Four years after Harvard and MIT launched edX, their online-course venture, in May 2012, MIT scholars have published “Online Education: A Catalyst for Higher Education Reforms,” a review of the field.

Its lead authors—Karen Willcox, professor of aeronautics and astronautics, and Sanjay Sarma, Flowers professor of mechanical engineering and the institute’s vice president for open learning—look beyond the massive open online courses (MOOCs) that attracted so much hoopla when edX was conceived. They focus instead on education and learning more broadly, and the implications for campus classrooms.

That emphasis is especially notable for two reasons. First, in the wake of MIT’s broad strategic embrace of new approaches to learning (see “What Modularity Means for MOOCs,” harvardmag.com/mit-edx-16), two-thirds of its undergraduates are reported to have taken courses that incorporate the edX interactive instructional software. Second, underwriting MOOC technology both for free use by self-motivated learners around the world and for its application in classrooms on this residential cam-

Illustration by Mark Steele

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pus remains one of the foremost rationales for Harvard’s own investment (see Provost Alan Garber’s perspective in “Teaching and Learning: Taking Stock,” January-February, page 24). To date, it has been challenging to determine how to encourage such adoption, and to assess the effects.

The MIT authors emphasize that online courses will not supplant teachers: “Rather, we believe that the value of in-person education can be enhanced by blending in online experiences.” They outline a “dynamic digital scaffold” of “instrumented” learning, assisted by, for instance, interspersing videos with “interpolated testing”; spaced practice with material introduced days, weeks, and months earlier; designing problems to become more challenging as students’ skills broaden; and adapting course content to each learner’s needs. The aim is to “support teachers and allow them to free up time from conveying content to focus on high-value in-person interactions with students,” in a truly blended approach to learning.

To support such pedagogy, the MIT authors advocate systematic, interdisciplinary research on education, learning, cognition, and neuroscience. To bring those discoveries into teaching, they propose that universities cultivate as a profession the “learning engineer.” In contrast to current “learning designers,” who apply digital technologies to course content, they envision postdoctoral professionals with both Ph.D.-level command of a substantive discipline and immersion in learning science and technologies for classroom use.

These general findings resonate with other MOOC-related developments. For-profit MOOC distributor Coursera recently put its courses on a new platform so they can be offered nearly continuously, rather than only at limited, set intervals that mimic semester-based campus courses. President and co-founder Daphne Koller told The Chronicle of Higher Education that students who enroll in MOOCs “know their own mind [and] what they’re looking for” is very different from the current campus experience. “They’re looking for shorter, more-to-the-point modules of knowledge...for things that have direct relevance to the problems that they’re trying to solve...” Because “MOOC students have the option to walk away,” they cannot be taught in the same way as on-campus learners. But the Coursera and edX technologies, of the sort the MIT report covers, suggest to Koller that “maybe what we should be pro-

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John Adams at Harvard
What he learned, and what he made of it

Editor’s note: As early-action applicants to the College class of 2021 anxiously await a response, the account of an admissions ordeal in 1751 may offer perspective. Richard Alan Ryerson ’64 includes the passage in his new book, John Adams’s Republic: The One, the Few, and the Many (Johns Hopkins), as background on the future president’s intellectual development. The author is former editor in chief of The Adams Papers at the Massachusetts Historical Society and former academic director and historian of the David Library of the American Revolution.

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In the summer of 1751, an anxious 15-year-old set off from Braintree on the 12-mile route to Cambridge. His schoolmaster had promised to accompany him to his admissions exam at Harvard College, but was indisposed that morning. Our subject picks up his story:

terrified at the Thought of introducing myself to such great Men as the President and fellows of a College, I at first resolved to return home: but foreseeing the Grief of my father and apprehending he would not only be offended with me, but my Master too whom I sincerely loved, I aroused myself and collected Resolution enough to proceed….Arrived at Cambridge I presented myself…and underwent the usual Examination by the President Mr. Holyoke and the Tutors….Mr. Mayhew into whose Class We were to be admitted, presented me a Passage of English to translate into Latin. It was long and casting my Eye over it I found several Words the latin for which did not occur to my memory. Thinking that I must translate it without a dictionary, I was in a great fright and expected to be turned by, an Event that I dreaded above all things. Mr. Mayhew went into his Study and bid me follow him. There Child, said he is a dictionary, there a Grammar, and there Paper, Pen, and Ink, and you may take your own time. This was joyful news to me and I then thought my Admission safe. The Latin was soon made, and I was declared Admitted…

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The staff of Harvard Magazine mourns the loss of Laura Levis, who contributed significantly to our efforts to serve readers online and through social media, while also writing articles on a broad range of subjects. We were privileged to work with her from 2011 through this past spring, when she moved to the University’s public affairs office. The death of a young colleague, following a sudden, severe asthma attack, is particularly painful. We extend our heartfelt condolences to her husband, parents, and entire extended family.

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Portrait of John Adams by Benjamin Blyth, ca. 1766
Courtesy of the Collection of the Massachusetts Historical Society