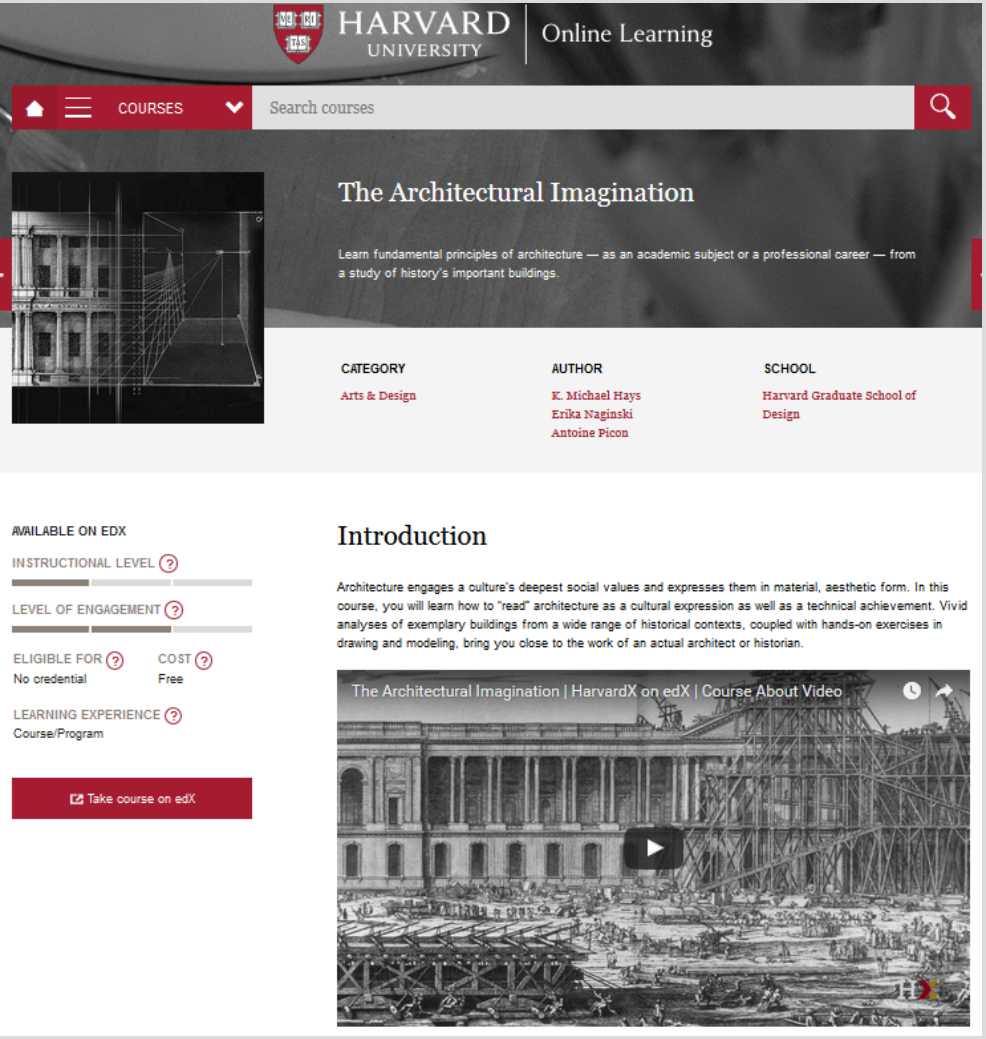
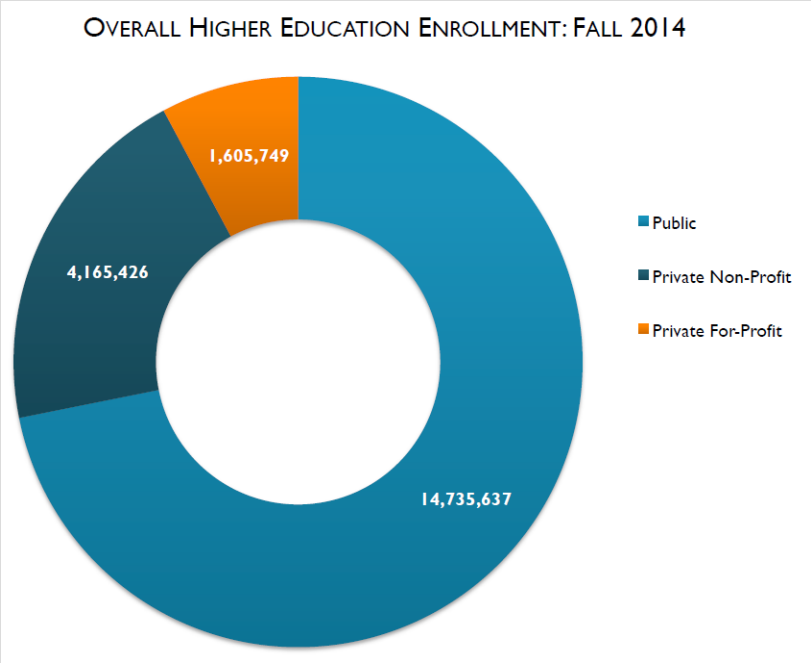
Lessons from HarvardX
哈佛x平台經驗分享



