

**Massive open online courses (MOOC s)
ed edX. Alcune riflessioni sul futuro
dell'educazione
ispirate dall'insegnamento della fisica**

**Seminario di Formazione
AULA 3.0
UNA POSSIBILE RISPOSTA
ALLA SCUOLA DEL FUTURO
May 28-29,2013**

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EdX: Motivation

EdX was created for students and institutions that seek to transform themselves through cutting-edge technologies, innovative pedagogy, and rigorous courses.

EdX Goals

- Expand access to education for everyone
- Enhance teaching and learning on campus and online
- Advance teaching and learning through research

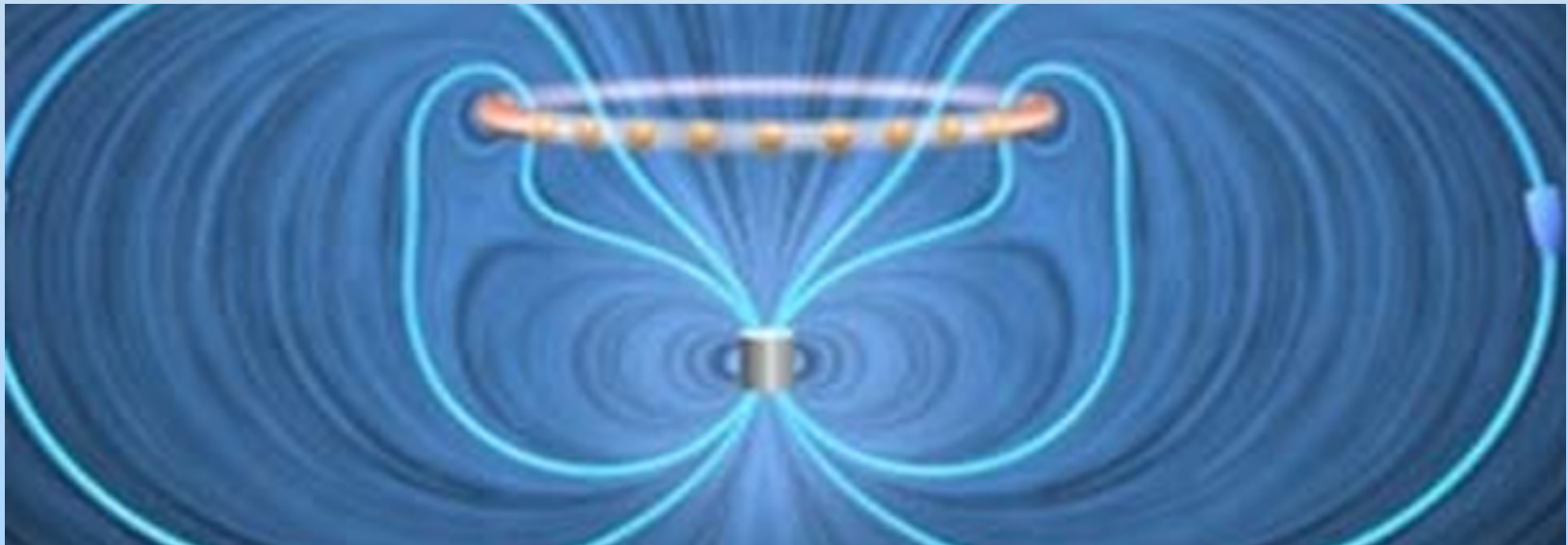
Xconsortium: Participating Universities

 Massachusetts Institute of Technology	 HARVARD UNIVERSITY	 Berkeley UNIVERSITY OF CALIFORNIA	 THE UNIVERSITY of TEXAS SYSTEM
 Australian National University	 TU Delft	 EPFL ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE	 GEORGETOWN UNIVERSITY
 McGill	 RICE Unconventional Wisdom	 UNIVERSITY OF TORONTO	 WELLESLEY W
 Berklee college of music	 BOSTON UNIVERSITY	 Cornell University	 DAVIDSON
 THE UNIVERSITY OF HONG KONG	 香港科技大学 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY	 Karolinska Institutet	 京都大学 KYOTO UNIVERSITY
 UCL Université catholique de Louvain	 THE UNIVERSITY OF QUEENSLAND AUSTRALIA	 SEOUL NATIONAL UNIVERSITY	 清华大学 Tsinghua University
 Technische Universität München	 THE UNIVERSITY OF QUEENSLAND AUSTRALIA	 UNIVERSITY of WASHINGTON	

