

# Institute-wide Task Force on the Future of MIT Education

## Survey of MIT Students

On February 6, 2013 President Reif announced the launch of an Institute-wide Task Force on the Future of MIT Education. In his letter to the community, President Reif described higher education as being at a crossroads, and asked for the community's help to "invent the residential research university of the future."

Over the past six months, the Task Force's three working groups, which include undergraduate and graduate student representation, have met regularly to imagine the possibilities for MIT's future. Now we need to hear from you. The questions in this survey are designed to better understand how you learn, how you interact with faculty, and what educational technologies you use. The questions on digital learning are written to collect student perspectives about the potential impact on coursework, research, and professional and personal development. Your input will be essential in guiding the working groups' discussions.

The survey is designed to take approximately 15-20 minutes, although, depending on the detail with which you answer the open-ended questions, it might take a bit longer. The survey is voluntary, and you may answer as few or as many questions as you wish. The data will be treated as confidential and results will not be reported in any form that would identify an individual. Thank you in advance for your willingness to participate in this survey.

Thank you in advance for your willingness to participate in this important discussion.

### 1. Were you previously aware of the Institute-wide Task Force on the Future of MIT Education?

Yes/No

### 2. Have you ever taken any classes online, for credit or not-for-credit? Please mark all that apply.

Yes, with edX or MITx (1)

Yes, with Coursera (2)

Yes, with Udacity (3)

Yes, with other online course provider(s): (4)

No (5)

### 3. In the past year, did any of your classes (at MIT or elsewhere) include online components? Please check all of the online features your classes included and enter any we missed.

Lectures available online (1)

Interactive online problem sets or labs (2)

Online self-assessments (3)

e-books or e-textbooks (4)

Online discussion/forums (5)

Classwork turned in online (6)

Other online or interactive components. Please specify: (7) \_\_\_\_\_

None of my classes last year had online components. (8)

I was not enrolled in classes in the past year. (9)

### 4. Below are a few ways of describing the ways in which students are taught. In what type of learning environment do you tend to learn the MOST?

Classes with no online components (1)

Classes with some online components (2)

Classes that are completely online (3)

No preference (4)

Other, please specify (5) \_\_\_\_\_

Not in a position to rate (6)

### 5. In general, what type of learning environment do you PREFER?

Classes with no online components (1)

Classes with some online components (2)

Classes that are completely online (3)

No preference (4)

Other, please specify (5) \_\_\_\_\_

Not in a position to rate (6)

## How You Learn

As the Task Force on the Future of MIT Education considers new models of delivering education, we have a few questions to try to understand how our students currently learn and if students have potentially missed opportunities to learn.

### 1. Please indicate your level of agreement or disagreement with the following statements:

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)	N/A (6)
My chosen MIT degree program has the right balance of general institute requirements, departmental requirements, hands-on classes, and elective opportunities. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The options available to me in the General Institute Requirements match my educational goals at MIT. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MIT has too many General Institute Requirements. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Textbooks and other class materials should be available in online or electronic formats. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like more opportunities to take hands-on classes in my degree program. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I prefer taking classes where external speakers (e.g., industry or academic leaders) participate. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use online materials (e.g., lecture notes, video, exams, readings, including what is available in Stellar and OCW) to prepare for a subject BEFORE enrolling in the class. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I use online materials to prepare for a subject WHILE enrolled in a class. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would like more opportunities to interact with faculty outside my classes or labs. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 2. Think about the MIT subjects you have taken so far.

	Yes (1)	No (2)	Not sure (3)
Are there any subjects you would have preferred to take online BEFORE coming to campus? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>If NEW Is Equal to Returning</b> Are there any subjects taught at MIT that you wanted to take but did not, for any reason? This can include subjects with limited enrollment outside of your major or program. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>If NEW Is Equal to Returning</b> Did any of the subjects you took have external speakers (e.g., industry or academic leaders) in class? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>If NEW Is Equal to Returning</b> Have you taken MIT classes that were offered in smaller, more discrete segments/modules that were taught independently? (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>If NEW Is Equal to Returning</b> Have you taken MIT classes that you think would benefit from modularization into smaller more discrete segments that could be taught independently? (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## Skill Development

