HARVARDX: YEAR IN REVIEW
2013-2014
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HarvardX is a University-wide strategic initiative, overseen by the Office of the Vice Provost for Advances in Learning, to enable faculty to build and create open online learning experiences (free, low-touch, high-touch) for residential and online use, and to enable groundbreaking research in online pedagogies.

THE THREE GOALS OF HARVARDX ARE TO:

1. EXPAND access to education worldwide
2. IMPROVE teaching and learning on campus
3. ADVANCE our understanding of teaching and learning through research

HarvardX is committed to developing organic collaborations with related programs and offices directed at promoting innovation, convening best practices, and leading in learning.

HARVARDX BY THE NUMBERS (AS OF JUNE 2014):

Harvard faculty supported (as project leads): 66 from 10 schools

- Open courses/modules published to date: 45
- SPOCs produced: 5
- Blended courses: 6
- Course versions: up to 3
- Projects in planning: 37 (involving 47 lead faculty)

Enrollments: 1.3M+ (out of approximately 3M on edX)

- Percent of registrants from outside of the U.S.: 63%

Learning & research core team FTEs: 33

- Additional University contributors: 100+
UPDATES / EXECUTIVE SUMMARY

MEETING OUR GOALS OF EXPANDING ACCESS, IMPROVING TEACHING, AND ADVANCING RESEARCH

- Produced 45 HarvardX learning experiences (more than 1 million global students engaged) representing diverse topics from 10 different Harvard schools and built cross-University tools to support digital annotation and manipulation of materials from Harvard’s museums and libraries.

- Participated in a Bok Center-led study of 6 residential blended College & School of Public Health classes using HarvardX content; created new beta tools (annotation, library image viewer) for potential use on campus; and hosted Radcliffe faculty seminar on online and residential education.

- Produced the Harvard-MIT working papers on MOOC learner profiles, corresponding data visualization tools, and released de-identified datasets.

STRENGTHENING AND EVOLVING OUR ORGANIZATION

- Developed and implemented an 8 point plan to guide the maturation of the organization, promote internal communication, and assure that shared objectives were met.

- Filled key leadership roles, including Samantha Earp as Executive Director of HarvardX; Annie Valva as Associate Director, Instructional Development; and Rebecca Petersen as Senior Research Manager.

- Completed an organizational recalibration and new set of rationalized processes and policies based upon changing faculty and institutional needs.

SUSTAINING THE EDUCATIONAL MISSION

- Ran revenue experiments (value added services, verified certificates, and licensing) and developed a robust future revenue framework.

- Crafted and carried out a fundraising and engagement strategy to support innovation in teaching and learning.
SHARING BEST PRACTICES AND ENGAGING IN OUTREACH

- **Hosted over 20 visitors and delegations from institutions** of higher learning, governmental offices, and companies

- Presented and published major findings, shared best practices, and hosted internal and external workshops on the future of learning.


INVESTING IN STRATEGIC PRIORITIES

- Looking ahead to build an enterprise capable of…
  
  » **ENHANCING** capacity to support more faculty in more ways through emerging efforts such as a revised letter of interest strategy and Faculty Academy.

  » **MODULARIZING** HarvardX learning experiences (both open and revenue-generating);

  » **SUPPORTING** school-specific priorities (especially related to the development of new online and hybrid academic programs); and

  » **BENEFITTING** the local Allston community, in particular, and running experimental programs suited to particular key audiences such as alumni and professionals.

APPENDIX

- Leadership & Staff

- HarvardX Course List
Upon the creation of edX in May 2012, founding partners Harvard and MIT identified three primary goals: Expand access to education worldwide; improve teaching and learning on campus; and advance our understanding of teaching and learning through research.

HarvardX, the University’s strategic initiative to advance learning through technology launched in tandem with edX, embraces those same goals, but carries them out with the aim of meeting institutional priorities, with particular focus on the residential educational experience.

Distinct from other online learning endeavors, HarvardX offerings cover the spectrum of disciplines and fields taught at Harvard, ranging from History, Law, and Literature to Neuroscience, Global Health, and Quantum Mechanics.

Moreover, among peer institutions, HarvardX has helped to further position Harvard as a leader and model for experimental and innovative education both online and in the classroom. After just two years, among its peers HarvardX now boasts the highest number of online learning experiences and the greatest variety of intellectual content.
EXPAND ACCESS TO EDUCATION WORLDWIDE

- 45 learning experiences (including some version 2.0s) have launched or will soon launch. HarvardX courses account for 1.3 million enrollments from 195 countries.
- HarvardX accounts for roughly 1/2 of all edX learner participation.
- HarvardX has future plans to offer fully translated courses on global platforms such as Xuetang (China) and Edraak (Middle East).