US higher education

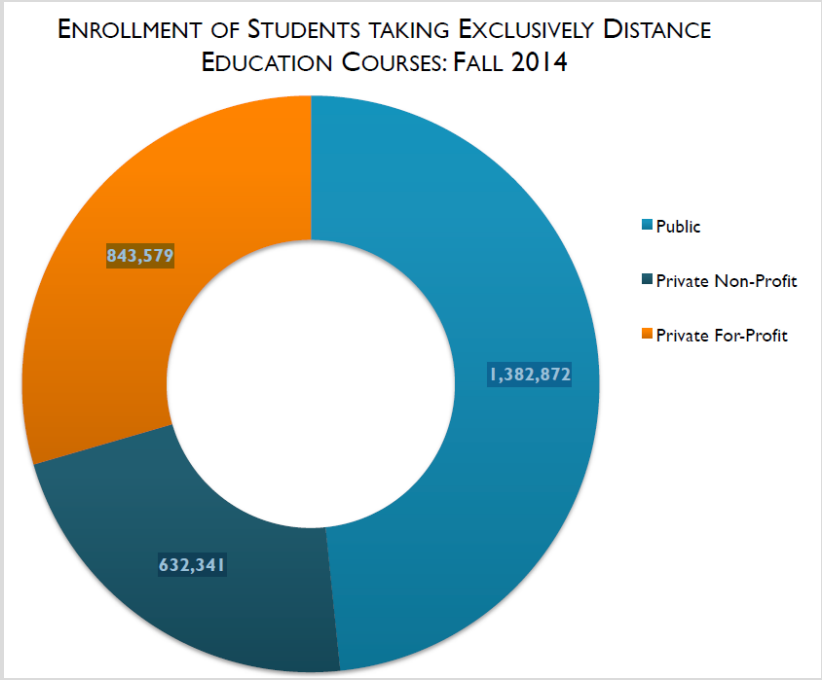
Total Enrollments

~21 million

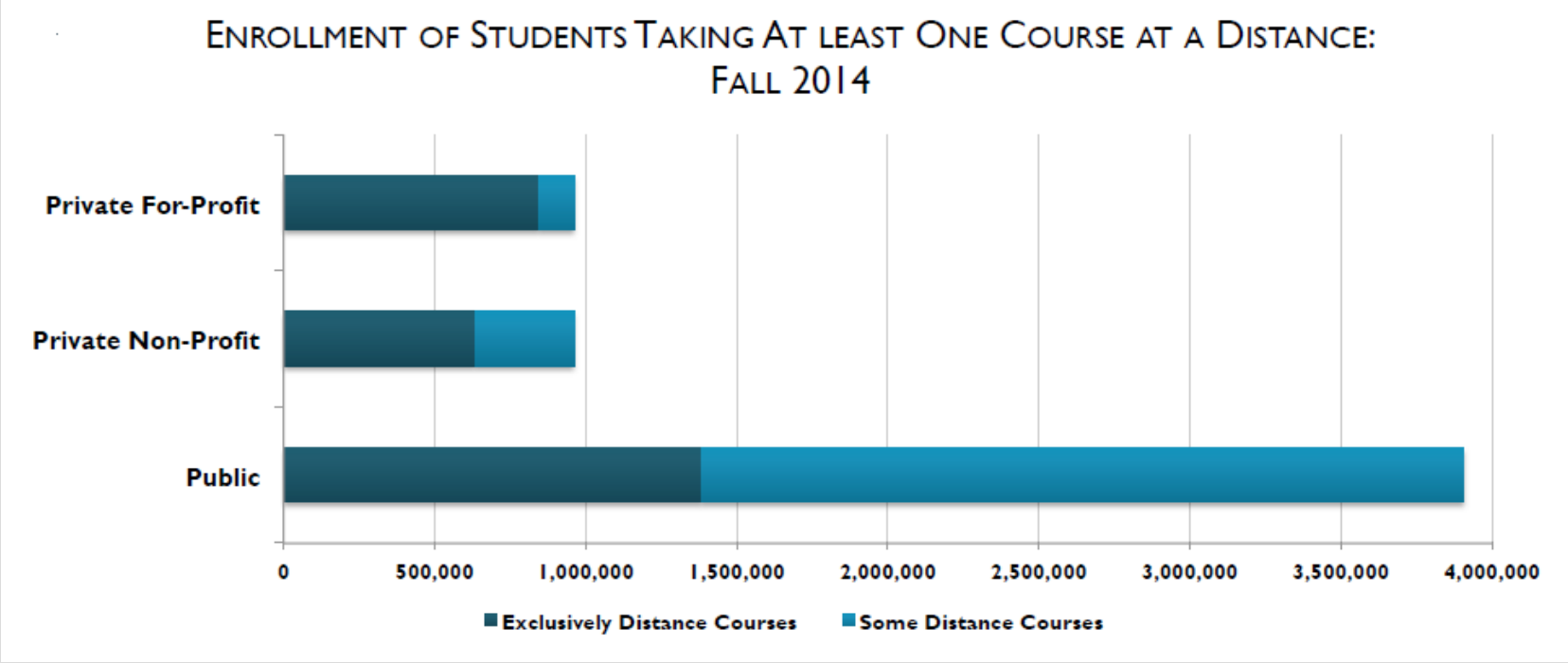


Distance Only Enrollments

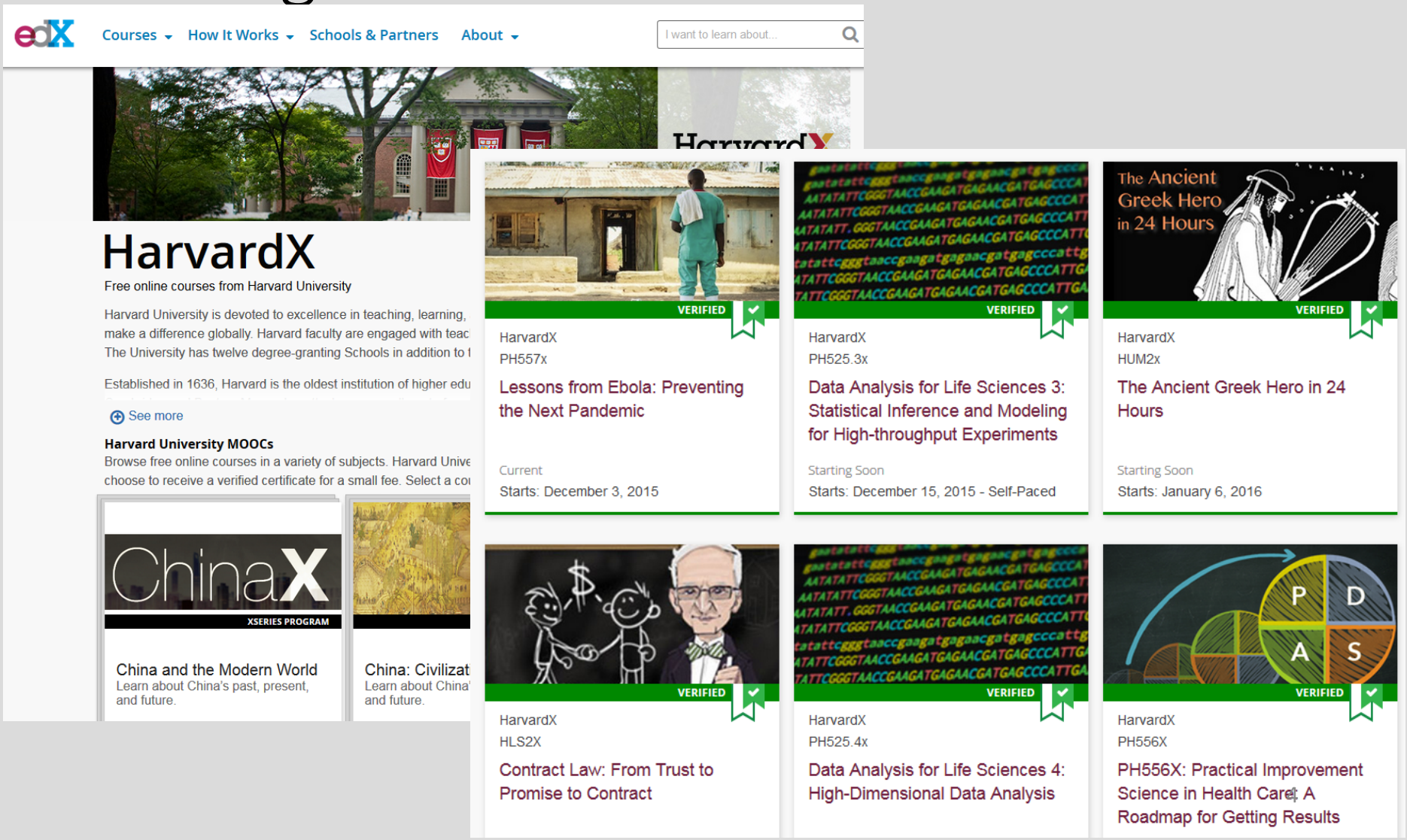
~3 million

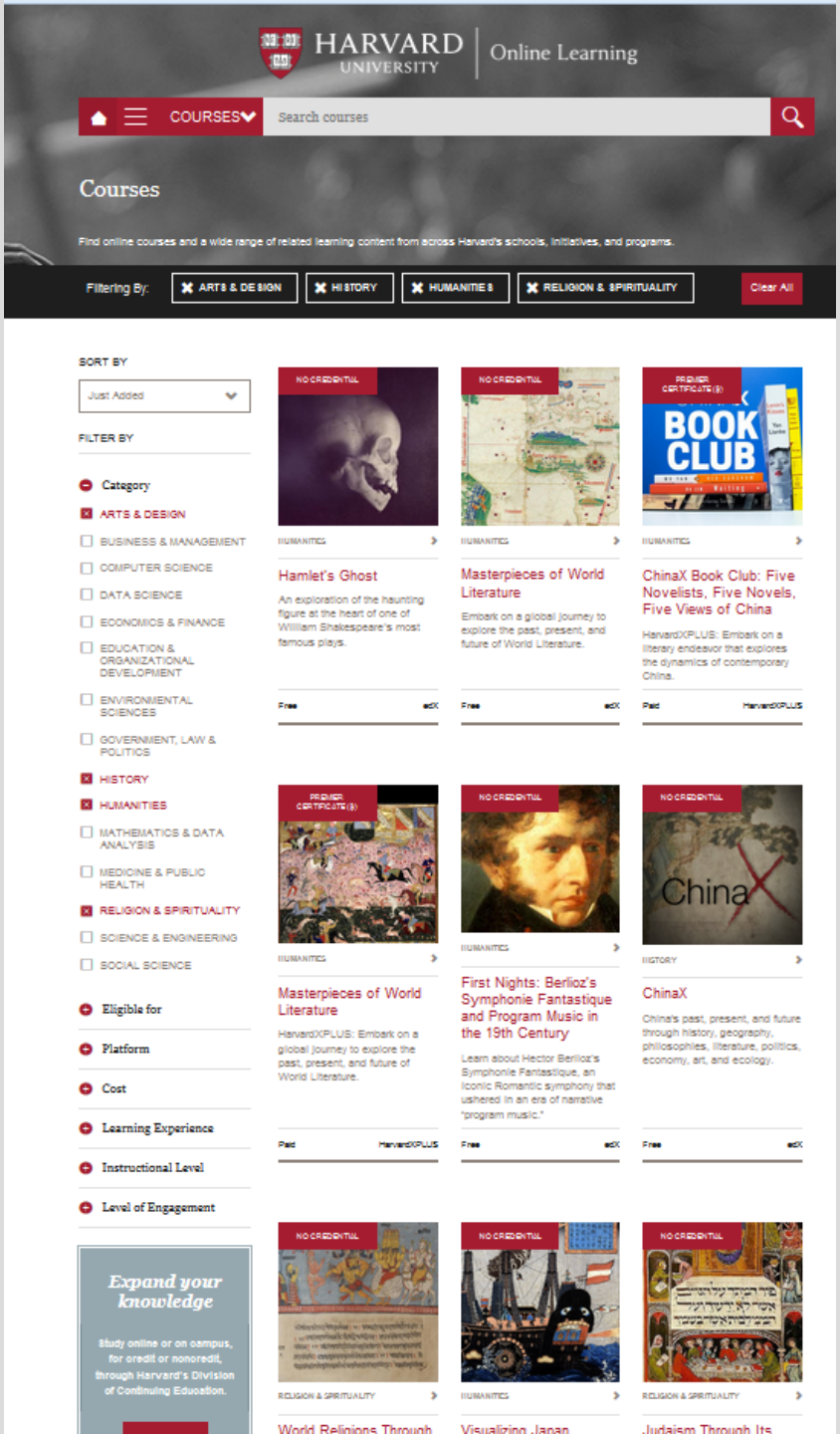


- 27% of public institution students took at least one distance course.
- 23% of private non-profit students took at least one distance course.
- 60% of private for-profit students took at least one distance course.



Massive Open Online Courses (MOOCs) are different from traditional online learning





Go to edX.org

Or go to http://online-learning.harvard.edu/

Sign up for any HarvardX course, for free

HarvardX develops premium open online learning experiences that:

- **REACH** global learners
- Enhance on campus **RESIDENTIAL** teaching and learning
- Create opportunities for learning sciences **RESEARCH**

REACH:

The HarvardX program and courses–offered by dozens of educational institutions and teacher networks across the globe–connect and extend learning around the world.

RESIDENTIAL:

HarvardX content and tools are being re-used in over twenty degree and professional education courses and helping upgrade University capabilities to benefit on campus learning.

RESEARCH:

HarvardX course data serves as the foundation for extensive research activities, including cross-institutional collaborations, over 100 articles and working papers, and new faculty research projects.