**1. The Task Force is considering proposals to provide skill and competency-based training in flexible, on-demand formats. Below is a list of some skills that could be offered. Thinking about the various skills you need while STUDYING, LIVING AND CONDUCTING RESEARCH. In which of the following areas would you want more opportunities to develop your skills? Please select up to 5 areas, and list other specific skills not on this list.**

- Communicating complex ideas in writing (1)
- Research proposal and grant writing (2)
- Technical report writing (3)
- Presentation and public speaking skills (4)
- Negotiation skills (5)
- Networking skills (6)
- Time management in work and life (7)
- How to teach effectively (8)
- How to be a good mentor (9)
- Broad and practical research skills (10)
- The basics of statistical analysis (11)
- Training in common software packages (12)
- Familiarity with widely used programming languages (13)
- Marketing skills (14)
- Management and leadership in the workplace (15)
- Efficient project management (16)
- Personal finance and accounting (17)
- Business finance and budgeting (18)
- Entrepreneurship, or "How to Start a Company" (19)
- Other (20) \_\_\_\_\_
- Other (21) \_\_\_\_\_
- Other (22) \_\_\_\_\_

**2. Do you have any proposals or suggestions for how the skills you checked above could be delivered to students?**

**3. Have you created any online tutorials or "mini-courses" for others to use?**

- Yes (1)
- No, but I would like to in the near future (2)
- No, and I do not wish to in the near future (3)

**3a. As someone who has experience with creating online tutorials or mini-courses, which skills would you recommend a new online instructor develop?**

**3b. As someone who is interested in creating online tutorials or mini-courses, which topics or skills would you like to teach?**

## Educational Technology

### 1. In the past year, to what extent have you used e-books or e-textbooks for your academic coursework?

- Used in one class (1)
- Used in a few classes (2)
- Used in about half my classes (3)
- Used in most of my classes (4)
- Used in all of my classes (5)
- I was not enrolled in classes in the past year. (6)

### 2. Have you bought the textbooks and publications (e.g., course readers) that were required for your fall semester subjects?

- Yes, all of them (1)
- Yes, some of them (2)
- No, but I plan to (3)
- No, and I do not plan to (4)
- Not applicable (e.g., not enrolled in classes) (5)

### 3. Generally speaking, which technologies, tools or methods do you wish were used LESS or MORE at MIT? Please keep use by you personally as well as others in mind.

	Much Less (1)
	Less (2)
	The Same (3)
	More (4)
	Much More (5)
	Don't know/ N/A (6)
Collaborative editing tools (e.g., Wikis, Google Docs, Adobe Connect) (1)	
Document sharing (e.g., Dropbox, Box, SugarSync) (2)	
Electronic tablets (e.g., for taking notes in class or lab, or for teaching) (3)	
Paper reference sharing (e.g., Mendeley, Papers, EndNote) (4)	
Videoconferencing or Internet phone chat (e.g., Skype, TeamSpeak) (5)	
Publication media tools (e.g., JoVE, nanoHUB, advanced PDFs) (6)	
Laser cutters, 3D printers, milling machines, or other fabrication technologies (7)	
Data visualization tools (8)	
MIT OpenCourseWare (OCW) (9)	
Freely available course content available outside MIT (e.g., Khan Academy, iTunes U, Mayo Clinic) (10)	
E-books or e-textbooks (11)	
Online portfolios or e-portfolios (12)	
Lecture capture (for later use/review) (13)	
Student response systems (e.g., clickers, wireless learning calculator systems) (14)	
Forums for online discussion (e.g., Stellar forums, Piazza) (15)	
Blogs (16)	
Online video projects (e.g., using YouTube, Google Video) (17)	
Simulations or educational games (e.g., video games, virtual worlds: Ayiti, EleMental, Second Life, Civilization) (18)	
Other, please specify (19)	
Other, please specify (20)	

### 4. Thinking about how education has evolved, what 2-3 technologies, tools, or methods could MIT provide students that you would find most useful? Please include technologies that could be used to learn, teach, advise, conduct research, or in student activities, and be as specific as possible.