IMPROVE TEACHING AND LEARNING ON CAMPUS

- Led by the Bok Center for Teaching and Learning and using online content developed through HarvardX, 4 blended College courses and 2 professional courses at the School of Public Health were analyzed with the aim of identifying effective implementation techniques.
- HarvardX used MOOCs as an opportunity to create new ancillary materials such as campus e-study guides, as in the case of “Science and Cooking.”
- Through town halls (3 across campus this year alone attended by nearly 500), lunches, workshops, and conferences HarvardX has provided opportunities for faculty to convene and share best practices.

ADVANCE OUR UNDERSTANDING OF TEACHING AND LEARNING THROUGH RESEARCH

- In January 2014 researchers from HarvardX co-led the release of the Harvard-MIT working papers, a series of reports based on 17 courses and data from 800,000 global edX learners; and subsequently announced the creation of a suite of digital visualization tools (February) and the development of best practices on how to de-identify online learner data (May).
- The HarvardX research team hosted joint weekly work sessions with the MIT-Harvard research teams sharing updates on a wide variety of topics, from completion rates to engagement.
- In partnership with the course development teams, researchers enabled the first formal edX A/B experiments in HarvardX courses.

- HarvardX has built and is refining new teaching technologies such as an annotation tool that allows students to live comment on text, video, and documents.
STRENGTHENING AND EVOLVING OUR ORGANIZATION

In the summer of 2013, the HarvardX leadership developed an 8 Point Plan to help guide its organizational evolution, moving from a start-up (with 2 FTEs) to a more mature entity (now with over 30 FTEs, and involving more than 100 participants across Harvard).

In 2013-2014, a particular aim was to “stand up” the organization to best support the needs and expectations of faculty and deans. Based upon what had been learned through the initial creation of online learning experiences, the corollary goal was to implement more formal processes and procedures to create greater efficiencies, spur collaboration, and align the organization with institutional priorities (including those in the Campaign for Harvard.)

Leadership also stabilized in the past year. Samantha Earp was named Executive Director of HarvardX; Annie Valva was appointed Associate Director, Instructional Development; and Rebecca Petersen will join in July as Senior Research Manager. HarvardX faculty director Rob Lue continues to focus on thoughtful faculty engagement and convening related teaching innovation efforts with over-arching direction from Peter Bol, the recently appointed Vice Provost for Advances in Learning.

KEY TAKEAWAYS FROM THE HARVARD-MIT WORKING PAPERS
(JANUARY 2014)

Based upon the data of 800,000 global edX learners...

1 500,000 (number of edX learners)

- Course completion rates, often seen as a bellwether for MOOCs, can be misleading and may at times be counterproductive indicators of the impact and potential of open online courses.
- Most MOOC attrition happened after students first registered for a course. On average, 50 percent of people left within a week or two of enrolling. After that window, attrition rates decreased substantially. The average probability of a student ceasing to engage in the second week of the course declined to 16 percent.
- Given the scale of some MOOCs, small percentages are often still large numbers of students — and signify a potentially large impact.
ENHANCE THE PLATFORM

» Joined together Black Pearl and the iCommons group to stand up the Teaching and Learning Technologies program, a Harvard IT strategic initiative to provide a set of core technologies to support teaching and learning which can be extended through custom component development and which will give us the ability to extract data across courses for educational research.

» Identified Canvas as Harvard’s next generation Learning Management System (primarily for campus use) and began working with Instructure on select tools, including annotation, for seamless integration into the edX platform.

BUILD A HARVARD ONLINE LEARNING PORTAL

» Worked with vendor Genuine Interactive to design and develop “Harvard Online Learning”—a website to act as a gateway for the public to gain access to Harvard’s extensive online learning resources which will have a soft launch in Fall, 2014.

» Collaborated with groups across campus (including DCE, the libraries, School executive education programs, etc.) to aggregate content for Harvard Online Learning.

ELEVATE AND EMPHASIZE EDUCATIONAL RESEARCH

» Ramped up research team at HarvardX, coordinated efforts with Harvard Initiative for Learning and Teaching (HILT) and Bok, and helped to shape the agenda at edX with regards to research and data.

CONDUCT REVENUE EXPERIMENTS

» Offered CS50x in multiple formats to test the strategy of value-added fees. Students could take CS50x for free online at edX.org, receive an identify-verified certificate from edX for a small fee, attempt a HarvardX/Harvard DCE certificate with additional faculty support for $350 or pursue full Harvard DCE credit for $2050.

