MIT Institutional Research Report:
Teacher Enrollment in MITx Open Online Courses

Highlights

In the spring of 2014, 11 MITx courses gave entrance and exit surveys addressing the motivations and backgrounds of participants. Over 33,000 participants responded to the entrance surveys, a 16.9% response rate. Amongst the survey's questions, several were targeted at teacher enrollment, asking whether participants self-identify as an instructor or teacher, with affirmative responses followed by contextual questions addressing the aspects of their instruction (see Table 1 in the Appendix). These questions can be broadly distilled into the following themes:

1) Are a significant number of teachers enrolling in MITx open online courses?
2) If so, do these teachers come from traditional instructional backgrounds?
3) Do teachers completing a course desire accreditation opportunities and broader usability of MITx resources?

The exit survey aimed at course outcomes, and questions were added in order to gauge the influence of a course on current teachers (see questions in Table 1 and Table 2 of the Appendix). Note, courses in this study did not advertise directly to teachers, nor has MITx as an organization attempted to reach out to this demographic. We view the results of this analysis as a baseline for teacher enrollment. All surveys were distributed using the Qualtrics survey platform (www.qualtrics.com) and appeared along side or within the first unit of material in each course. In some courses, reminders were sent to those students having not yet completed the entrance survey.

Highlights from the questions on teacher enrollment are shown below, and a full report exploring teacher enrollment will follow.

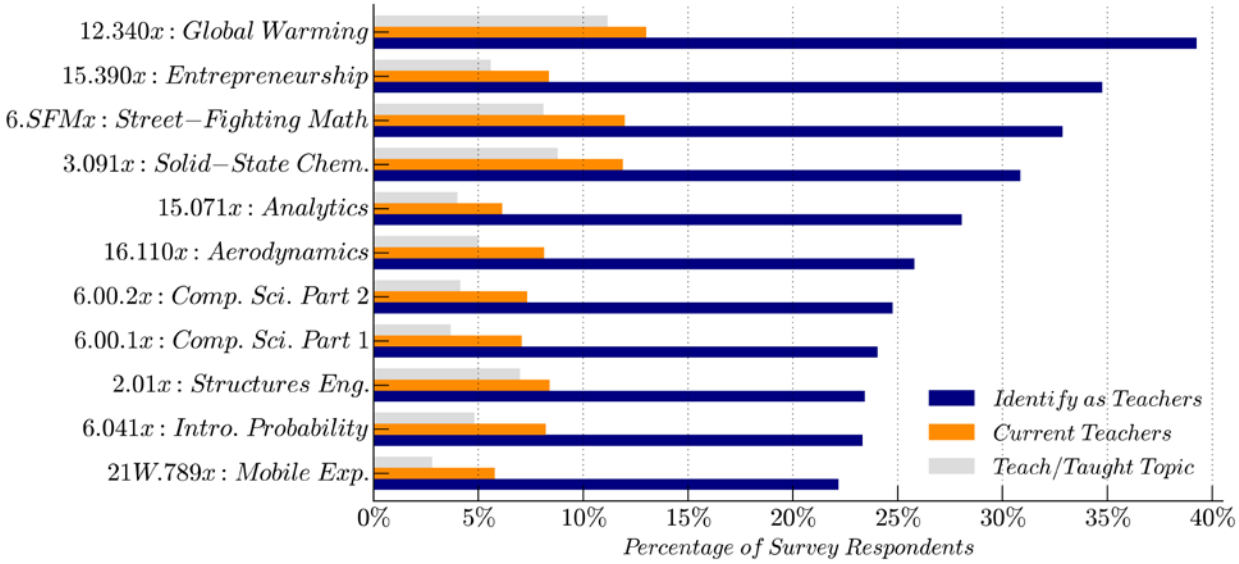
- The 11 MITx courses capture a wide range of topics from Street-Fighting Math to Entrepreneurship 101.