And a 4th goal: Reusability – making use of HarvardX content

Our HarvardX Learner Community is...

Massive

4.31M
Registrations

18,316
Unique Learners Per Course

109,318
Certificates Earned

Diverse

252,455
Learners who are Full-Time Working Professionals

35%
Learners who self-identify as Teachers / Instructors

70%
Learners who are Millenials

Global

65%
Learners Outside the USA

193
Countries Represented (all of them!)

654,623
Learners in U.N. Developing Nations

Read our reports.

Read our peer-reviewed publications.

Use our data.

Learning @ HarvardX

Activity

702.8M
Clicks

46.5M
Problems Attempted

118.3M
Videos Played

Time

6.70M
Learner Hours

1.30M
Learner Hours Spent on Problems

486,212
Learner Hours Spent on Forums

Course

133
Course Offerings

34
Courses in Humanities, History, Religion, Design and Education

15
Courses in Government and Health & Social Sciences

Last Updated
2016-07-12 21:31:06

HarvardX

Leading through learning

Office of the Vice Provost for Advances In Learning

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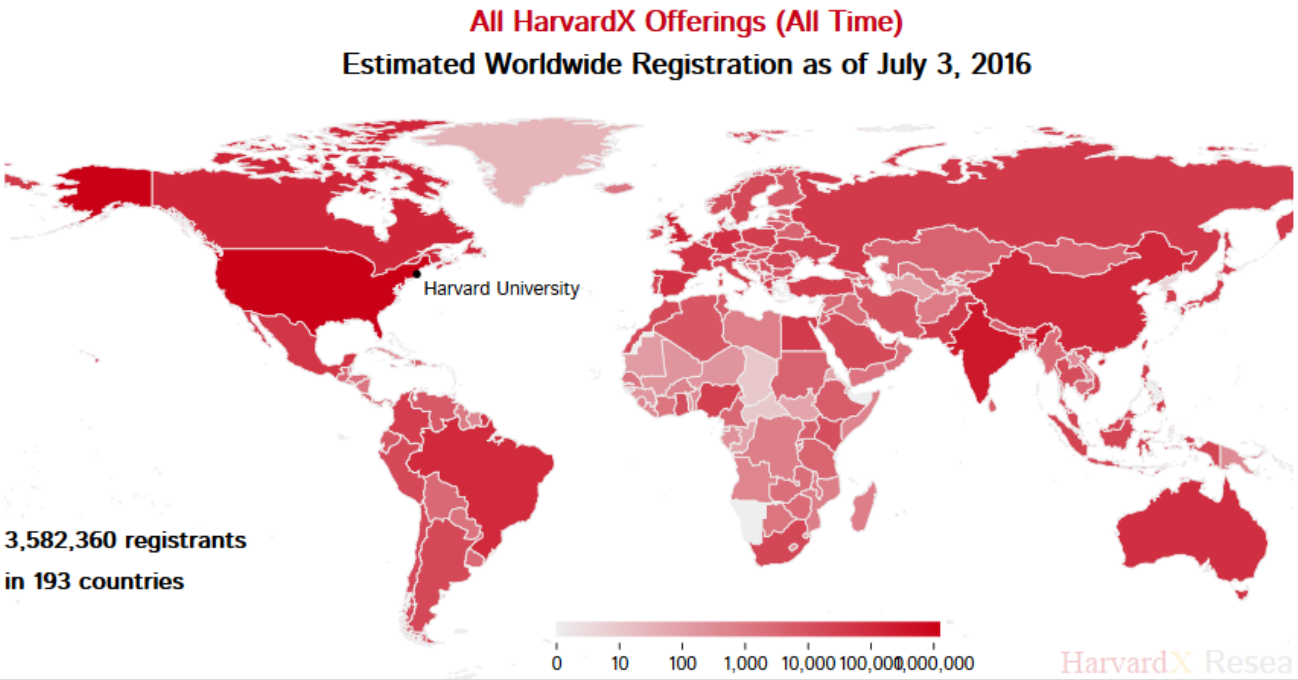
World Map of Enrollment



4.3 million registrations

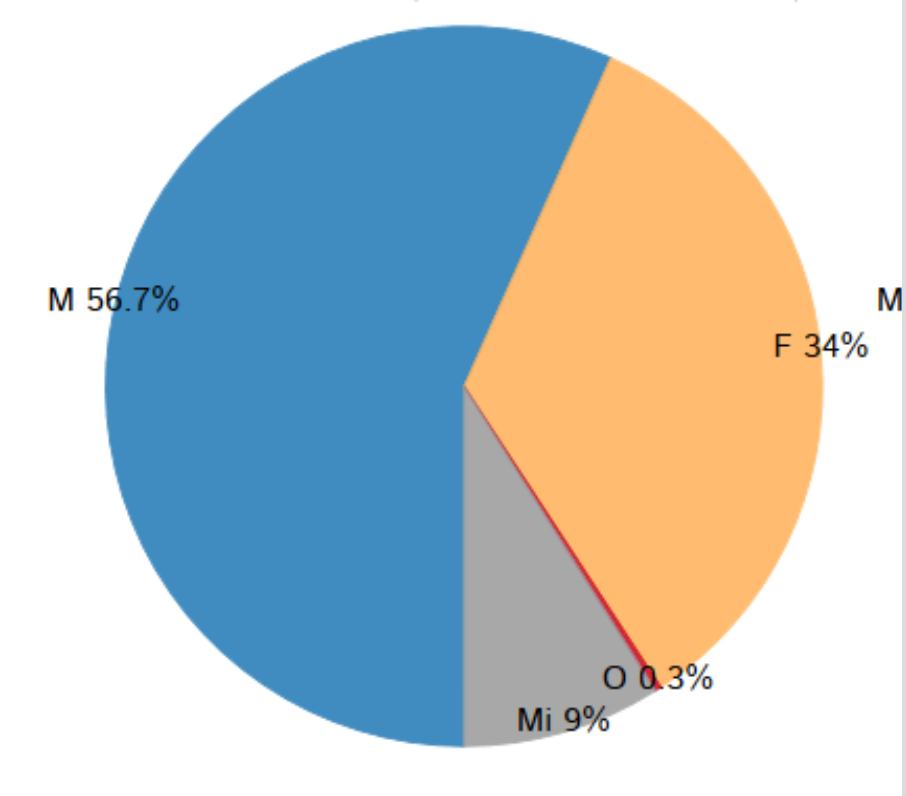
(including those without country identification)

65% outside of the US

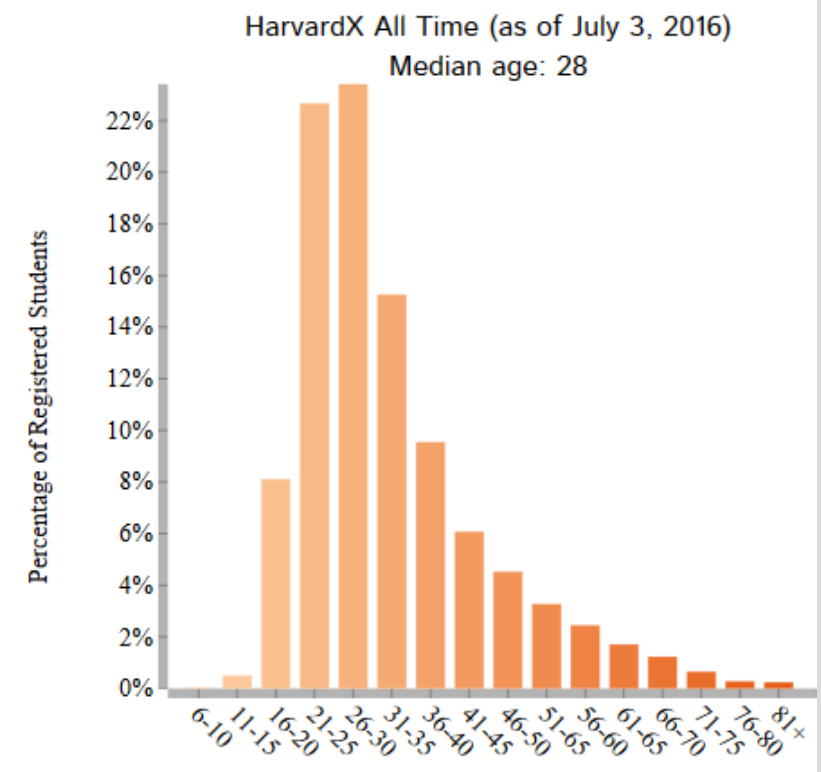
Education:

