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MIT looks to the future

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Quad 136

MIT Looks to the Future

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MIT Looks to the Future



Unless you are a college administrator or maybe a university trustee, you probably don't spend much time reading university strategic plans. And to be honest, I would not recommend giving up even a mediocre novel and replacing it with the world's best strategic plan. But if you are interested in the future of higher education, strategic plans do provide a glimpse into what different institutions think about that future. This can be especially helpful at a time when there is much debate about the challenges in higher education and uncertainty about what the future will look like. MIT's strategic planning task force recently completed its work on "[The Future of MIT Education](#)." At first glance, it is not apparent what residential, liberal arts colleges might learn from these efforts since MIT's mission is so different.

MIT is one of the world's finest research universities with an emphasis on education and research in the STEM fields. Faculty are focused primarily on graduate students and their own research. A multi-billion dollar endowment and numerous grant opportunities make MIT significantly less dependent on tuition dollars than most institutions. But for all the apparent differences, the MIT task force sees a future for its undergraduates that is in many important ways not so different than the one we are discussing at the College of Saint Benedict and Saint John's University.

The MIT task force does recognize the ways that technology might change higher education. They argue there is a strong international demand for online learning and a significant part of the report looks at how MIT can leverage its world-wide brand through its own online and blended offerings (MITx) and its collaboration with others (edX is its collaboration with Harvard, among others). But of most interest to those of us at small, residential, liberal arts colleges (SLAC) is how MIT envisions the future of its undergraduate education, also a significant part of its mission, though one that exists in the context of a R1 research university.

The first two recommendations the of the report focus on the establishment of "an Initiative for Educational Innovation" that will "engage in bold experiments to catalyze ongoing research, learning, and innovation about the future of MIT residential education." The emphasis will be "not just about curriculum, technology, and policy, but more generally about teaching."

There also seems to be a particular interest in reviewing MIT's Core Curriculum and encouraging interdisciplinarity. This Initiative is what most observers would recognize as a center for teaching and learning, which have been around for many years at SLACs, where special attention has been paid to the core or general education requirements and interdisciplinary learning.

To be fair, MIT's focus has not traditionally been on undergraduate education, but such experimentation and research on teaching is already widespread and to suggest this idea is a significant innovation is to ignore much of what has been going on elsewhere in higher education. (See for example the [Center for Research in Learning & Teaching at the University of Michigan](#) and the [Understanding Science Research Library at Berkeley](#) as well as research reported in The [Academic Commons](#), among many others.)

The recommendations that follow in the task force report focus specifically on the undergraduate experience.

The third recommendation is that “MIT build on the success of freshman learning communities and consider future expansions of the cohort-based freshman learning community model.” Again learning communities are already widespread in higher education, but, interestingly, MIT foresees a future in which cohorts learning together will be important. These learning communities could, in theory, happen online but seem to be most effective in a residential setting where students live together and interact face-to-face. (See [Virginia Tech – Housing and Residence Life](#) and [Purdue University – Learning Communities](#).)

The fourth recommendation calls for strengthening the teaching of communications. MIT hopes to achieve this in part through the use of online and blended learning, though they recognize that face-to-face interactions with faculty may be important too. I strongly suspect that research and experience will show that teaching writing and oral communication skills is a very faculty intensive endeavor, but the important point here is that MIT thinks its students need to improve their communication skills. Again, this goal is a learning objective that has long been held at SLACs who devote significant resources to the teaching of these skills to undergraduates, especially in their first year.

The final undergraduate recommendation has to do with service: “The Task Force recommends that MIT create an Undergraduate Service Opportunities Program (USOP).” The goal, beyond providing service in the community, is to have MIT students connect their service work with their academic experience. Another name for this pedagogical objective is service learning or community engagement which, again, is [widespread in undergraduate higher education](#).

The rest of the task force report focuses much of its attention on how “to extend MIT's educational impact to the world.” MIT has an enviable brand and reputation, especially in science and technology. It is clearly well-positioned to “reach a global audience” if the challenges (which they honestly note) of online education can be overcome. But the task force's discussion of strengthening the MITx and edX models focuses on extending MIT's reach and not on replacing the residential experience, of either undergraduates or graduate students.