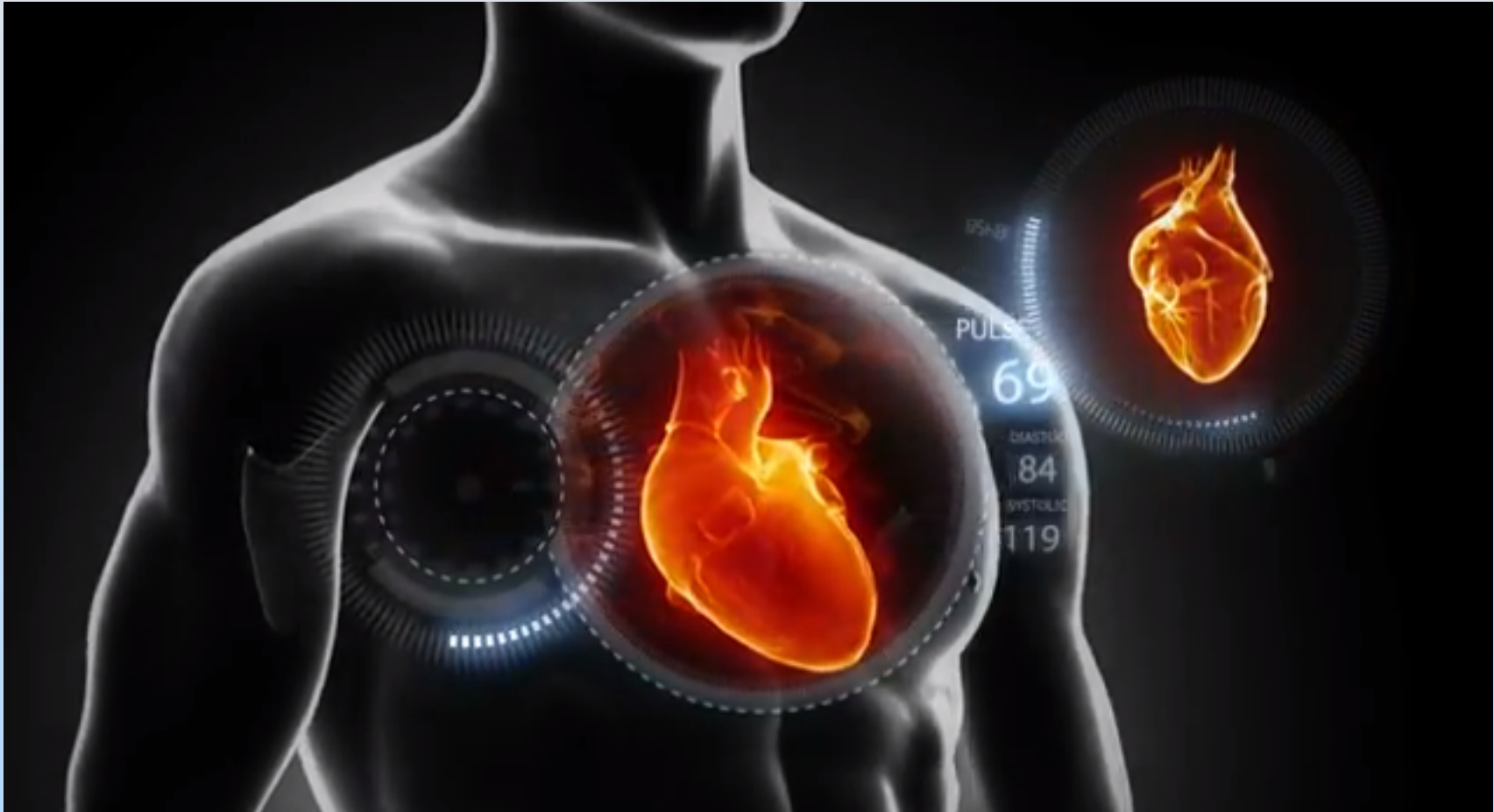
MITx Goals

- Support the use of digital learning tools and techniques in the delivery of MIT residential programs
- Support the development of free, openly licensed, scalable, MIT-quality courses to academically talented and well prepared learners worldwide on the EdX platform
- Further the understanding of best practices in emerging digital and scalable learning environments.

8.02x Electricity and Magnetism



Walter Lewin Introductory Video



<http://www.youtube.com/watch?v=BxSLwndRNDI>

8.02X Platform



MITx: 8.02x Electricity and Magnetism

Courseware

Updates

Course Info

Textbook

Download PDFs

Calendar

Discussion

Wiki

Progress

Instructor

Student view

▸ Introduction

▼ Week 1

Help

**Lecture 1: What holds
our world together?**

Lecture



**Lecture 2: Electric Field
and Dipoles**

Lecture



**Lecture 3: Electric Flux
and Gauss's Law**

Lecture



Problem Solving

Problem Solving

Homework 1

Homework due Feb 27,
2013 at 23:59 UTC



**Point Charges
Simulation**

TEALsim due Feb 27, 2013
at 23:59 UTC



Gauss's Law Simulation

TEALsim due Feb 27, 2013
at 23:59 UTC




INTRODUCTION

You were most recently in [Welcome from Prof. Lewin](#). If you're done with that, choose another section on the left.