All HarvardX registrants (as of July 3, 2016)% with Bachelor's or greater: 69.6%

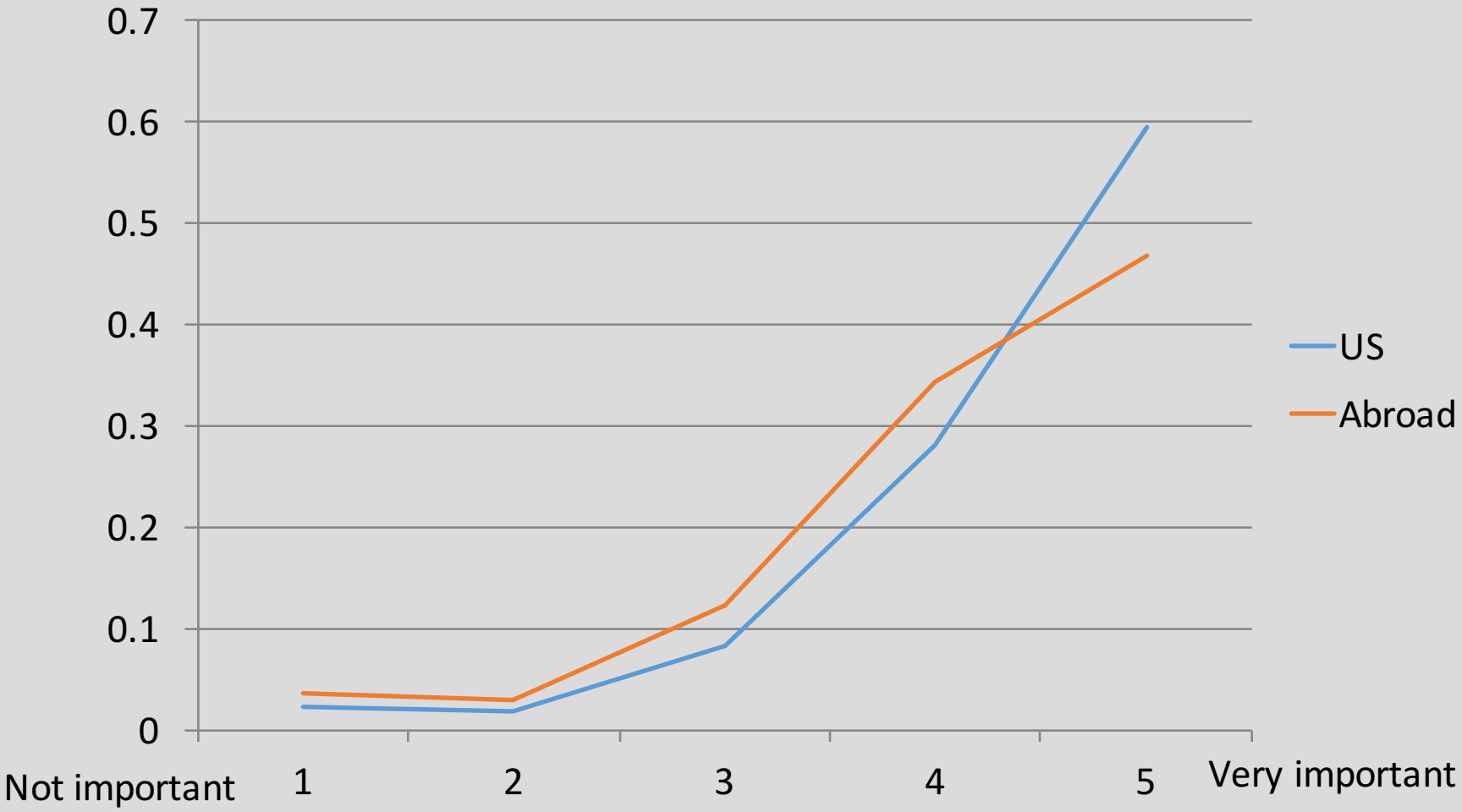
Gender composition



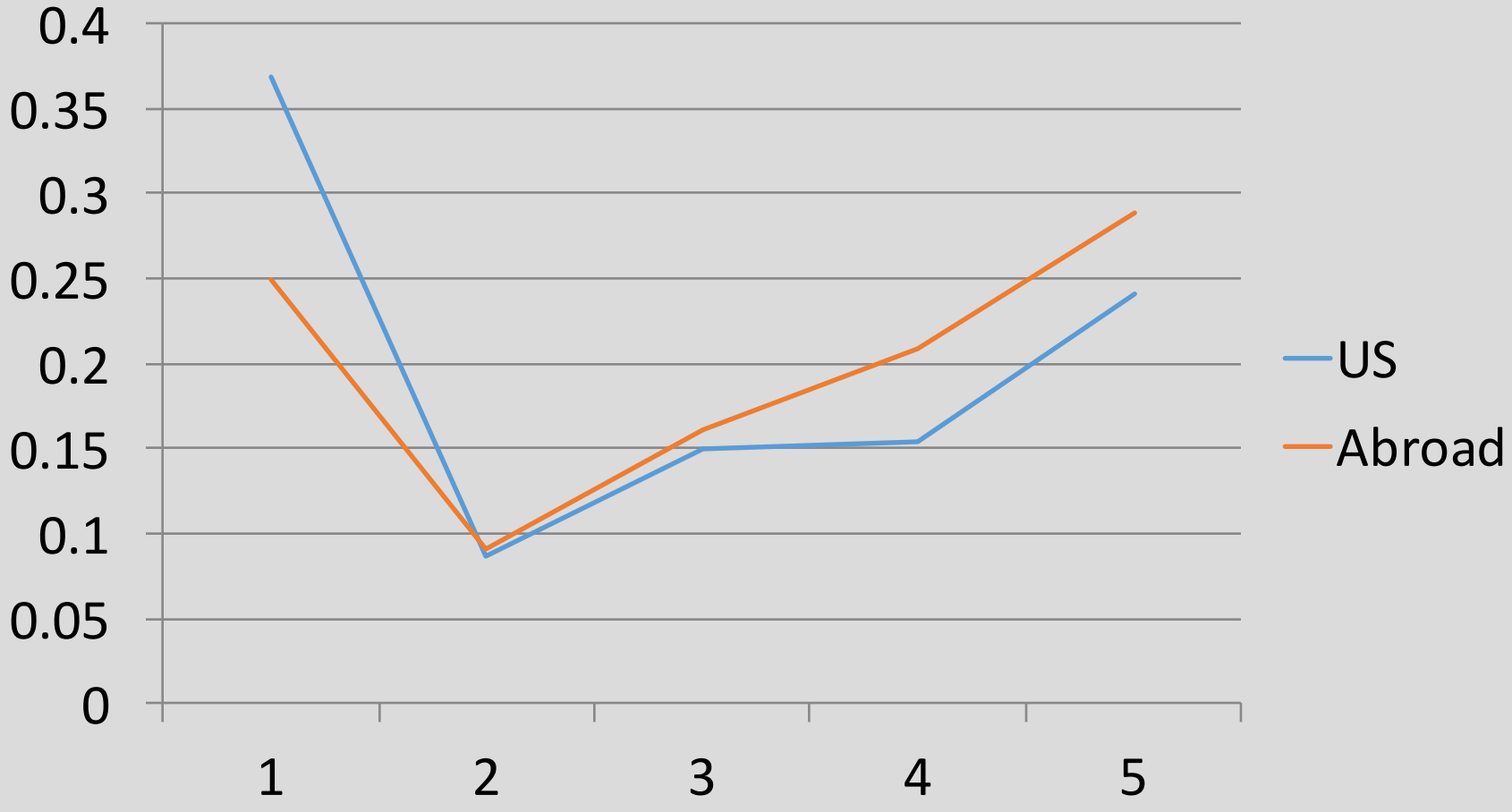
Age composition



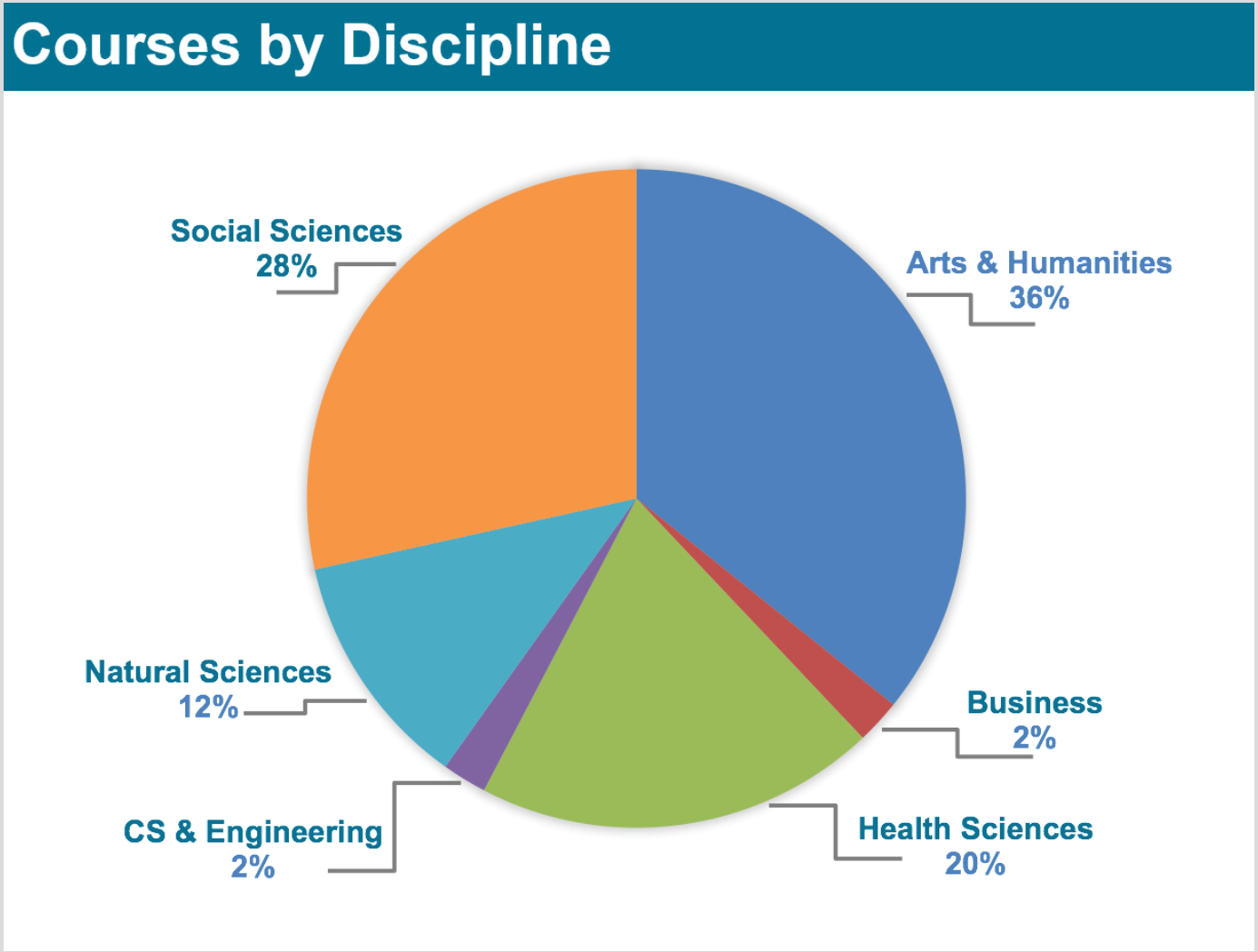
Importance of Lifelong Learning



How important is advancing my career?