» Piloted licensing agreements with the Queen Rania Foundation for the Edraak platform and Xuetang for use of HarvardX content on the Open EdX platform in Arabic and Chinese (respectively).

EXPAND FUNDRAISING EFFORTS

» Implemented a donation mechanism on the HarvardX website and tested the opportunity for online philanthropy by including a link in the footer of one course’s weekly emails.

» Worked closely with the University Development Office and HBX to refine the HarvardX sustainability narrative.

» Secured $15 million in donations (including pledges); continued to develop gift opportunities and think creatively about donor recognition (for example, including “made possible by” video bumpers like Masterpiece Theater).
INTEGRATE COMMUNICATIONS

» Established a “central” narrative about HarvardX/advancing teaching and learning used by leadership for the purpose of internal and external visibility and fundraising.

» Created consistency in internal communications and branding; worked with the schools on mutual marketing campaigns; integrated overarching themes from the office of the Vice Provost for Advances in Learning (VPAL).

REAFFIRM THE HARVARD AND MIT PARTNERSHIP

» Began hosting quarterly meeting of Boston area x-universities to share knowledge, develop best practices and coordinate needs.


» Released joint research in collaboration with MIT/MITx.

STAND UP COLLABORATIVE ORGANIZATION AT 125 MT. AUBURN

» Moved into and built out a designated space on the 4th floor of 125 Mt. Auburn housing HarvardX and HILT. Groups from the Bok Center for Teaching and Learning, CS50, DCE and the Teaching and Learning Technologies program also took up residence in the building, allowing for easier collaboration.

» Recalibrated the HarvardX organization to better align with the needs of our work and ensure opportunities for professional growth within HarvardX.

HAUSER DIGITAL TEACHING AND LEARNING STUDIO OPENS

The studio, made possible with support from Gustave (Gus) LLB ’53 and Rita HLS ’58 Hauser, is part of the new and evolving University-wide infrastructure that enables faculty experimentation with technology.

Situated on the ground floor of Widener Library, the facility features a three-sided, floor to ceiling “green screen” cyc wall; two sets of three cameras that accommodate both cinema and live television applications, a multi-channel live switcher capable of live streaming productions in real-time, and energy conscious LED light fixtures.
SUSTAINING THE EDUCATIONAL MISSION

HarvardX is committed to achieving long-term financial sustainability, providing support for ongoing faculty innovation.

To that end, HarvardX is engaging in revenue experiments and philanthropy as part of the University’s priority to remain a leader in learning.

EXPANDING LEARNER CHOICES
In addition to expanding open access to Harvard’s intellectual resources and offering ways to enhance the residential experience, HarvardX is responding to interest by individual learners, institutions, and Harvard’s schools for additional opportunities, such as...

1. VALUE-ADDED SERVICES // Additional fee-based special services (e.g., certificates and tutoring) and high-touch enhancements to the basic, free course offering.

2. SUBSCRIPTION MODELS // Bundled services (above) with every course, at a reduced price.

3. CONTENT LICENSES // Annual fee paid by foundations, NGOs, and educational institutions to use and adapt course content.

REVENUE EXPERIMENTS IN PROCESS

• Offered new ways for learners and institutions to engage with open content (value added services, subscription, and content licensing)
• Ran revenue experiments (certificates, institutional licenses)
• Evaluated HarvardX learners with the aim of better understanding their goals, Intentions, and needs

HARVARDX LEARNER PROFILES
While one-third of those taking HarvardX courses are doing so out of intellectual interest alone, others are seeking professional advancement or training and support.

<table>
<thead>
<tr>
<th>LifeLong Learners</th>
<th>30%</th>
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<tbody>
<tr>
<td>Adults with college degrees pursuing personal interests</td>
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<tr>
<th>Instrumental Learners</th>
<th>15%</th>
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<tr>
<td>Adults (often with degrees) taking courses for career advancement</td>
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</table>

<table>
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<tr>
<th>High School Students</th>
<th>3%</th>
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<tbody>
<tr>
<td>Primarily homeschoolers and independent learners</td>
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<table>
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<tr>
<th>Student Co-Learners</th>
<th>11%</th>
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<tbody>
<tr>
<td>Enrolled college/graduate students who are taking our courses as supplementary instruction</td>
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<table>
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<tr>
<th>Teachers/Researchers</th>
<th>8%</th>
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<tr>
<td>Established educators or researchers taking our courses to enhance their teaching or extend their knowledge</td>
<td></td>
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</table>

33% Chose not to self-identify

HIGH SCHOOL STUDENTS
3% Primarily homeschoolers and independent learners
ONE-CLICK TO LEARNING

EdX is a crucial platform for Harvard and its schools to deliver HarvardX open online learning content. In addition to edX, faculty host content on a wide variety of channels. To debut in the fall of 2014, Harvard Online Learning will provide a gateway for the public to gain access to Harvard’s extensive digital learning resources (from iTunes to SoundCloud to HarvardX). The project is sponsored by the Office of the Provost and falls under the auspices of the Office of the Vice Provost for Advances in Learning.
SHARING BEST PRACTICES & OUTREACH

Both on-campus and around the world, HarvardX shares best practices by hosting visitors, offering presentations, publications, and talks, and engaging with the media. Below are some select examples of outreach over the past academic year.