8.02X Discussion Forum



MITx: 8.02x Electricity and Magnetism

Courseware Updates Course Info Textbook Download PDFs Calendar **Discussion** Wiki Progress Instructor

Show All Discussions ▾

🔍

SORT BY: **DATE** VOTES COMMENTS

Help

I just hope you give the course again. +1 2

Question about partial polarization +0 1

edX not working in firefox? +0 3

circularly polarized light +0 0

thermal radiation and light +1 0

REMINDER: Forum will be closed again during the exam. +1 1

Will there be 8.03x on edX? +8 6

Prof. Walter Lewin: Wish you Health & Life ! +10 1

Mr. Lewin SUNGLASS +0 0

DIY rainbows +11 8

Electricity and Magnetism Discussion

8.02X Platform: Analytics



MITx: 8.02x Electricity and Magnetism

Courseware

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Instructor Dashboard

[[GRADES](#) | [ADMIN](#) | [FORUM ADMIN](#) | [ENROLLMENT](#) | [DATADUMP](#) | [MANAGE GROUPS](#) | [ANALYTICS](#)]

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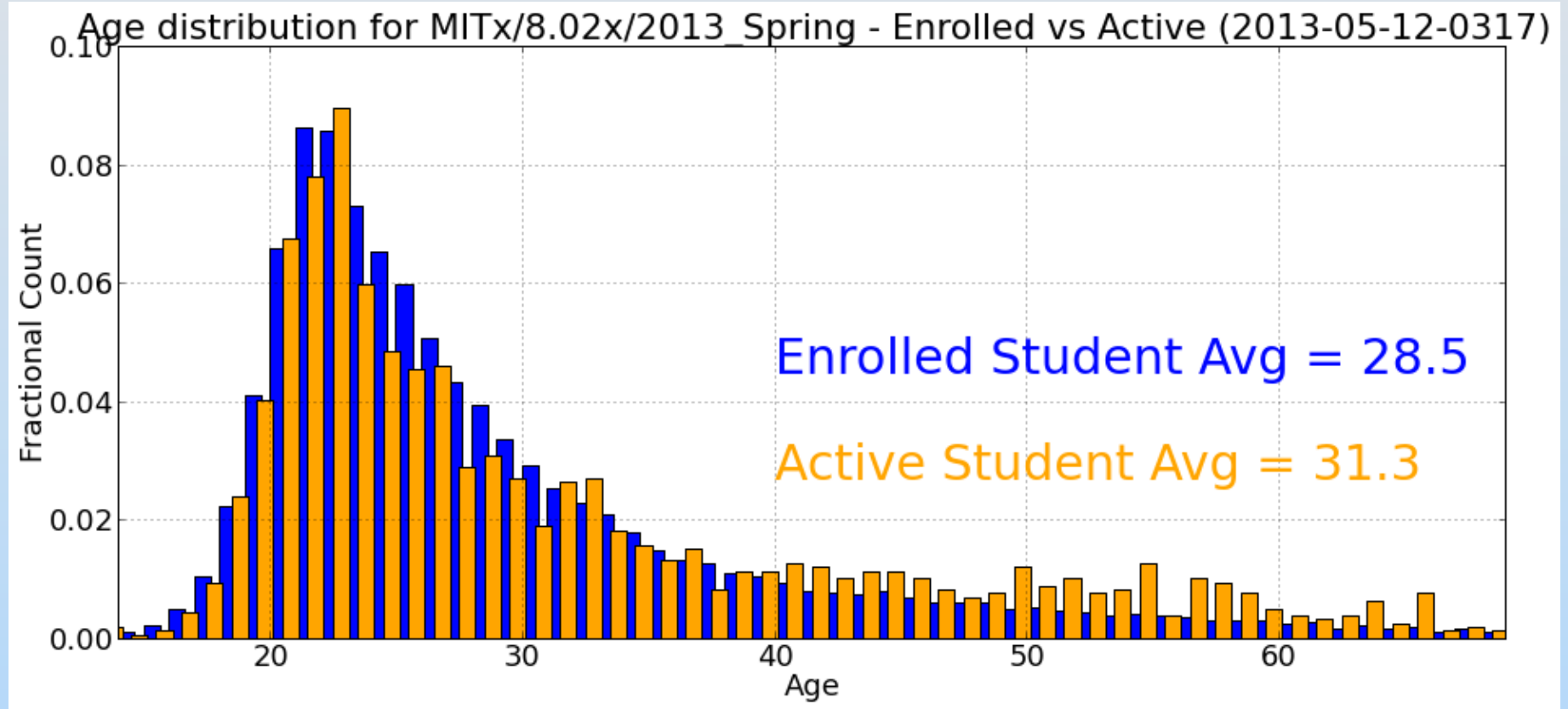
Students enrolled: 40639