The HarvardX Curriculum: Liberal Arts and Sciences



What we have learned:

- There is a world wide audience for the liberal arts because there is a world-wide audience for life-long learning
- That audience is young
- But mainly not in higher education at the moment

We want to help life-long learners continue to learn

Michael Brenner

Courseware | Course Info | Discussion | Progress | Introduce Yourself! + Final Projects | FAQs | Syllabus

Help

- Course Introduction
- Week 1 - Molecules, Moles, Flavor, and pH
- Week 2 - Energy, Temperature and Heat
- Week 3 - Phase Transitions
- Week 4 - Elasticity
- Candy!
- Week 5 - Diffusion and Spherification
  - Weekly Overview
  - Week 5 - Diffusion and Spherification
  - Week 5 Lab
    Lab due Oct 07, 2015 at 23:30 UTC
  - Week 5 Homework
    Homework due Oct 07, 2015 at 23:30 UTC
  - Advanced Materials (not required)
  - Extra Chef Materials

JOSÉ ANDRÉS: STRAWBERRY

Download video | Download transcript | .srt

Michael Sandel: JusticeX

Jeremy Bentham

Lecture 4 - Utilitarianism: J.S. Mill

Quiz 1

Lecture 5 - Libertarianism: Free Market Philosophy

Lecture 6 - Libertarianism: Do We Own Ourselves?

Lecture 7 - John Locke: Property Rights

Lecture 8 - John Locke: Individual Rights and Majority Rule

Lecture 7 & 8: Moral Dilemma and Poll #6
Poll Response due Jan 15, 2016 at 13:00 UTC

Lecture Video

Self-Test

Lecture 7 & 8 Discussion

Lecture 9 - Markets and Morals: Military Service

Help

PROPERTY RIGHTS & BOSTON PARKING

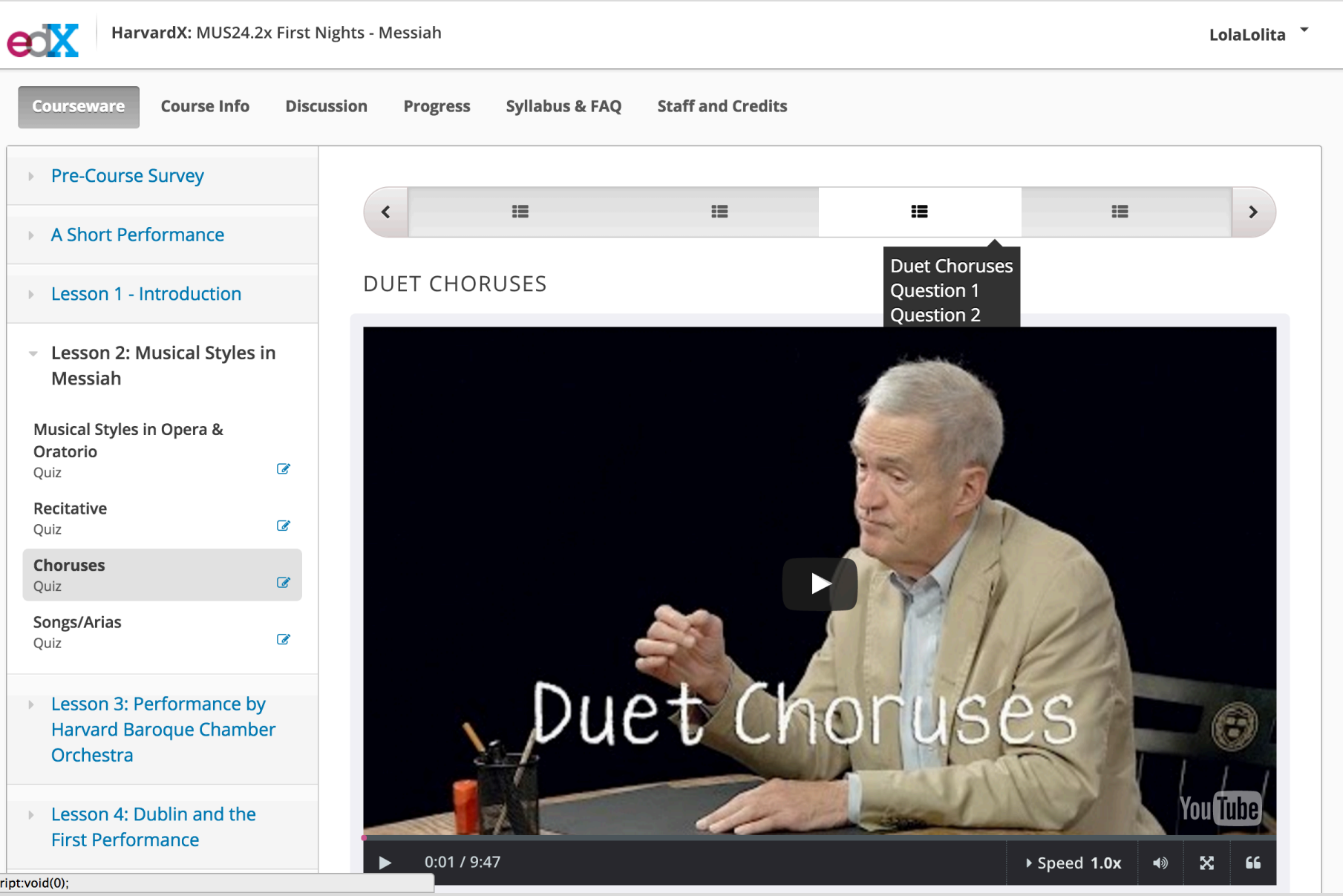
Download video | Download transcript | .srt

LECTURE 7 & 8 POLL (EXTERNAL RESOURCE) (1.0 / 1.0 points)

Should people be allowed to place space holders in public parking spots where they dug their car out of the snow?

- ***A. Yes***

Thomas Kelly: First Nights



Anne Becker, HMS
Paul Farmer, HMS
Salmaan Keshavjee, HMS
Arthur Kleinman, FAS

Global Health: Case Studies from a Biosocial Perspective

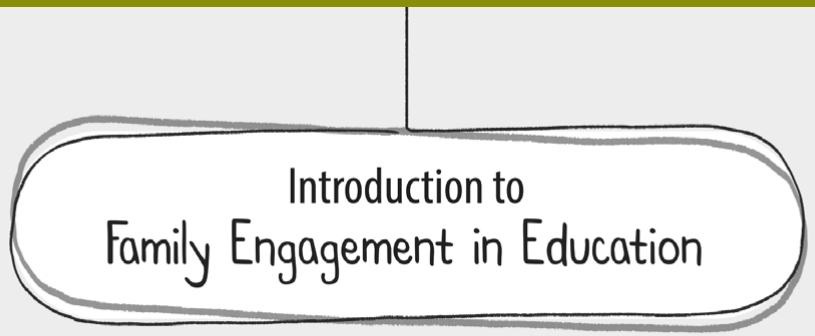
Course co-instructors are all physician-anthropologists with unique specializations.

Our **interdisciplinary** course combines anthropology, history, and medicine to solve global health problems. We are a team of 9 faculty from HMS, HSPH, FAS, together with **international experts (policy makers, healthcare workers and patients)**. Filming in Haiti & Rwanda, we challenge assumptions about rural hospitals in **low-income countries** and demonstrate what is really possible.

Filming in the field further reinforces the course's ethnographic philosophy.

Karen L. Mapp, HGSE

Introduction to Family Engagement in Education



Dialogic interviews inspire thoughtful discourse and generate unique learning moments.