VISITORS TO HARVARDX

» Sang-Mook Lee, Associate Professor, Seoul National University
» Student group from Jinghua (20+ 8th graders)
» Luis Alberto Montero Cabrera, Professor of Chemistry, University of Havana
» Central Student Council of Delft University of Technology (8 undergrad & grad students)
» In Kook Park, President, Korea Foundation for Advanced Studies
» Open Lecture Live group (Korea)
» Sofie Carsten Nielsen, Minister for Higher Education and Science, Denmark
» SURF, Dutch Open Education Study Trip
» LaunchCode
» Australian National University
» Olaf Schulte, Video Production Lead, ETH Zurich
» Albert Einstein Distinguished Education Program (through the Marshal’s office)
» Karolinska Institutet, Sweden
» Khon Kaen University, Thailand
» Columbia University Center for New Media Teaching & Learning
» Representatives from the National Univeristy of Mongolia and the Mongolian Ministry of Education and Science
» ESSEC Business School, France
» University of Botswana

SELECT PRESENTATIONS AND TALKS

HarvardX Town Halls (Cambridge, Longwood, and Allston/Harvard Business School)
The First Year of HarvardX with Justin Reich (Graduate School of Education)
Global Learning event with Peter Bol and Rob Lue (Goldman Sachs & Faculty of Arts and Sciences)
Harvard Thinks Big with Rob Lue (Harvard College)
Online Learning Summit, Year 2 (Stanford University)
edX Global Conference (TU Delft)
Thinking with Your Eyes: Visualizing the Arts, Humanities, and Sciences (Digital Futures Consortium at Harvard)
Launch of HarvardX for Alumni (HAA Annual Meeting)
MAKING A LOCAL IMPACT / EXPERIMENTS AND SPECIAL PROJECTS

In partnerships with groups such as the Harvard Alumni Association and Harvard Allston Education Portal, HarvardX co-developed and ran several experimental programs last year. The goal was to learn from them and find ways to move forward to ensure that HarvardX engages not just on-campus and on-line, but is deeply connected to the surrounding communities, from residents to alumni to parents.

HarvardX for Allston

HarvardX for Allston brings HarvardX content to the Allston-Brighton community and general public by offering programs that integrate the latest in virtual education technologies with opportunities for face-to-face interactions and discussion. The nascent endeavor is part of the University’s community benefits program for the Allston-Brighton community in association with the institutional master plan for Harvard’s campus development in Allston. Over the past year, through three faculty led events and staff-led training activities, HarvardX for Allston engaged more than 500 individuals both in-place and online.

HarvardX for Alumni

HarvardX for Alumni is an exclusive, experimental online learning experience that provides a meaningful way for alumni to engage with and share the intellectual riches of the University while building and strengthening connections to Harvard and each other. In total 20,000 alumni registered for the program (of which 11,265 enrolled) and around 1,000 participants were actively engaged each week, with segments ranging from a conversation with President Faust to “Fundamentals of Neuroscience” to the “Ancient Greek Hero” to “Tangible Things”.

SELECT RESEARCH PAPERS


MEDIA HIGHLIGHTS

Harvard Goes All In For Online Education (Boston Globe, May 18, 2014)

Harvard is Teaching the Chinese Their Own History (Quartz, April 20, 2014)

8 Things You Should Know About MOOCs (Chronicle of Higher Education, June 13, 2014)


Ten Courses With a Twist (New York Times, April 8, 2014)

How St. Louis is solving the programmer shortage one Harvard course at a time (IT World, March 11, 2014)

Moocs: Learning becomes a joy again (Financial Times, March 9, 2014)


INVESTING IN STRATEGIC PRIORITIES

In the coming year, the priority for HarvardX is centered around better supporting faculty and the schools and their decanal priorities — and to do so in a sustainable manner. The past two years at HarvardX, its start-up phase, have provided an opportunity for experimentation and learning. Based upon such lessons, outlined in part by Provost Alan Garber, HarvardX will be positioned to move forward in a smart, yet bold manner.

