW," the subject states. OpenCourseWare must do away with any hindrances with respect to downloading material from its library of publications if it really means to make the information free, accessible and useful. He suggests making the course publications available offline as well. OCW is a pacesetter in the specific subject matter it covers. The material is great, understandable and thorough. He encourages that the website should review its course materials. The limitations in using OCW are much more prevalent in Ghana where the web and such technologies are not easily accessible. He thinks that OCW must make the PDFs viewable with a PDF viewer (such as Adobe Acrobat). The subject uses OCW to advance his personal and professional endeavors. He thinks OCW is great for professionals and workers trying to increase their knowledge base and making themselves more marketable. It helps him measure his knowledge state in particular disciplines. He has discussed the possibility of a Ghanaian tertiary institution (EMIT electronic institute) improving their curriculum based on OCW material. EMIT has no present infrastructure for OCW due to inadequate capital. "Make the material accessible offline!" PDFs are more secure as far as OCW material formats are concerned. His concern lies with the ability to download these materials.

Impact: The subject's business with OCW is strictly with self-learning. It has a lot of information that has broadened his academic scope and improved his learning techniques. "I am OCW's publicity in Ghana, we have to talk," he jokes. He is not really aware of the impact the website is having in Ghana. However, he can pinpoint one friend of his, Kojo as a testimony of OCW's impact. Open Course Ware has a lot of room for development that would make it more responsive to Ghanaian needs in general. Lately, he has researching neural networks in artificial intelligence which made him access neurology for better understanding. "OCW is not interactive, no feedback, nothing," he says. It would be cool to create a form of feedback system on curricula. The subject recommends OCW to students in higher learning and tertiary educators. He suggests that Open Course Ware should have affiliations with Ghanaian interest groups. It should also have information sessions in tertiary institutions. He mentions that people like him should be sponsored to publicize OCW and get feedback." He has shared many of the OCW materials with friends and has used them to engage with communities of learning.

Region: Eastern Europe

Role: Student

Country: Turkey

Access: The subject is a Mechanical Engineering graduate with an undergraduate degree in electrical engineering at a prominent technical university. He used dial-up to get to the site originally and has since gotten a cable modem. He reports PDFs are a "pain" to download and he rarely used the multimedia, and since getting cable he is using all the multimedia and MIT world. He is interested in Sloan content related to electrical markets and deregulation. He is also interested in marketing high tech products for the software business. He has e-mailed colleagues about the site. A professor at his university got his degree at MIT and is now dean of science and teaching letters? and encouraged the subject to visit the MIT site back in 1999. On a subsequent visit, the subject came across the link to OCW, and watched with great interest in the last few years as more and more courses appeared on the site. He appreciates the perspective of a different approach to teaching. He recommended the site to friends and classmates and knows of at least one friend who did visit the site. Open information sharing is of great interest to the subject.

Use: The subject was included on a committee dealing with the accreditation of his school of engineering and tried to get the committee to use the OCW site as a resource for curricular and pedagogical change, though he encountered a great deal of cultural resistance and ultimately the committee did not use the site. The school is starting to offer more classes in English and is changing its grading system to be more like the US model and not like the German model they have used before. The school ultimately adopted some changes that were intended to improve education--decreasing the number of classes, increasing the amount of testing, increasing the pace at which student were expected to learn. Students were not very successful at keeping up, faculty ended up spending extra time and nobody was pleased. Students began seeking instructors from whom they knew they could get a good grade. The subject suggested looking at OCW syllabi to see how you could teach at a fast pace successfully. The subject is very knowledgeable about the differences between his educational system and MIT's. In particular, he sees his classes as slow to start and poorly structured, lacking clear syllabi. Accreditation committees were not familiar with OCW. Lecture notes are most interesting to the subject because they provide a different approach to the subject, tied to real application. The subject stresses the importance of having a syllabus to define the steps to follow, information from which you can learn, and a way to check your learning. He is able to find complimentary materials in his library, though often has to request it through interlibrary loan, but the library has little interest in getting complementary material--the librarians are civil servants.

Impact: The subject sees tremendous impact coming from the site because books are hard to come by and the internet provides materials for free. Even when students can find books, they often can't afford them. A typical student works for about a dollar an hour, so a \$40.00 book is a week's wages. He'd like to see the site content released on CDs that could be copied.