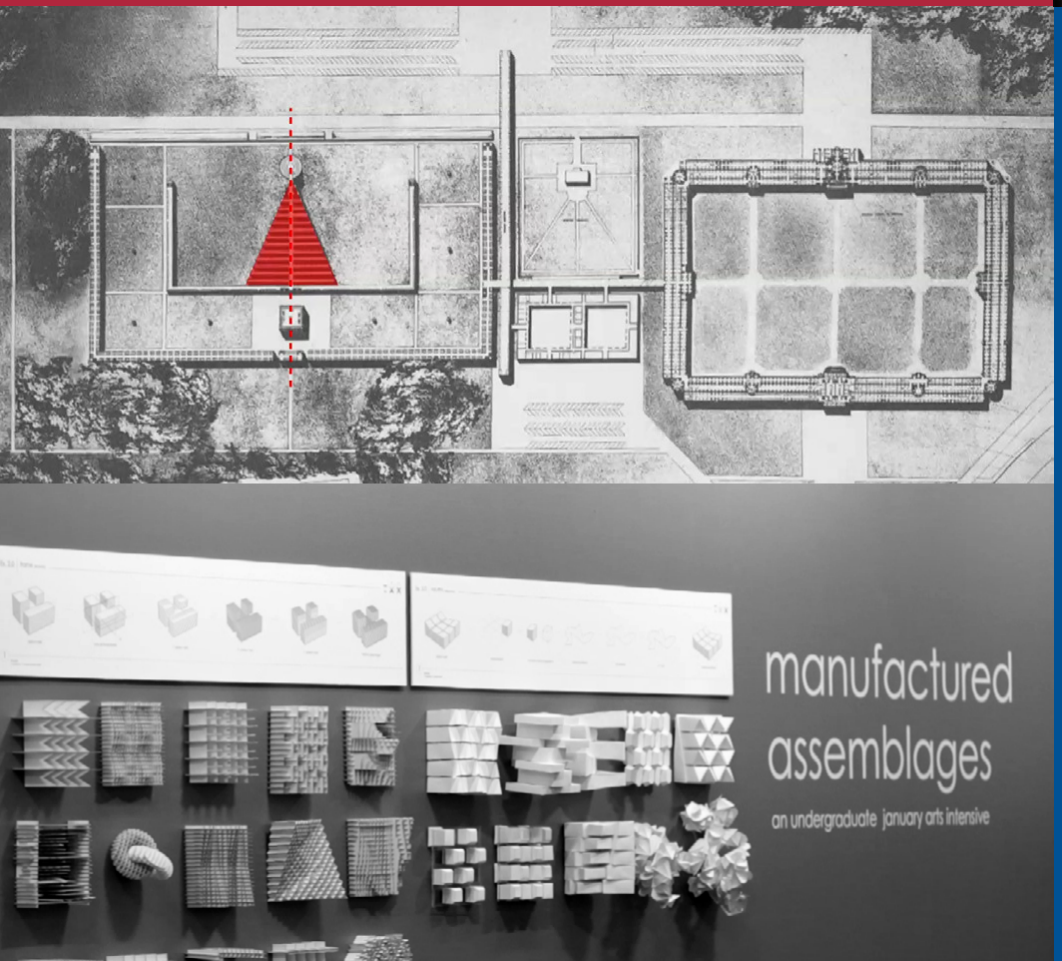
We conduct 35 interviews with subject matter experts, including academics at HGSE, HKS and, **school leaders, teachers, parents, and students**. Professor Mapp's expertise is in high demand nationwide; this MOOC allows her to **expand the reach of her teaching**. Our media is also used in her residential HGSE Program in **Professional Development**.

Filming in schools brings voices from the field into the MOOC learning experience.

Michael Hays, GSD

The Architectural Imagination

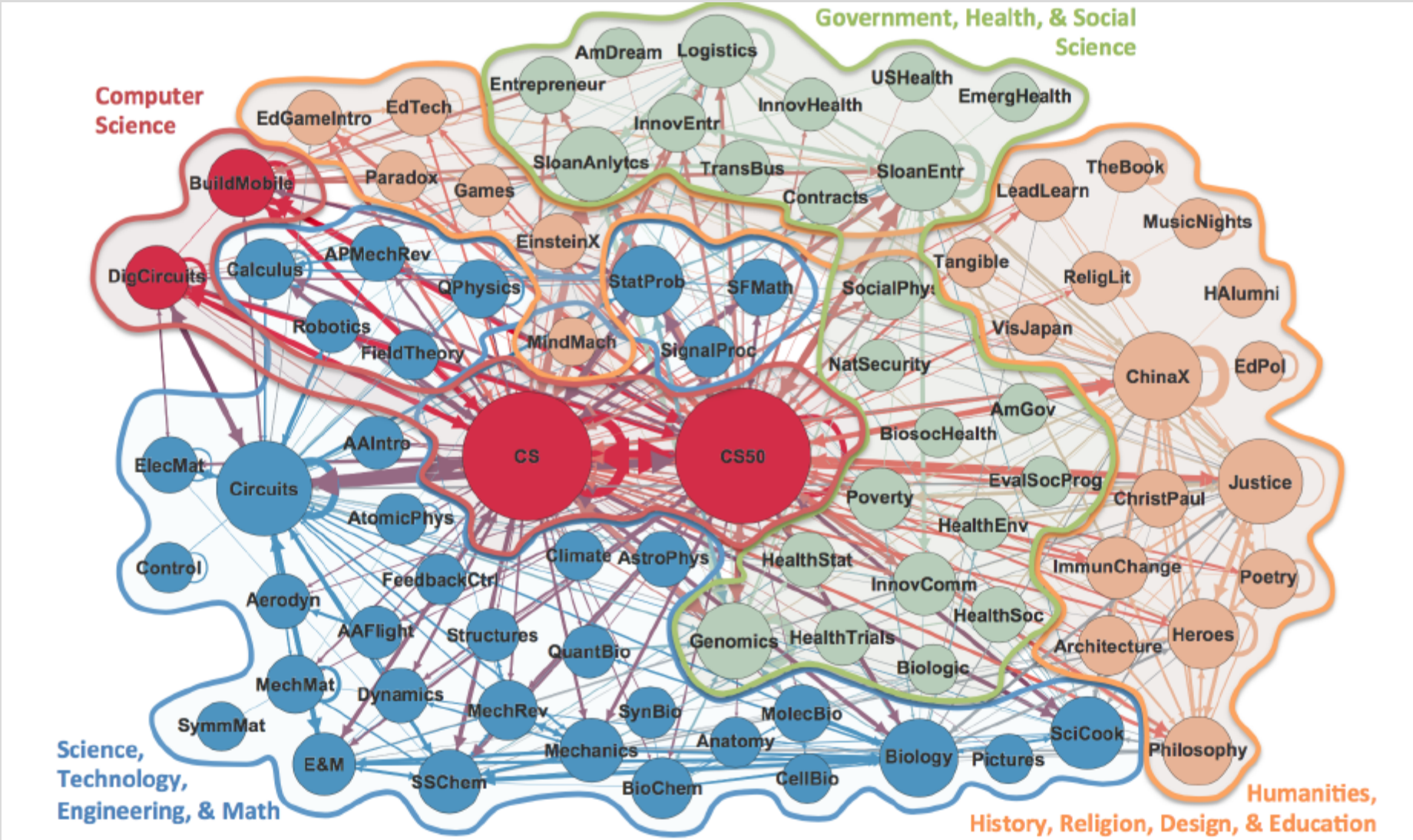
Filming faculty in environments referenced in course curriculum provides learners context.



Our course originates as a **Residential Bootcamp** for incoming graduate students, and addresses the need to provide materials long distance. The first 2 course versions ran as **hybrid courses on campus**. Learner input and faculty revisions are used to develop the MOOC for launch in early 2017.

Exposing campus resources provides online access to Harvard worldwide.

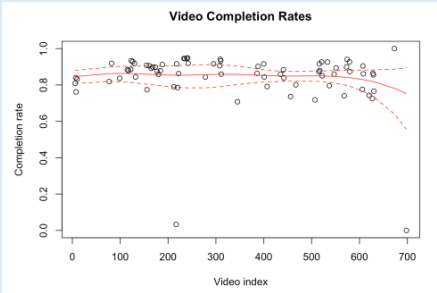
The HarvardX-MITx Course Network



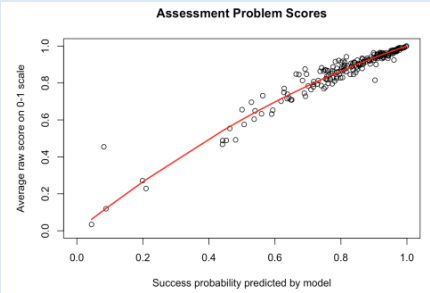
Note: Larger nodes connect more participants to other courses. Central nodes connect to more courses. Proximal nodes have greater flow between them than distal nodes. Arrows indicate the direction of flow, with weights corresponding to the amount of flow.[3] Estimated from 743K participants who participated in multiple courses.

RESEARCH

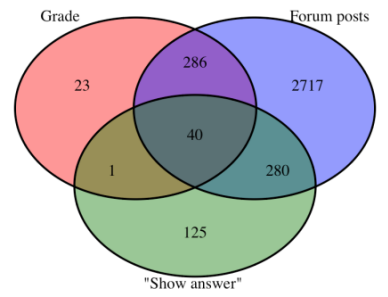
Which videos have low completion rates?



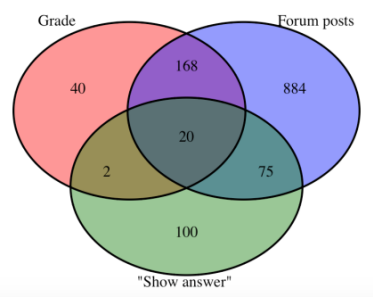
Which assessment problems have strange scores?



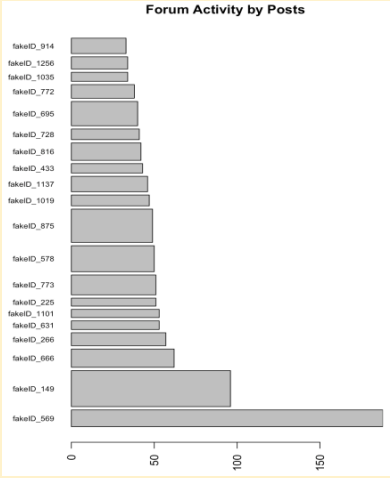
Which students go above expectations?