In fact, MIT expects the on-campus population to grow. The task force asserts:

We have to reach more students. In 2013, MIT received over 43,000 total student applications for undergraduate and graduate school combined, and only 10% gained admission to their program of choice. Undergraduate applications topped 19,000, and only 8.2% were admitted. For the upcoming 2015 academic year only 7.9% of applicants were admitted. Clearly, there is a vast unmet need for access to high-quality education.

The Task Force specifically encourages MIT to evaluate possibilities for increasing its undergraduate class size so that more students can experience “the rich magic of an MIT residential education.” The issue for MIT is clearly not a lack of faith in the “magic” of a residential experience; the challenge is more prosaic—too little housing in Cambridge. (Their monks were not as wise as ours and didn't buy 2500 acres at their founding.)

The task force ends the report with some observations about the MIT economic model. Even with an endowment of roughly

\$13B, making it the 6th richest educational institution in the world, MIT has many of the same challenges other universities have. The task force specifically addresses costs:

In a market that focuses on excellence, MIT incurs high costs. These costs result from the Institute's need to attract and retain the best faculty and the brightest students, to provide premier research and educational facilities, and to perform the unparalleled research that is integral to the research university model. Providing the facilities required for our exceptional faculty, students, and researchers to advance research discovery and innovation is inherently expensive. Nevertheless, we will need to continue to invest in our world-class teaching and research infrastructure and remain competitive in recruiting top talent if we are to maintain our preeminence.

But they make no apologies for these high costs, confidently asserting that the returns to students and society are high:

This investment pays off in terms of educational outcomes. The MIT model produces outstanding students and advances knowledge in remarkable ways. MIT contributes significantly to educating some of the brightest engineers, scientists, and businesspeople of our time. Moreover, graduates from MIT perform exceedingly well in their life pursuits. These outcomes not only influence the formation of companies, job creation, patents, and inventions, but also advance the boundaries of science and engineering.

But lest one think that MIT has any “magic” to use on the economic model of higher education, among their last recommendations they suggest both expanding “fundraising activities” and evaluating “revenue opportunities surrounding technology licensing and venture funding.” While acknowledging that MIT has significantly better licensing and venture capital options than most, it should be noted that these recommendations are almost boilerplate in the planning documents of all higher educational institutions. Clearly the economic challenges of higher education are just as real on the banks of the Charles River as they are for the tuition-driven world most of us live in.

The Task Force summarizes its discussion of undergraduate education by saying:

We see a future in which the MIT residential education model is not threatened, but rather strengthened, as the Institute is guided by our core values and principles....By pursuing the Task Force's recommendations...the magic of MIT will shine even more brightly.

MIT is most certainly not representative of the 2000+ baccalaureate granting institutions, but its vision of the future is especially interesting precisely because it is not typical. MIT, with its technology focus, financial resources and world-wide reputation, is among a handful of institutions that might well dominate an online, technology driven, distance learning model of higher education. Yet the MIT vision described in “The Future of MIT Education” does not seek or foresee such a world. While MIT is not oblivious to its strengths and certainly hopes to use technology and its reputation to extend its world-wide reach, the vision for undergraduate education is one of strengthening the current residential experience and even making it more “liberal artsy.”*

The MIT future is one in which new technologies will provide additional options for some students, particularly international students who don't always have great choices now, but where the magic of MIT for undergraduates will be built on a

residential experience, one that, while not identical, sounds a lot like that provided by the finest residential, liberal arts colleges today.

*Interestingly, this MIT vision is consistent with stories colleagues and friends report of visiting R1 universities with their college-bound children and hearing tour guides describe, plausibly or not, the undergraduate experience as being much like that on a small liberal arts campus and of the increasing trend towards honors colleges inside of large public universities. (See the [Honors Program at the University of MN](#) or the [Honors College at Arizona State University](#).)

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