Students active in the last week: 3483

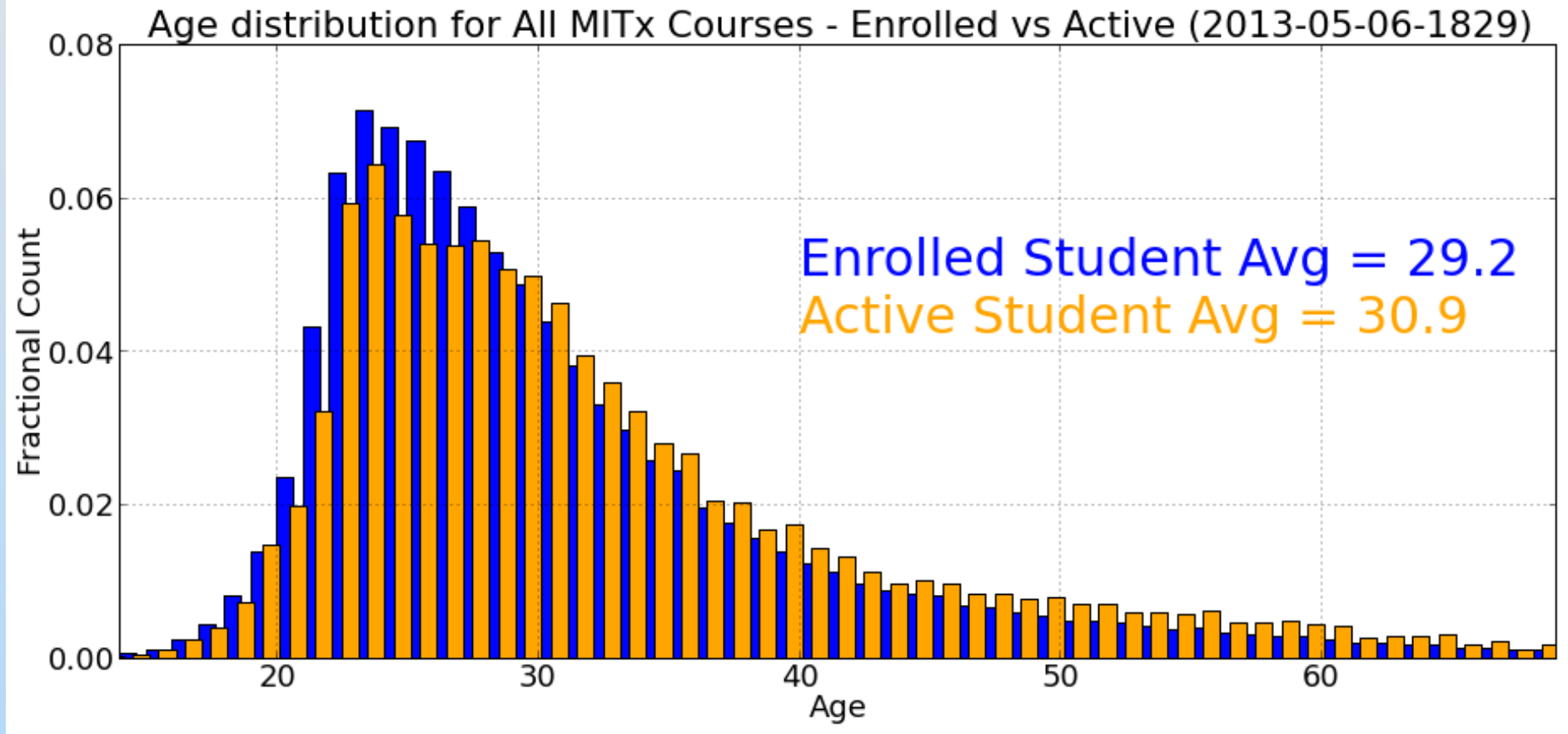
Answer distribution for problems

Problem	Max	Points Earned (Num Students)	
edx_survey:access_edX_from_where	None	None	(334)