Course	Description	Launch Date	Course Length	Registrants by Week 3
21W.789x	Building Mobile Experiences	2014-02-04	12 Weeks	31072
6.041x	Introduction to Probability - The Science of Uncertainty	2014-02-04	15 Weeks	26569
6.00.2x	Introduction to Computational Thinking and Data Science	2014-03-05	9 Weeks	15065
12.340x	Global Warming Science	2014-02-19	12 Weeks	13047
6.00.1x	Introduction to Computer Science and Programming Using Python	2014-02-19	9 Weeks	22797
15.071x	The Analytics Edge	2014-03-04	11 Weeks	26530
16.110x	Flight Vehicle Aerodynamics	2014-03-05	14 Weeks	28653
15.390x	Entrepreneurship 101: Who is your customer?	2014-03-18	6 Weeks	44867
6.SFMx	Street-Fighting Math	2014-04-08	7 Weeks	23640
3.091x_2	Solid-State Chemistry	2014-05-12	15 Weeks	6954
2.01x	Elements of Structures	2014-06-03	12 Weeks	7705

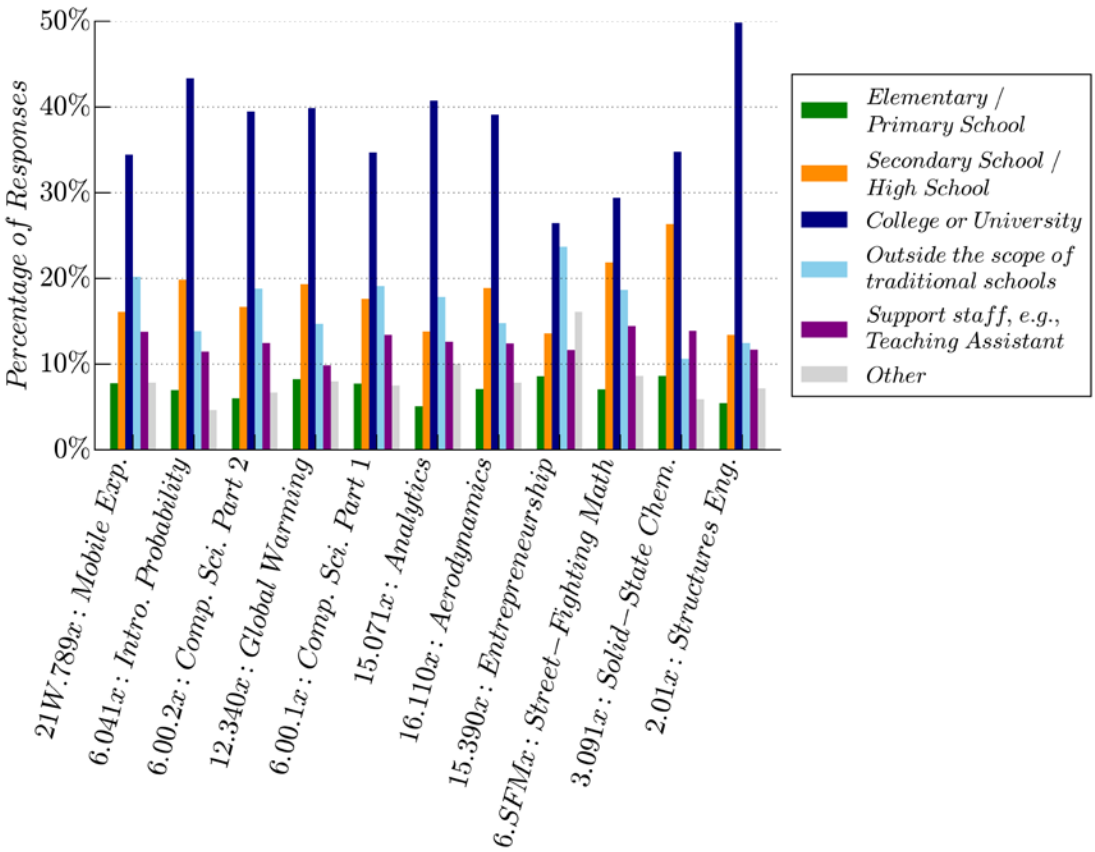
- Across the 11 MITx courses, entrance surveys indicate 1 in 4 (28.0%) survey respondents identify as teachers, while nearly one in ten (8.7%) identify as current teachers. In addition, one in twenty (5.9%) identify as having taught the course topic.