MODULARIZING HARVARDX LEARNING EXPERIENCES (BOTH OPEN AND REVENUE-GENERATING)

HarvardX learning experiences are developed to serve a continuum of offerings from open, self-sustaining modules to high touch, fee-for-service credit-bearing courses. While its roster primarily consists of “courses,” in the coming months and years, HarvardX will emphasize modules (learning units of various lengths), clusters (groups of related learning units), and related learning objects (tools and platforms). Doing so will allow greater choice for online learners and easier integration of content into residential classrooms.
SUPPORTING SCHOOL PRIORITIES

HarvardX will further help Schools develop and present premiere online learning experiences and be a connector to reimagine and repurpose content through, for example, the Division of Continuing Education. Already, the School of Public Health is considering using its HarvardX materials to form the basis for a new hybrid degree program and the Graduate School of Education is producing content that caters to professional educators with the aim of furthering its mission to promote evidence-based practice that informs policy and methodology.

BUILDING HARVARDX CAPACITY TO BEST SERVE FACULTY

Through June 2015, HarvardX plans to operate at a capacity of 40 concurrent learning projects (including initial and subsequent iterations of courses and modules).

In late May, HarvardX launched a new faculty proposal process. The aim is to enable faculty to engage with the team from the start to develop a course or module proposal and understand the work required before submitting a complete proposal to the HarvardX Faculty Committee. Proposals will be considered on a quarterly basis.

The Advances in Learning Office has also partnered with the Derek Bok Center for Teaching and Learning and HarvardX to run a small pilot program called the Faculty Academy, a monthly intensive workshop to provide 6 faculty with a half day of hands-on experimentation and expert guidance in emerging pedagogies and tools for use on-campus and online.

PRIMARY LEADERSHIP & STAFF

Peter Bol, Vice Provost for Advances in Learning; Carswell Professor of East Asian Languages Civilization; Director of the Center for Geographic Analysis

Samantha Earp, Executive Director, HarvardX

Andrew Dean Ho, Co-Chair, HarvardX Research Committee; Associate Professor of Education, Harvard Graduate School of Education

Dan Levy, Co-Chair, HarvardX Research Committee; Senior Lecturer in Public Policy, Harvard Kennedy School; Faculty Chair, SLATE, Harvard Kennedy School

Robert A. Lue, Faculty Director, HarvardX; Professor of the Practice of Molecular and Cellular Biology; Director of Life Sciences Education; Richard L. Menschel Faculty Director of the Derek Bok Center for Teaching and Learning
## SELECT COURSES FOR 2013-2014

HarvardX offers courses across the spectrum of disciplines and fields taught at Harvard, ranging from History, Law, and Literature to Neuroscience, Global Health, and Quantum Mechanics. ([Click here](#) for more information)

<table>
<thead>
<tr>
<th>HUMANITIES</th>
<th>EDUCATION</th>
<th>SOCIAL SCIENCES</th>
<th>SCIENCE &amp; ENGINEERING</th>
<th>HEALTH &amp; MEDICINE</th>
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<tbody>
<tr>
<td>SW12.4X: CHINA (PART 4): A NEW NATIONAL CULTURE</td>
<td><strong>AI12.2X: POETRY IN AMERICA: WHITMAN</strong></td>
<td>HLS1X: COPYRIGHTX</td>
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<td>USW30X: TANGIBLE THINGS: DISCOVERING HISTORY THROUGH ARTWORKS, ARTIFACTS, SCIENTIFIC SPECIMENS, AND THE STUFF AROUND YOU</td>
<td>HAA1X: HARVARDX FOR ALUMNI</td>
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<td>GSE1X: UNLOCKING THE IMMUNITY TO CHANGE: A NEW APPROACH TO PERSONAL IMPROVEMENT</td>
<td>SW12.3X: CHINA (PART 3): COSMOPOLITAN TANG: ARISTOCRATIC CULTURE</td>
<td><strong>ER22.1X: JUSTICE</strong></td>
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<td>MCB80.1X: FUNDAMENTALS OF NEUROSCIENCE, PART I</td>
<td>PH525X: DATA ANALYSIS FOR GENOMICS</td>
<td>SPU27X: SCIENCE &amp; COOKING: FROM HAUTE CUISINE TO SOFT MATTER SCIENCE</td>
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<td>SW25X: GLOBAL HEALTH: CASE STUDIES FROM A BIOSOCIAL PERSPECTIVE</td>
<td>BUS5.1X: INNOVATING IN HEALTH CARE</td>
<td>CS50X: INTRODUCTION TO COMPUTER SCIENCE</td>
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<td>PH210X: UNITED STATES HEALTH POLICY</td>
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