Follow-up interviews

The interviews below follow up on interviews conducted during the 2003 program evaluation. Notes from both the 2003 interview and the 2004 follow up are included.

Role: Self learner

Country: Argentina

2003 Interview

Access: The subject is a recent graduate of the Baccalaureate of Engineering program at the University of Buenos Aires. He has been working for a Network and Telecom provider, Iplan Networks, since he completed the study portion of his degree. He will receive his Ing. EE degree officially early next year after the required period of work experience. He is a Traffic Engineer in

the telephone side but has also rotated through roles in the Network Operations center and Equipment groups since joining IPlan. He began using OCW in March of this year. He thought it was a very good idea but felt that at the time, there was lots of room for improvement. He perceived that there was lots of enthusiasm around the OCW mission but felt the early offering left a lot to be desired, particularly due to large gaps in content and variability in content completeness. He heard about OCW from his sister who is a librarian with a degree in Library Sciences. She emailed him a link suggesting he might find it useful given his professional focus. Knows about Uniersia as a consortium of Latin American Universities doing work similar to OCW. Was not aware that they had created translations of the MIT OCW content. Thinks that overall awareness of OCW in Argentina is still very low. LAN Access from work. Broadband access from his parent's house. No access from his apartment. Likes to surf OCW at the office where he arrives 30 mins early to do this. He sometimes spends time during his one hour lunch break surfing the web as well. In general, he doesn't surf from home since after spending a full workday working on a computer; he's not so keen to spend more time doing that. Has always found performance to be very good and could not recall any "glitches" with the site operation.

Use: The subject uses OCW to access information on specific topics he needs to learn about for work (even though his company does offer some formal training). He has also accessed other content such as Sloan Courses to broaden his knowledge around business and management topics. Recently, he has not been using OCW as much since he was married and "doesn't have much time for anything else". He has browsed OCW many times starting initially at the EECS area (due to his background, work requirements and MIT's reputation in this area). He doesn't like hardware so has focused more on networking, communications, computer programming and algorithms. Some of the browsing is directed based on specific work needs related to a change in assignment. He looked for some material in the Telephony/Interconnect areas but didn't find it - believes it is too specialized/probably falls in graduate level courses if at all. To accomplish his goal, he identifies materials of interest and then prints them out to give him maximum flexibility in terms of when he reviews them. He feels open sharing is very useful for Argentina. Access to this type of materials is very limited still for many and the Internet offers the opportunity to open it to many more (especially in a country where there is rapidly increasing access to the Web) Believes some teachers/investigators have relationships with MIT and many courses at Universities in Argentina use textbooks by MIT faculty (Oppenhiemers text, etc.). Using MIT quality materials is a step forward that can benefit many people in Argentina both faculty and students. He suggests that good drivers of use for OCW would be government education people plus faculty at key universities around the country. Likes use of PDFs. Would like to be able to download full courses and/or have easy to print versions.

Impact: The subject expects great impact - very positive but need to find more ways to make people in Argentina aware of it. Believes that impact for professional self-learners is very high. Also allows students to benchmark their experience against a recognized world leader, which can only lead to improvements in education in other countries. Impact is mainly impaired by incomplete course material (e.g. book references but not the underlying text which can be very hard to access in developing nations). He recommends that OCW have content be more MIT independent. Feels like the value would increase many fold if things like readings were included (even if just abstracted portions relevant for the course). For many, this is a huge barrier. Allow easier download of packages of course materials. Create more print-friendly versions of content. Try to make sure all labs etc. are complete (no dead end content). Look for ways to make content more appropriate for non-MIT consumers.

2004 Follow-up

Access: In the year since we've spoken to him, the subject indicates he's come to the site less frequently, in large part because his professional responsibilities have shifted away from technical issues toward administrative duties not addressed by OCW content (he's working with Argentinean regulatory issues, so a very specific field). He does still access the site for technical information occasionally. He mostly access lecture notes and handouts, especially where they are comprehensive. He has also examined materials from Sloan and Literature out of personal interest. Has not heard more about OCW in the media in the past year.