8.02x Participants Age Distribution

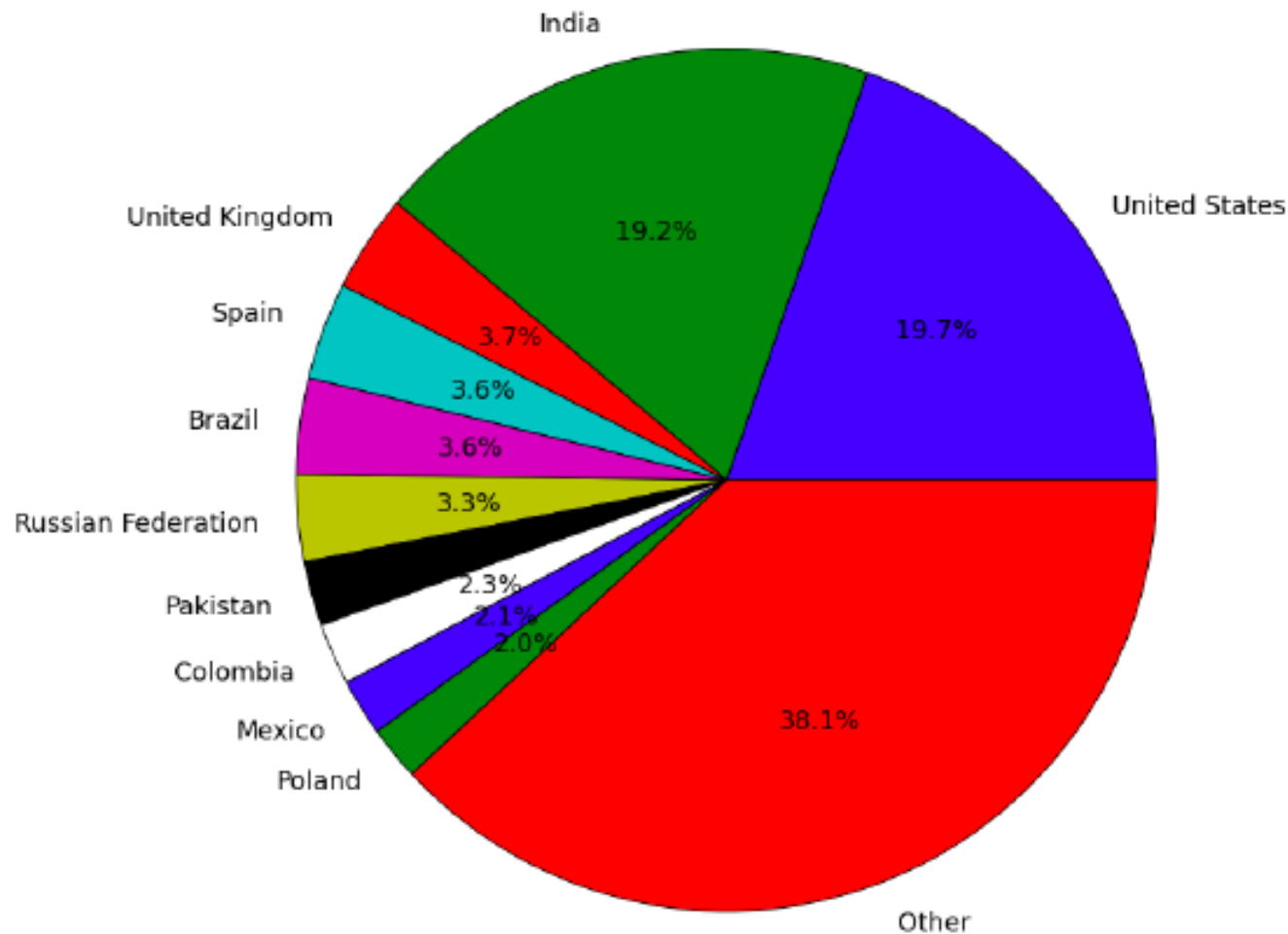


Age Distribution for all MITx Courses

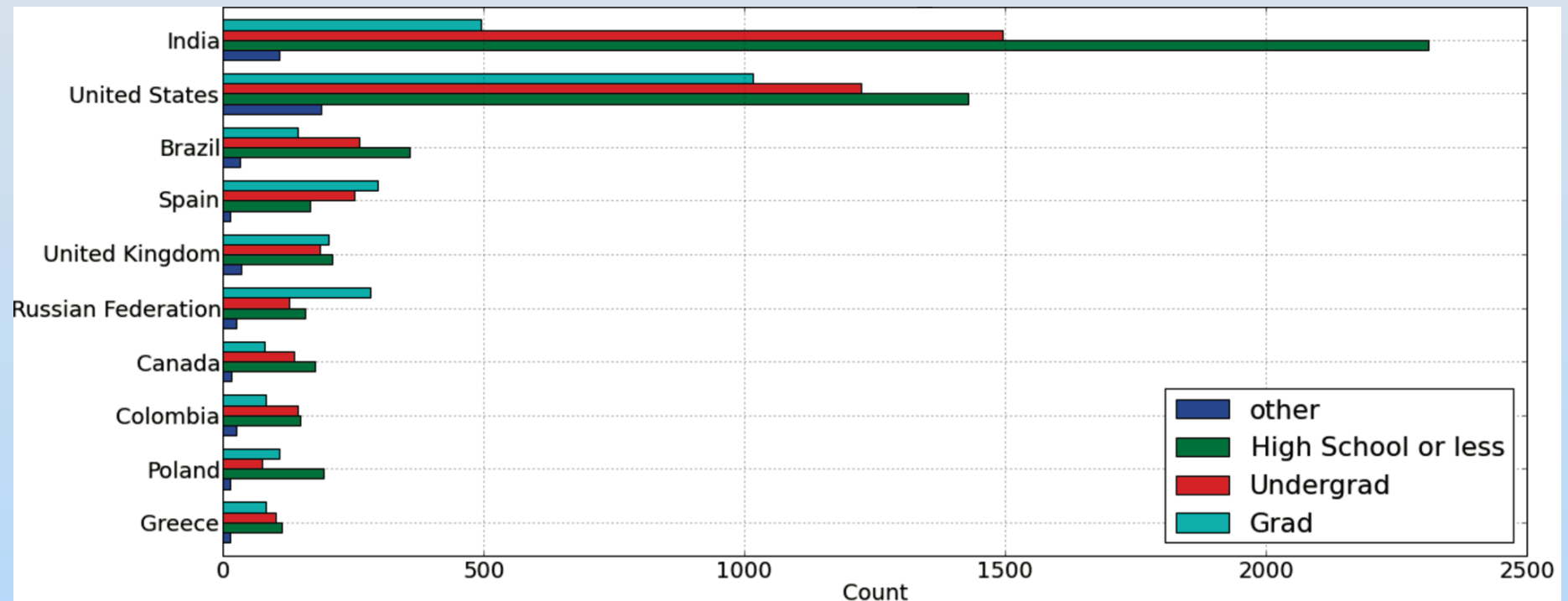