Course	**Surveyed** (Question 1)	**Teachers** (Yes to Question 1)	**Current Teachers** (Yes to Question 4)	**Teach/Taught Topic** (Yes to Question 2)
21W.789x	4217	933	242	115
6.041x	2400	553	197	116
6.00.2x	2997	739	216	123
12.340x	2458	956	318	277
6.00.1x	3997	956	280	143
15.071x	3010	838	183	122
16.110x	1709	441	139	86
15.390x	4843	1682	405	268
6.SFMx	4162	1364	499	333
3.091x_2	1639	506	195	144
2.01x	2058	483	173	144
Total	33490	9451	2847	1871
Average Percent	16.8%	28.0%	8.7%	5.9%

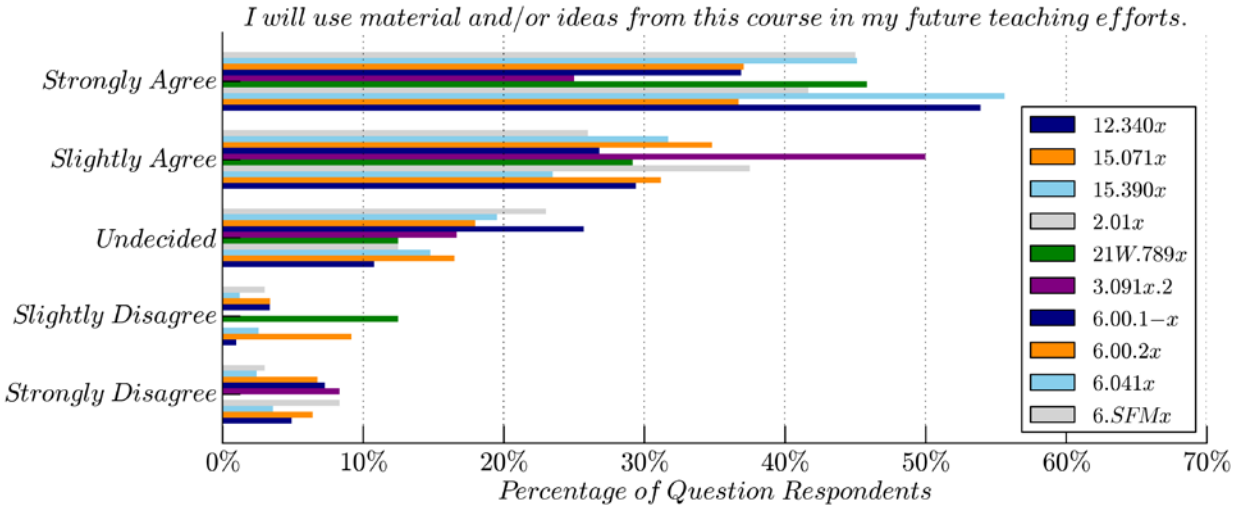
- The percentages of teachers varied between courses with Global Warming Science (12.340x) attracting the most teachers and Building Mobile Experiences (21W.789x) attracting the least.