Use: As explained above, the subject continues to use the site primarily for self-learning, both relating to and independent of his profession. He finds the course materials to be uneven, especially where readings are concerned. He feels the value of the site would be vastly increased with the addition of full text readings. Interestingly, the subject says he gets the impression that many of the subjects are placed on the site more for internal use than external. He feels the schedules included are of little help to self-learners and that the courses would benefit from some sort of a self-learner's guide providing a method and timeline for approaching use of the material for self-study.

Impact: The subject indicates that his opinion of OCW has not changed since last year---he still thinks it is a great idea that will have a significant impact.

Role: Self learner
Country: Turkey

2003 Interview

Access: The subject is an undergraduate student at the Middle East Technology Institute in Ankara, Turkey. This is a/the premier, private technical university and is apparently fully accredited to US standards. He is in his first year as an undergraduate in Industrial Engineering (courses include general physics, chemistry, computer programming and calculus). His studies are conducted entirely in English as is apparently common in the leading private Universities in Turkey. His goal is to pursue an academic career but he realizes that professors are not well paid in Turkey. Plans to go overseas (to the US) for graduate studies. He went to a private high school and many of his fellow students went on to study in the US so he was very familiar with MIT before hearing about OCW. He first saw OCW prior to enrolling at METU. At the time, he was impressed with the materials and that they were free. However, he wasn't able to fully understand them and hence, wasn't able to make much use of them. However, he intended to start using them once he began his studies in Industrial Engineering. Read about OCW in a Turkish computer magazine - PC World in late 2002. Has subsequently seen it referenced in a number of other magazines. He has spoken about the site to various peers. He hasn't spoken about it with or heard about it from faculty at his school. He believes very few people have used it at his school. Believes that for students, they would not like to study seriously on-line, would rather browse for "fun". Since the majority of students in Turkey don't speak technical English, he doesn't believe it there would be widespread use, particularly among undergraduates. The subject reports using the site 6-10 times since last fall, but plans to continue to use it moving forward and as his studies progress, he believes he may use it more often. Accesses from University dormitory via high speed LAN. Feels the site is well designed, fast and easy to use. Teachers use laptops/projectors in classrooms. E-learning/distance learning based courses are under development and he expects to utilize some in future studies.

Use: His main mode of use is looking for materials to complement those for courses he's currently or about to take. He has reported mixed results so far but plans to persist. Prior to starting university, his challenge was a lack of background materials making it hard for him to understand/follow the course materials. Since starting university, his main challenge has been that some courses have very detailed course notes (making them easy to use) while others do not. Cited a task he tried where he was looking for calculus materials and the course didn't have many notes. It mainly listed reference reading that he was unable to access. He expressed surprise that the course appeared to be mostly taught from a textbook. Thought MIT courses would be more innovative in the things they taught. The open sharing model is very powerful to him as student in Turkey. However, the value is limited where users can't access the texts - which he believes would be the case at many of the public universities in Turkey. He believes the format of the materials is good but would like more course notes and reference extracts to allow him to follow more completely.

Impact: The subject sees OCW as a way to complement the fairly high quality materials he is already using at his university. Said that if he were at a public university, the MIT materials could be even more valuable but language would be more of an issue (his education is all conducted in English). His parting comment was a desire to keep in touch "...and my finals start next week, so I'll spend more time on OCW." He recommends that OCW continue to work on improving/completing courses and particularly course notes; make it clear what new courses are available; add excerpts from text books; add more "off topic"/background material. He liked one of the calculus courses having a comic strip in the material - makes it feel livelier. Add do-you-know and trivia sections.

2004 Follow-up

Access: The subject is now beginning his second year at METU, still pursuing Industrial Engineering. He's read a few small articles here and there regarding OCW but does not recall anything recent. He used the site somewhat during his first semester at METU, and more extensively during his second term. His first term was focused on introductory courses, so he mostly visited OCW to look at Calculus, Linear Algebra and Physics courses. In his second semester, he looked at courses more related to his field, as well as related Sloan courses. He has recommended the site to friends, but doesn't think any have visited the site. He states that he continues to access the site at least once a week, though he didn't visit during the summer. He is not aware of any faculty using the site. SiteWise indicates that 994 visitors have made 1427 visits from his school since Oct 1 03. He reports two technical issues: 1) He would prefer QuickTime or Windows Media Player to RealOne, as RealOne is not as widely used in Turkey. 2) He feels advanced search does not work well. Instruction at METU is in English, but he feels a wider impact for OCW in Turkey is limited by language, as most other schools do not teach in English.