8.02x Geographic Distribution

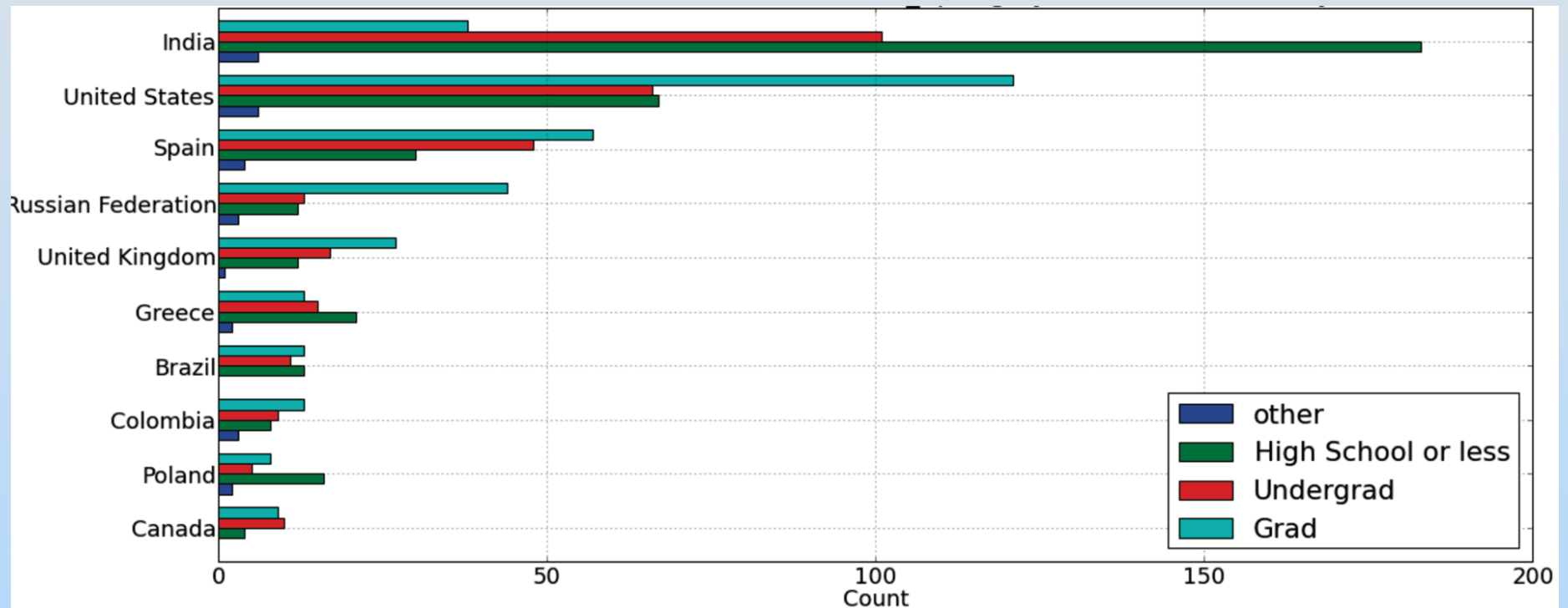
Geographic distribution of MITx/8.02x/2013_Spring Enrollees (2013-05-01-1219)