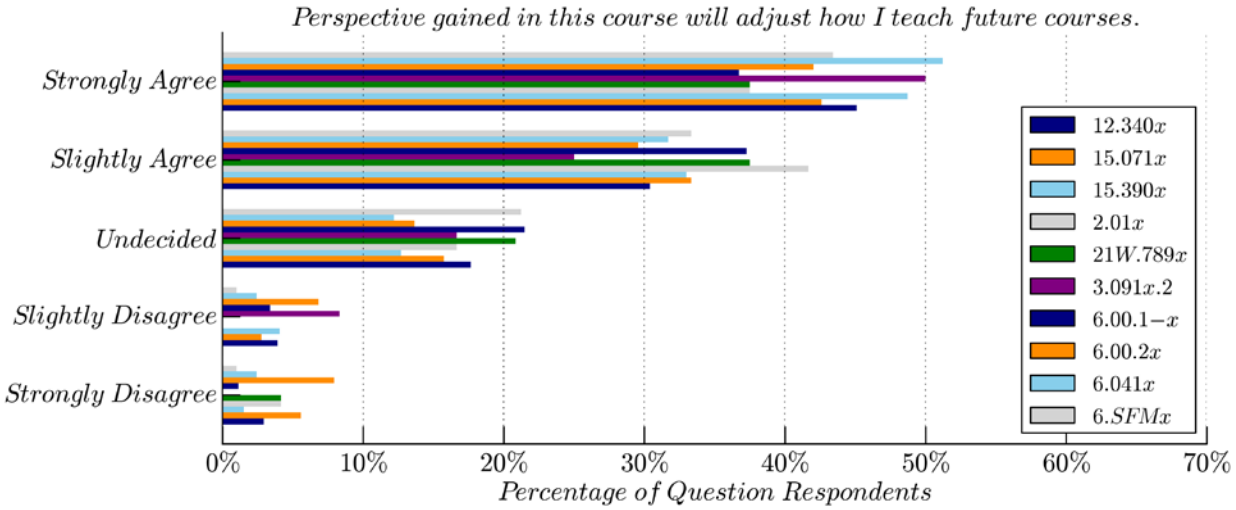


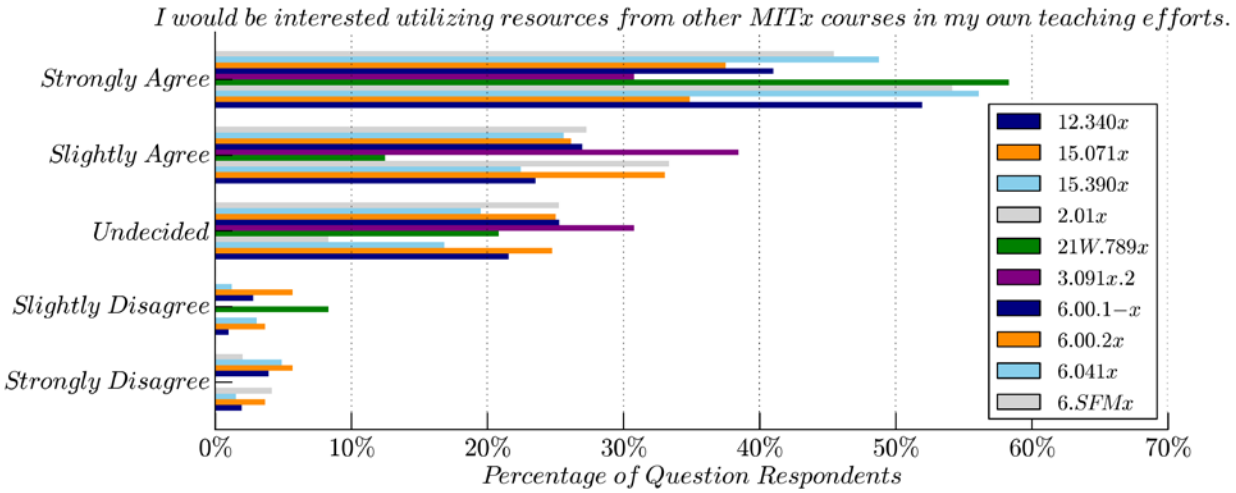
- The largest percentage of teachers came from colleges and universities (post-secondary education).



- Teachers were generally interested in taking what the learned from the MITx courses back to their classes.