Use: The subject identified three different ways that he uses the site: 1) To complement courses he is taking. In doing this, the subject indicates that he finds homework assignments and exam questions to be most helpful; he says lecture notes are not as helpful because most require you to have the course textbook to understand them sensibly. He has in some circumstances been successful at locating the textbooks listed, or ones similar enough to be useful. 2) To look ahead at subjects he will be studying soon. Intro materials (such as home page and syllabus) and lecture notes are of most help to him in doing this. 3) To

study subjects unrelated to his schooling. He notes that he's been able to self-learn a fair amount of Spanish from the site, in part due to videos that are very helpful in developing correct pronunciation.

Impact: He feels the site continues to have an impact on his educational experience and he plans to continue visiting the site, even after he graduates. He has been very pleased with the 2 major additions of courses to the publication (the spring and fall 04 publications). He feels that most courses are graduate, though, and would like to see more undergraduate courses.

Appendix 6
OCW MIT Student Survey

Email Text

Dear [Name]:

As you may know MIT OpenCourseWare is a free and open publication of teaching materials from MIT classes, available to anyone with access to the internet. OCW is approaching the halfway point to our goal of publishing materials from virtually all of MIT's courses. We would like to insure that OCW is a valuable resource for members of the MIT community, and your participation in this short survey will help us achieve that goal. This is a programmed survey that will take you to appropriate questions based on your preceding answers.

The survey is anonymous unless you voluntarily choose to provide your email address for a possible follow-up evaluation contact. We genuinely appreciate your taking the time to complete this survey. Your input will help to make OCW a success.

To proceed with the survey, please click on the link below or point your browser to it.

Sincerely,

[\[Survey URL\]](#)



[Welcome Message and Instructions]

Welcome to the OCW Student Survey! Your feedback will help us make improvements to MIT OpenCourseWare.

INSTRUCTIONS: Click the Continue button below to begin. Answer each question, and click the next button to proceed through the survey. Please do not close the survey window. If you inadvertently close it, you can restart the survey by clicking on the link in the original email survey information.

[Goodbye Message]

We appreciate your taking the time to complete this survey. Please feel free to provide us with any additional thoughts by clicking on the "Feedback" button that appears on OCW, or through the Contact Us link.

DEMOGRAPHICS

1. Which of the following is your major field of study?
 - 1.a Course 1
 - 1.b Course 2
 - 1.c Course 3
 - 1.e Course 4
 - 1.f Course 5
 - 1.g Course 6
 - 1.h Course 7
 - 1.i Course 8
 - 1.j Course 9
 - 1.k Course 10
 - 1.l Course 11
 - 1.m Course 12
 - 1.n Course 13
 - 1.o Course 14
 - 1.p Course 15
 - 1.q Course 16
 - 1.r Course 17
 - 1.s Course 18
 - 1.t Course 21A
 - 1.u Course 21F
 - 1.v Course 21H
 - 1.w Course 21L
 - 1.x Course 21M
 - 1.y Course 21W
 - 1.z Course 22
 - 1.aa Course 24
 - 1.bb Course BEH
 - 1.cc Course CMS
 - 1.dd Course ESD
 - 1.ee Course HST
 - 1.ff Course MAS
 - 1.gg Course SP
 - 1.hh Course STS

Research logic

Go to Question 2

2. Please indicate your class rank.
 - 2.a Undergraduate
 - 2.b Graduate

Research logic

Go to Question 3

ACCESS

3. Are you aware of the MIT OpenCourseWare web site?
 - 3.a Yes
 - 3.b No

Research logic

If 3.a go to Question 4, else go to Question 15.