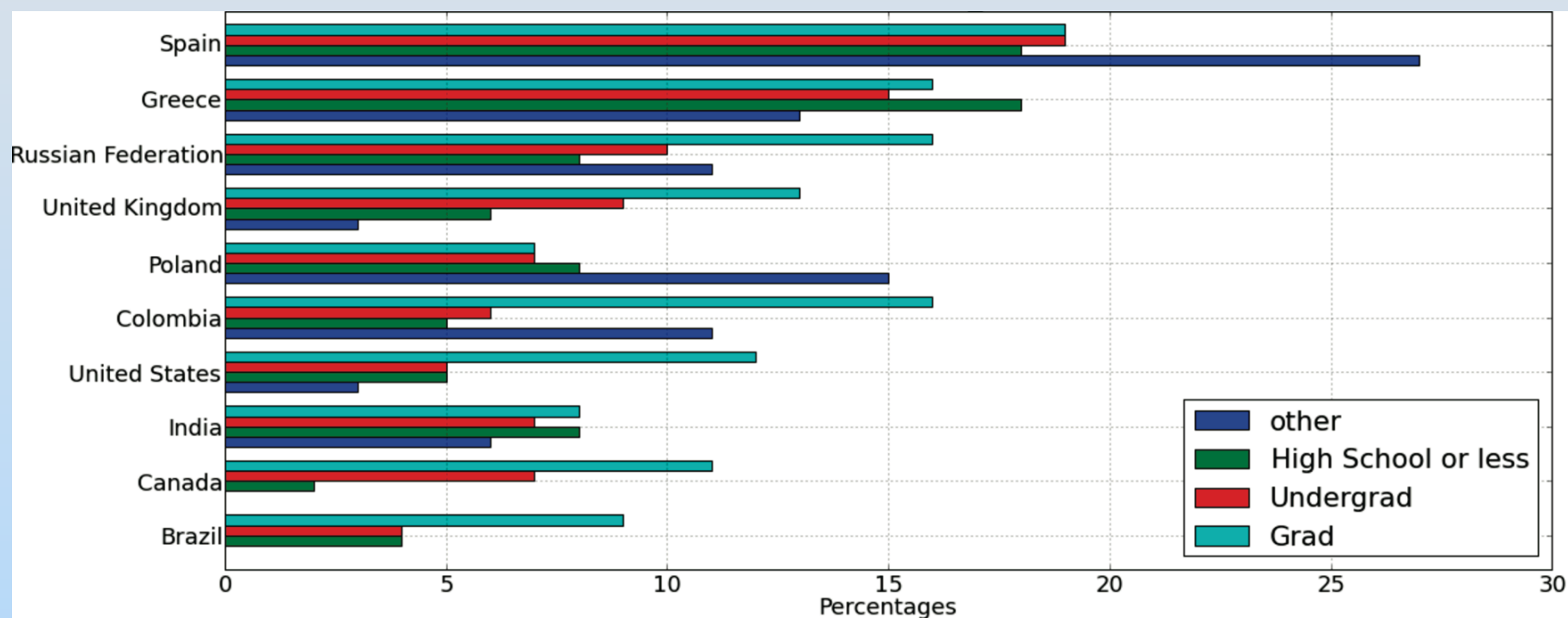
Enrolled Students for MITx/8.02x/ 2013/Spring by ed level and country