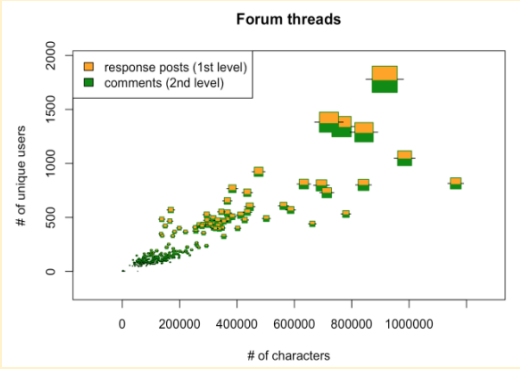
Which students go above and beyond?



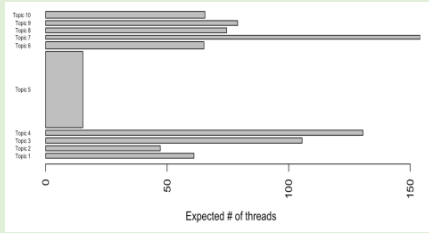
Who is an active forum user?

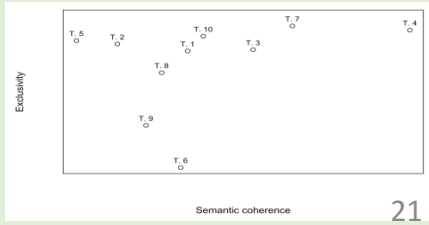


Which forum threads have high activity?



Which topics can we discern and how prevalent are they?





FOCUS ON RESEARCH:

HarvardX Online Learner Engagement Increasing

As HarvardX continues to offer the greatest breadth and depth of liberal arts and sciences courses anywhere online, HarvardX learners continue to interact more deeply with each other and course material.

Learner engagement increased during HarvardX's Year 3 (June 2015–May 2016) compared to HarvardX's Year 2 (June 2014–May 2015) in a number of key areas:

Discussion forum reads –
34% ↑

Discussion forum posts –
44.5% ↑

Attempts to solve problems (assessments) –
136.6% ↑

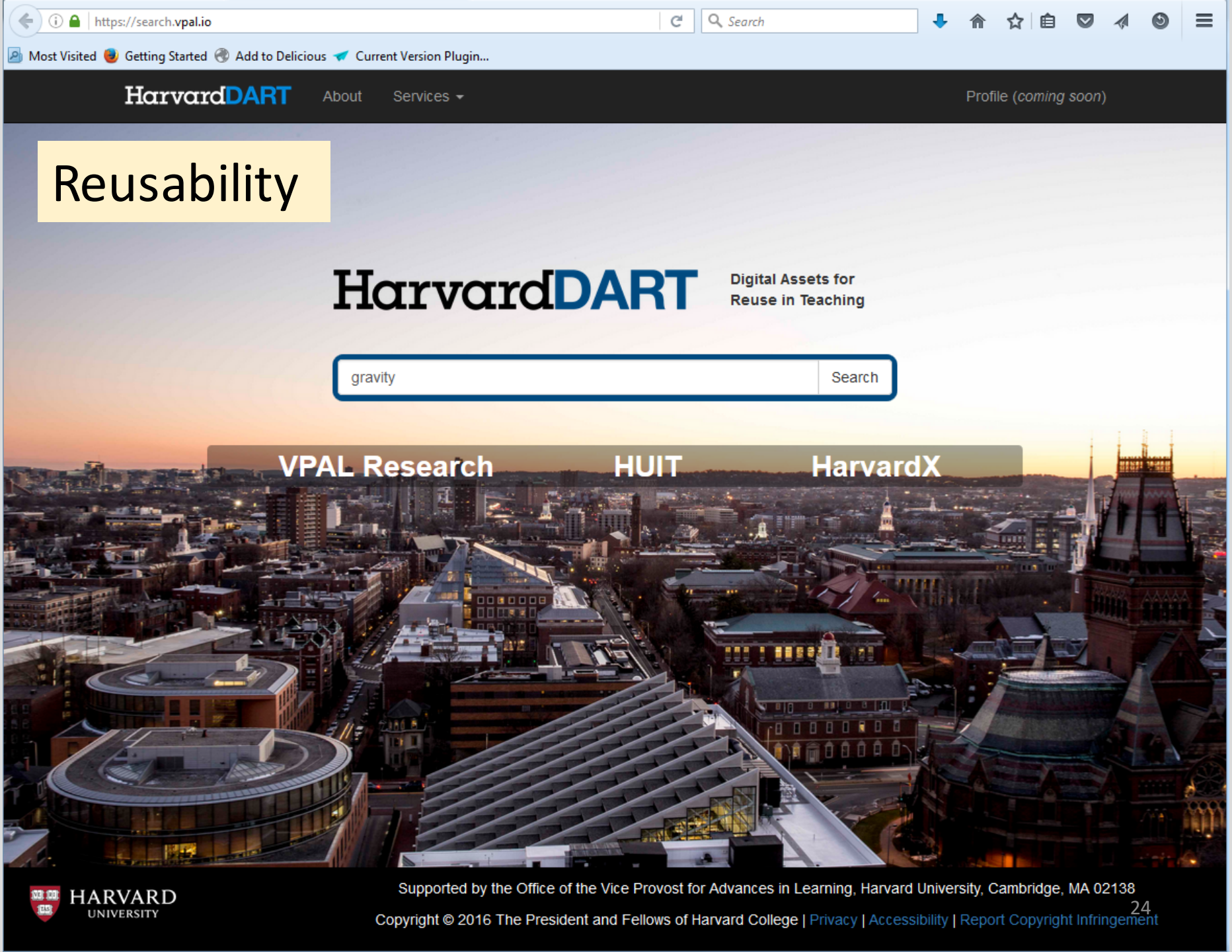
"HarvardX learners are engaging more, with a richer array of content (discussions, video, and assessments), than ever before."

—Dustin Tingley, Faculty Director, Vice Provost for Advances in Learning (VPAL) Research Team, Harvard University

Visit **HarvardX Insights at harvardx.harvard.edu/insights** for additional data on learners compiled by VPAL research.

VIDEO, ILLUSTRATIONS, CLAYMATION

- "Fundamentals of Neuroscience" with Prof David Cox (FAS)
- Neuroscience-Virtual_to_Phys_to_Virtual\._MCB80X Claymation-HD.mp4
- --- Review of course animations and additional animations can be found at:
- http://www.itsnicethat.com/articles/fundamentals-of-neuroscience?utm_content=buffer3fb4f&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer
- "Contracts" with Prof Charles Fried (HLS) trailer
- https://www.edx.org/node/3911#.VFeYsVxtAWQ


https://search.vpal.io
Search
Most Visited
Getting Started
Add to Delicious
Current Version Plugin...
HarvardDART
About
Services
Profile (coming soon)
Reusability
HarvardDART
Digital Assets for
Reuse in Teaching
gravity
Search
VPAL Research
HUIT
HarvardX
HARVARD
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https://search.vpal.io/search/find?query=gravity

Most Visited Getting Started Add to Delicious Current Version Plugin...

HarvardDART About Services Profile (*coming soon*)

gravity Search Again

View and filter all **97** search results with the term **gravity**.

Videos (35) Assessments (30) HTML Pages (32)

Search Results

The Equivalence Principle

HarvardX, The Einstein Revolution (EMC2x)
edX Course Link
is if there were no **gravity** because everything...could cancel **gravity**-- then **gravity** in a certain way...might be a theory of **gravity**. One would be the
Preview Video Add to Canvas

Introduction to Parallelism

HarvardX, Poetry in America: The Poetry of Early New England (AI12.1x)
edX Course Link
momentum, sense of **gravity**, reasonableness
Preview Video Add to Canvas

Introduction to Parallelism

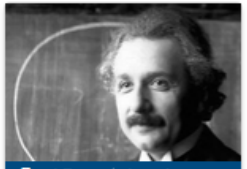
HarvardX, Poetry in America: The Poetry of Early New England (AmPoX.1)
edX Course Link
momentum, sense of **gravity**, reasonableness
Preview Video Add to Canvas

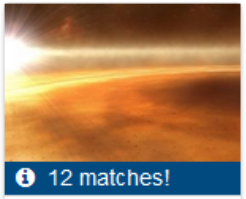
Video: The Wobble Method

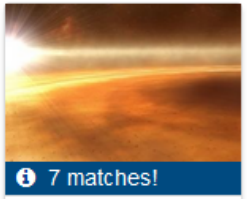
HarvardX, Super-Earths and Life (SPU30x)
edX Course Link

Courses with the highest number of results for your search **gravity**.

26 matches!
Super-Earths and Life
Launched on Oct. 18, 2016


15 matches!
The Einstein Revolution
Launched on Feb. 16, 2016


12 matches!
Super-Earths and Life
Launched on Oct. 13, 2015


7 matches!
Super-Earths and Life
Launched on Feb. 10, 2015

28 HarvardX courses had matches for your query.

ChinaX

The goal of ChinaX isto help learners to understand China's historical experience, its patterns of philosophy and religion, and its social and political thought. These themes are discussed in order to understand China in the twenty-first century and as a great world civilization that developed along lines different from those of the Mediterranean.