## Settings for Learning and Interacting

The MIT learning experience involves several modes of interaction: lectures, recitations, labs, projects, internships, study groups, individual study, and so on which can occur in a variety of settings.

**1. Please rate your agreement with the following statement: MIT students have access to adequate space and technological resources (e.g., areas to work with seating, power sources, printers, scanners) on campus when needed.**

- Strongly agree (1)
- Agree (2)
- Neither Agree nor Disagree (3)
- Disagree (4)
- Strongly Disagree (5)

**2. During a typical week at MIT in Spring Term 2013 (Feb-May 2013) or the current Fall Term 2013, did any of the following apply to you?**

	Yes (1)	No (2)	N/A (3)
I studied from my home (e.g., dorm, FSILG, off-campus apartment) (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I brought a laptop or tablet with me to my class(es) or lab(s) (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I used an Athena quickstation or workstation on campus (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I used fabrication technologies, a machine shop on campus, or the MIT hobby shop (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I attended formal meetings with my academic or research advisor on campus (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I "ran into" my academic or research advisor outside the classroom or lab (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I "ran into" other MIT faculty and instructors outside the classroom or lab (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I communicated with MIT faculty and instructors using a mobile phone or online voice communicator (e.g., Skype, Facetime) (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I interacted with MIT faculty and instructors using other "virtual tools" (e.g., online whiteboard software, Google Docs) (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I interacted with students using other "virtual tools" (e.g., online whiteboard software, Google Docs) (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I communicated with MIT faculty and instructors over weekends or after hours (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**3. Do you have any suggestions for tools that could create or improve opportunities to communicate and network with others at MIT and individuals outside MIT?**

## Settings for Learning and Interacting

The Task Force recognizes education can occur in a variety of physical settings. We hope to understand how you use space now, and how you feel those needs may change as modes of MIT education delivery evolve.

**4. During a typical week at MIT in Spring Term 2013 (Feb-May 2013) or the current Fall Term 2013, what were the top 1-3 locations where you conducted the following activities?**

	<ul style="list-style-type: none"> <li>Attending scheduled classes or labs (1)</li> <li>Working on subjects outside class/lab on my own (e.g., problem sets, writing assignments) (2)</li> <li>Working on subjects outside class/lab with other students (3)</li> <li>Conducting research (4)</li> <li>Working as a TA or RA (5)</li> <li>Working for pay (other than TA/RA) (6)</li> <li>Extra-curricular activities (7)</li> <li>Other education-related activities (8)</li> </ul>
In a classroom at MIT (1)	
In a lab at MIT (2)	
In conference rooms at MIT (3)	
If LEVEL Is Equal to G In my office at MIT (4)	
MIT Libraries (5)	
In common space around my department/MIT (6)	
Student group offices (7)	
Using "virtual" technology (8)	
In a residence hall at MIT (9)	
At a home off-campus (10)	
Off-site, away from home and campus (please describe) (11)	
Other (please describe) (12)	
Not applicable (e.g., I am not working as a TA/RA) (13)	

**5. Do you have suggestions for 1-2 types of space MIT could provide (within reason) to help MIT students learn, communicate, and develop professionally?**

## Closing Thoughts

The MIT Community has shared a number of values and principles of an MIT education with the Task Force, with themes including: Commitment to excellence Commitment to technical depth Constant and widespread faculty/student interaction Learning by doing: hands-on experience Extensive curricular offerings Leadership training, fostering teamwork, and developing communication skills Respect for truth above all other authority Education in the service of pushing the boundaries of knowledge

**1. Recognizing this list is not exhaustive, from your perspective, which values and principles of an MIT education do you feel are most important to maintain or develop? Please list up to three.**

**2. If you could change up to three things about the way MIT educates its students, what would you change? Please list up to three.**

**3. Do you have any suggestions for how MIT can increase opportunities for faculty and student interaction?**

**4. How do you feel digital learning could benefit you as you study or do research?**

**5. Would you be willing to participate in focus groups for more in-depth discussions on the Future of MIT Education and educational technologies?**

Yes. Please enter the best email address to reach you: (1) \_\_\_\_\_ No (2)