4. How did you become aware of the MIT OpenCourseWare web site?
 - 4.a peer
 - 4.b teacher
 - 4.c offline media (newspaper, magazine, television, radio)
 - 4.d online media (online news article, link, search engine)
 - 4.e materials you received from MIT/the MIT web site

Research logic
Go to Question 5

-
5. How often do you visit the OCW Web site?
- 5.a Daily
 - 5.b Weekly
 - 5.c Monthly
 - 5.d Occasionally (less than once a month)
 - 5.e Never

Research logic
If 5.e go to Question 15, else go to Question 6

-
6. Have you recommended the OCW site to any of the following?
- 6.a Other students
 - 6.b Instructors
 - 6.c Professional associates
 - 6.d Family/friends
 - 6.e Other

Research logic
Go to Question 7

USE

7. Which of the following best describe ways that you use the MIT OpenCourseWare site? (check all that apply)
- 7.a learning about subject matter to complement a course I am taking
 - 7.b learning about subject matter for personal knowledge beyond materials covered in courses I take
 - 7.c reviewing materials from courses I've completed previously
 - 7.d planning my course of study/deciding what subjects to register for
 - 7.e other. Please specify: _____

Research logic
Go to Question 8

-
8. Please select the THREE types of materials that were most important to the completion of your objectives in using the OCW site.
- 8.a Syllabi
 - 8.b Calendars
 - 8.c Reading citations
 - 8.d Full text readings
 - 8.e Lecture notes
 - 8.f Lecture videos
 - 8.g Assignments
 - 8.h Assignment Solutions
 - 8.i Exams
 - 8.j Exam Solutions
 - 8.k Projects
 - 8.l Labs
 - 8.m Tools (e.g. simulations, animations, example code)
 - 8.n Related Links
 - 8.o Study Materials
 - 8.p Other. Please specify: _____

Research logic
Go to Question 9

-
9. Please rate your satisfaction with each of the following:

- (Very Satisfied, Satisfied, Neutral, Unsatisfied, Very unsatisfied)
- 9.a Organization of the OCW web site
 - 9.b Visual design or presentation of the OCW web site
 - 9.c Performance of the web site (e.g., errors, responsiveness/speed, etc.)
 - 9.d Subject matter and course areas covered on the OCW web site
 - 9.e Types of course materials available for specific courses
 - 9.f Quality or nature of the course materials provided for specific courses

Research logic
[Go to Question 10](#)

10. What is most interesting and useful to you on OCW?
 FREE TEXT _____

Research logic
[Go to Question 11](#)

11. What is least interesting and useful to you on OCW?
 FREE TEXT _____

Research logic
[Go to Question 12](#)

12. Please describe what you would change to improve the usefulness and value of OCW.
 FREE TEXT _____

Research logic
[Go to Question 13](#)

IMPACT

13. We are eager to understand the impact of OCW and the difference it makes for the MIT students who access it. Please indicate the degree of positive impact that the OCW Web site has already had, or that you expect it to have, on your educational experience at MIT.
- 13.a 5: Extremely positive impact
 - 13.b 4: Positive impact
 - 13.c 3: Moderately positive impact
 - 13.d 2: Somewhat positive impact
 - 13.e 1: No positive impact

Research logic
[Go to Question 14](#)

14. Please explain your rating. Be specific—elaborate on the impact OCW has had on you.
 FREE TEXT: _____

Research logic
[Go to Question 15](#)

PARTICIPATION

15. Please rate your agreement or disagreement with the following statement
 (Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree)
- 17.a I feel comfortable sharing my own original academic work on-line

Research logic
[If 3.b END, else go to Question 16](#)

16. Have you participated in the publication of course materials through OCW in any of the following ways? (check all that apply)
- 18.a I have contributed my own original academic work (e.g., a paper or project)

18.b I am working/have worked with the OCW staff to capture notes/materials from a class

18.c I have encouraged peers/faculty to publish course materials using OCW

18.d Other. Please specify: _____

Research logic

If 16.a or 16.b or 16.c or 16.d go to Question 17, else END

17. Please rate your agreement or disagreement with each of the following statements as they apply to the OCW web site and/or course materials.

(Strongly Agree; Agree; Neutral; Disagree; Strongly Disagree)

19.a Contributing my work to OCW is easy and straightforward

19.c The OCW staff is responsive and helpful

19.d The OCW site is useful to students

19.e I am satisfied with OCW

Research logic

Go to Question 18

18. May we contact you regarding the following? (Check all that apply)

18.a helping OCW to capture notes/materials from MIT classes

18.b participating in follow-up interviews and/or focus groups

18.c employment opportunities at OCW for recent graduates

Research logic

If 19.a and/or 19.b and/or 19.c go to Question 19, else END

19. Please provide your e-mail address in the space below.

FREE TEXT: _____

END