Two Examples:

The changing map of China over time

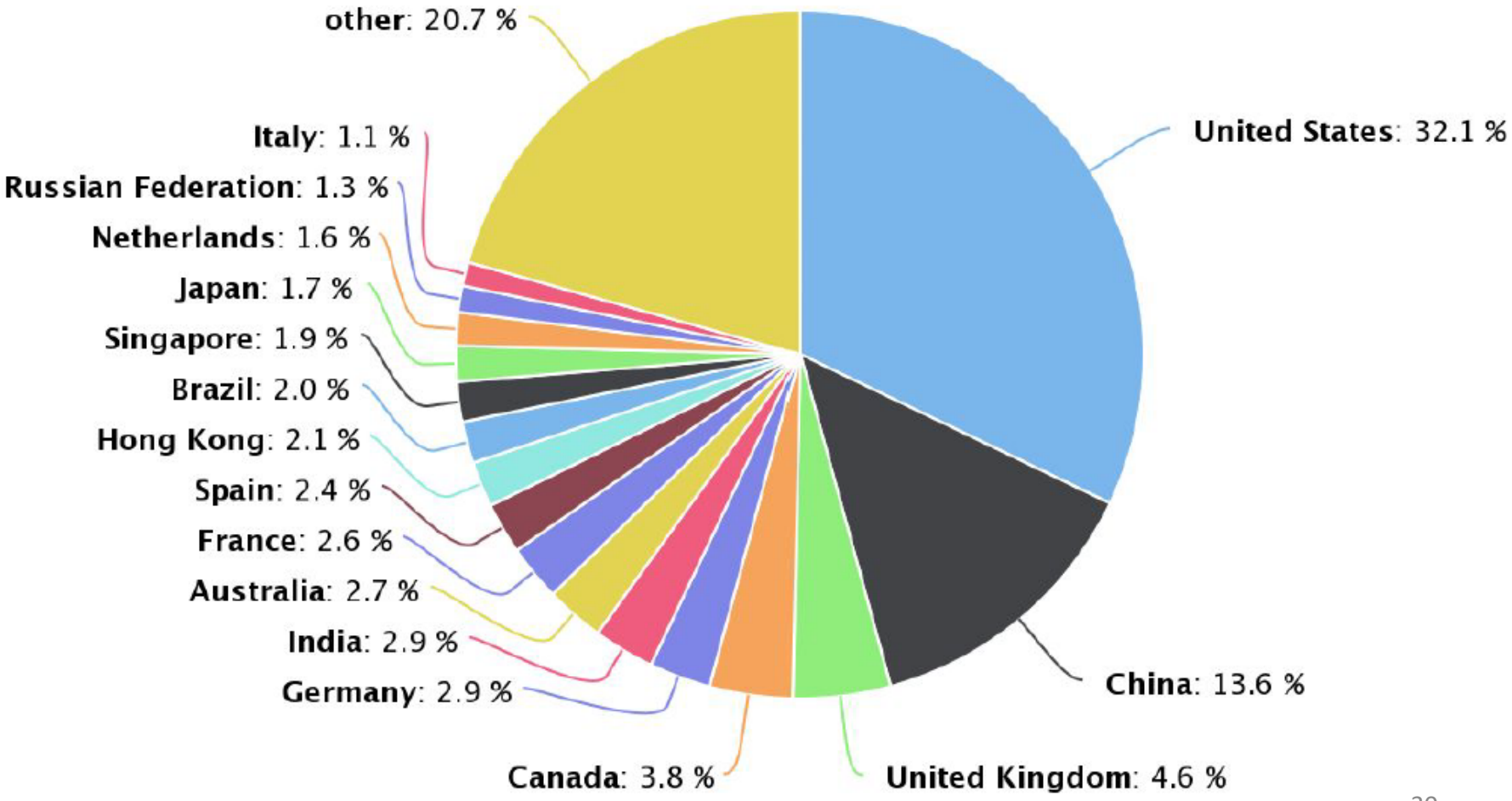
Chinese Literature

Number of Unique Learners by Participation Type per Module

Module	Net registered	Viewed	Explored	Certified	Verified ID *	Certified & Verified	Male	Female
ChinaX 1	58,283	45,618	13,623	3,691	0	0	39,957	29,804
ChinaX 2	33,915	12,727	5,419	2,642	0	0	23,625	16,504
ChinaX 3	32,547	7,320	4,014	2,227	0	0	20,931	15,244
ChinaX 4	33,636	6,656	2,535	1,788	0	0	21,092	15,497
ChinaX 5	33,246	5,162	2,970	1,685	0	0	20,576	14,469
ChinaX 6	33,882	5,364	2,835	1,637	0	0	20,768	15,010
ChinaX 7	33,863	4,583	2,640	1,505	71	63	19,544	14,199
ChinaX 8	34,323	4,411	2,563	1,528	67	62	19,424	14,059
ChinaX 9	35,054	4,126	1,809	1,441	65	60	19,650	14,112
ChinaX 10	36,732	5,492	1,204	1,258	85	73	20,628	14,897

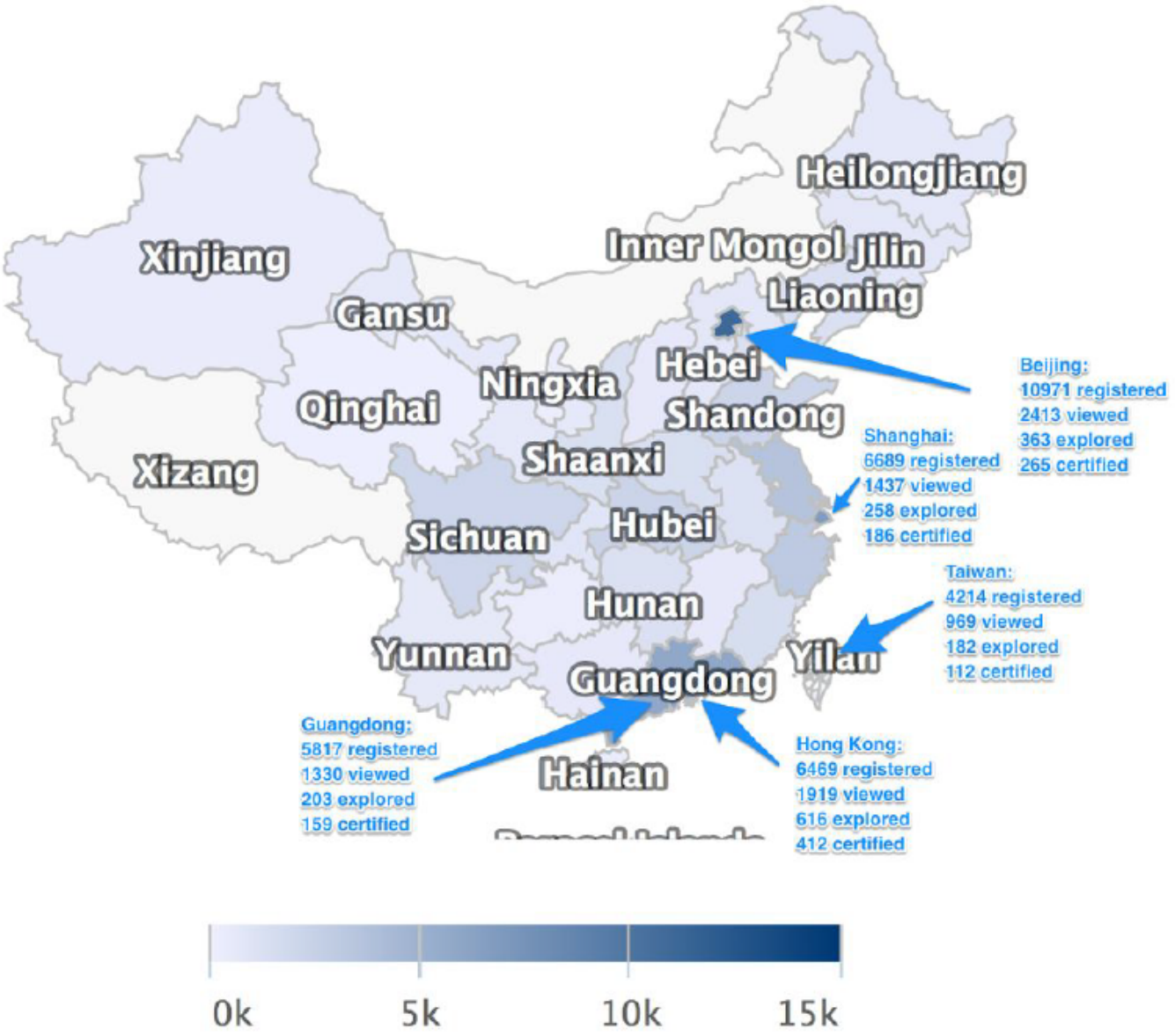
*the ID verified certificate option only became available in ChinaX 7, thus the previous parts do not have any verified ID or certified & verified.

ChinaX 1-10 on edX Viewers by Country



ChinaX Participants (SW12.1x – SW12.10x)

China with Hong Kong, Macau, and Taiwan



#	Answer		Response ▲	%
8	Philosophy/Intellectual History		300	63%
1	Art history		235	49%
7	Literature		214	45%
5	Law and Governance		212	45%
6	Language (Mandarin)		197	41%
4	Economics		172	36%
3	Education		160	34%
2	Business		147	31%
10	Other		127	27%
9	Public Health		89	19%

Figure 9. Survey response on what "What topic(s) they would you like to learn more about on ChinaX"

The most famous part of ChinaX

Leading through Learning

The common ground of HarvardX learners and the University

HarvardX