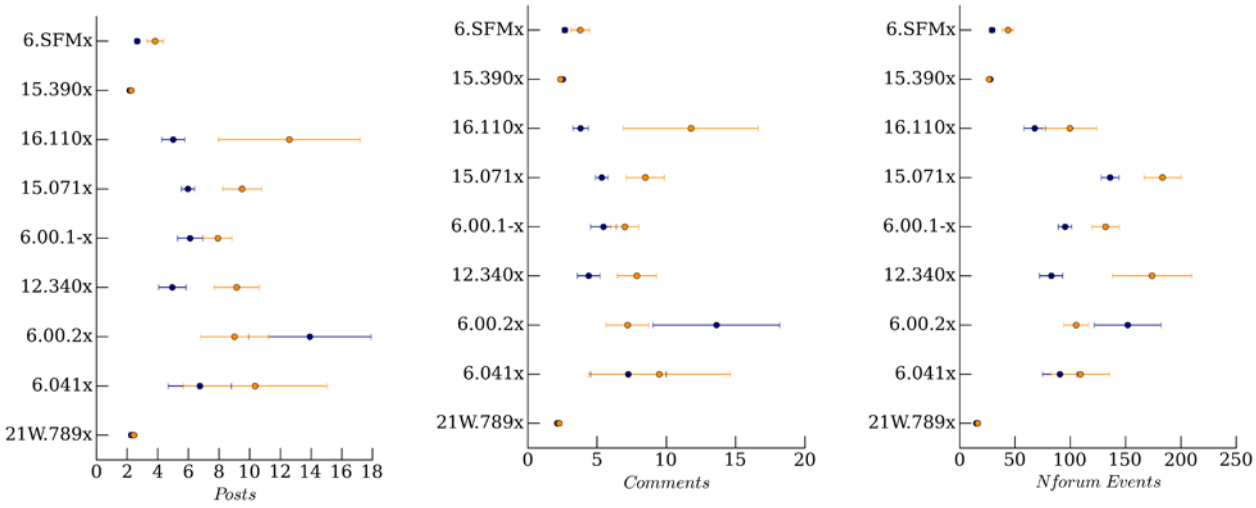
Discussion Forums

An intriguing aspect of teacher enrollment involves how this group chooses to participate in courses. In addition to survey data, a tremendous amount of participant interaction data is available. Discussion forums entries and click-stream data allow one to check if participating teachers are actively pursuing an important aspect of their profession, namely, instructing other participants within a course.

Discussion forums are the only source for social interaction data. These highly unstructured conversational hubs include help-seeking questions on problem solving, as well as course-wide introductions where participants state their country of origin and background. Only a fraction of participants are active posters (initiating a forum thread) and commenters (responding to posts); the majority of forum interactions simply involve searching through and reading posts (Huang 2014).

Participants can post (text initiating a discussion thread), comment (responds within an existing thread), and up-vote (assign one point to a thread, where total score leads to increased visibility). In addition, one can count the total number of forum-click interactions using click-stream data.

Below are the average number of posts, comments, and forum events (total clicks in the forum) for teachers (orange) versus non-teacher respondents (navy). Activity is significantly higher in 4 out of 11 courses in each category. The distributions of forum activity are highly skewed toward zero, often with a few outliers leading to significant tails toward high activity.



Appendix

Table 1: Entrance survey teacher questions.

	Question	Response Options
1.	*Are you currently, or have you ever identified yourself as, an instructor?*	Yes, No
	If Yes,	
2.	*Are you, or have you, taught material related to this course?*	Yes, No, Unsure
3.	*In what settings did your instruction take place?*	Elementary / Primary School Secondary / High School College or University Outside the scope of traditional schools Support Staff, e.g., Teaching Assistant Other (open text field)
4.	*Are you currently employed as a teacher or instructor?*	Yes, No

Table 2: Cross course average percentages of current teachers' responses to exit survey questions.

Questions	No	Unsure	Yes
	Cross-Course Averages		
Would you be interested in teacher accreditation opportunities? e.g., Continuing education units or graduate credit.	15.1%	27.3%	55.9%

	Strongly Disagree	Slightly Disagree	Undecided	Slightly Agree	Strongly Agree
	Cross-Course Averages				
I will use material and/or ideas from this course in my future teaching efforts.	5%	4.3%	17%	29.7%	44%
Perspective gained in this course will adjust how I teach future courses.	3.8%	3.1%	17.1%	33.7%	42.3%
I would be interested utilizing resources from other MITx courses in my own teaching efforts.	3.4%	3.4%	21.4%	26%	45.7%

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