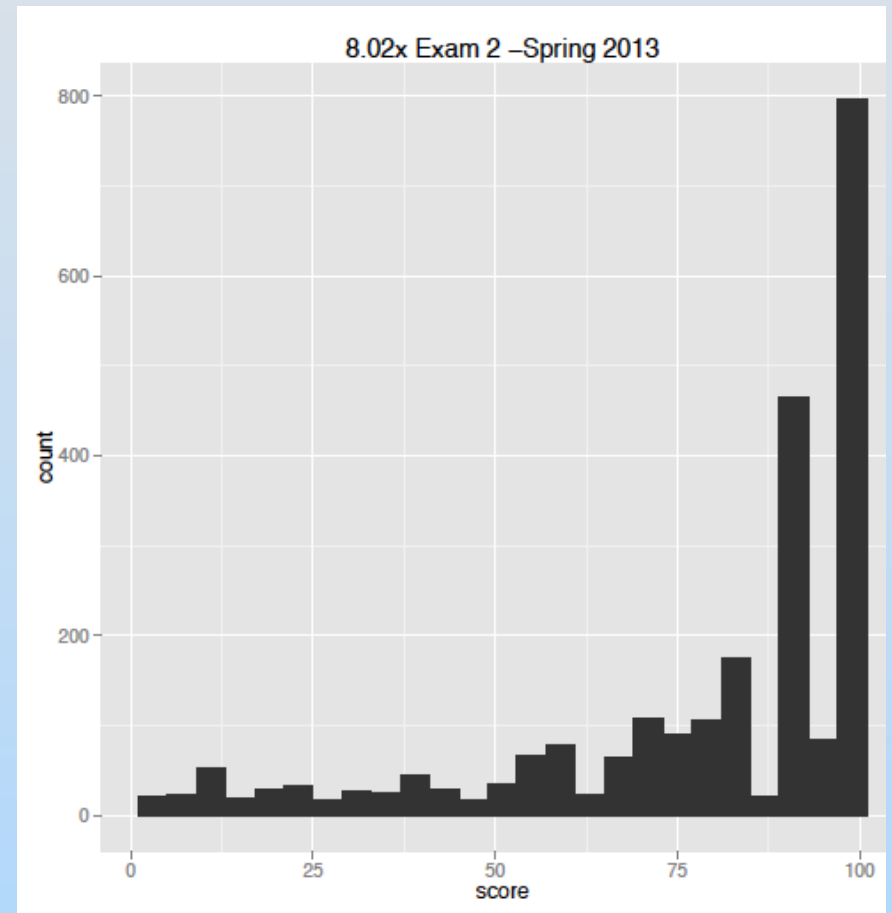
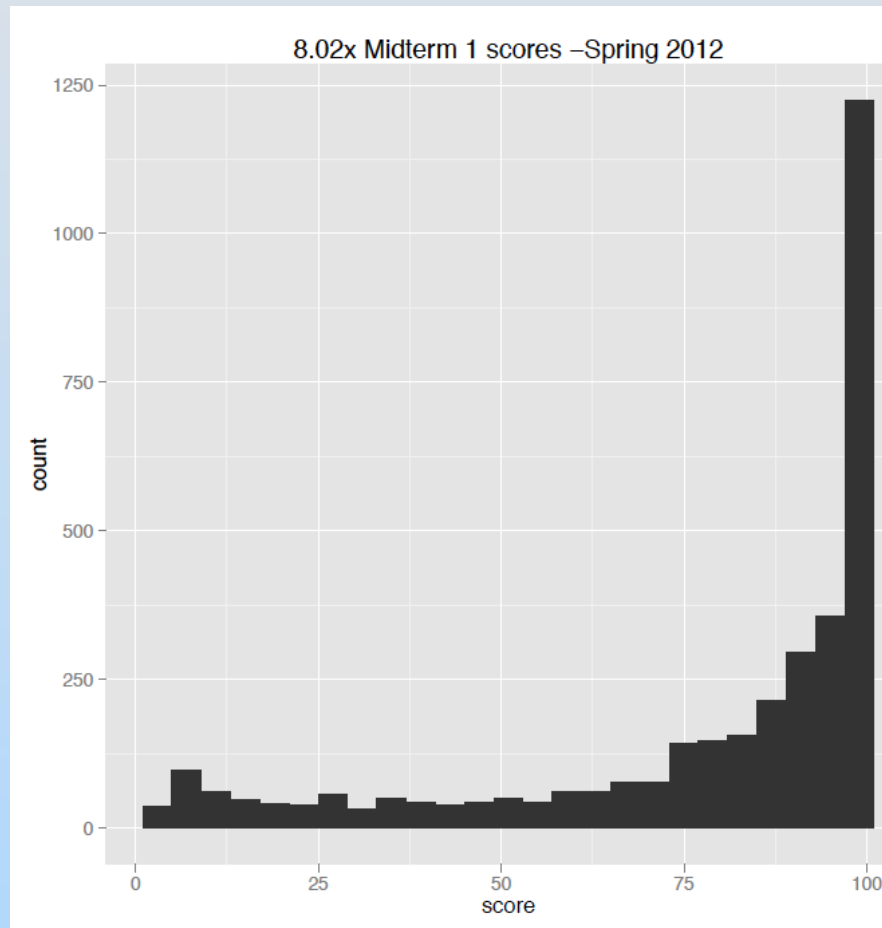
Active Students for MITx/8.02x/2013/ Spring by ed level and country



Retention Percentages for MITx/8.02x/ 2013/Spring by ed level and country



MidTerm Exam Scores



Developing MITX Courses

Small Steps

Know your audience

Recycle Content

Build community

Get Help!

Quality Control, Good is not good enough

Have fun!

Implications for Residential Education

Integrate MIT Courses with MITX course

Enhance the interactive experience of residential education

Crucial Issues for Success

- Get students to diagnose their skill set before the class begins
- Develop tutorials for students who are missing certain skills, design for retention, support materials (learning objectives and assets)
- Passive Learning/Video lectures vs. problem solving: how to facilitate this transition from passive to active learning
- Good assignments: need the right level
- Develop community Teaching Assistants
- Develop materials for future years

Crucial Issue for Success:

- Need support staff: detailed work flow, program manager,
- start-up different from steady state
- two teams: content development, platform development
- setting proper expectations
- good communication with students: office hours

Next Steps

Example: Learning Asset Library

Video Lectures

Text

Simulations

Problem Solving Videos

Concept Questions

Problem Library