These days, observations about online learning have a very short half-life. I feel this very acutely in rereading Taylor Walsh’s overview of efforts to share course materials online, *Unlocking the Gates*, winner of this year’s Phillip E. Frandson Award for Literature. I was invited to provide reflections on the book, which was published in mid-2011, in November of last year. For those of us in the open education space, that already seems like a bygone era.

The intervening months have witnessed—in rapid succession—the completion of the first three Stanford massive open online courses (MOOCs), which collectively enrolled more than a quarter of a million students; the subsequent creation of two organizations to offer similar courses—Stanford’s Coursea and independent spin-off Udacity; the announcement of MIT’s entrant into the space, MITx; and edX, the related partnership between MIT and Harvard to build a platform to support MOOCs.

The developments, dizzying as they are, don’t render Walsh’s book obsolete, but they do dramatically change the context in which it must be read. The book is a series of case studies of leading “online courseware” efforts, as Walsh describes them, that emerged beginning more than a decade ago, including commercial efforts AllLearn and Fathom.com; OpenCourseWare efforts at MIT, Yale, Berkeley, and India’s IITs; and Carnegie Mellon University’s adaptive-learning site, the Open Learning Initiative (OLI). In the interest of full disclosure, I was interviewed extensively for the book in my capacity as the External Relations Director for MIT OpenCourseWare.

*Unlocking the Gates* stands as an important documentation of the state of play of the open-education field at a pivotal moment. The efforts to share educational content online, either openly or for profit, were enabled by the
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Internet’s fundamental and arguably most powerful capability, the ability to share content globally at almost no incremental cost. The for-profit efforts described in the book included some nascent interactive components, but predated the emergence of Web 2.0 technologies as we know them today. Only Carnegie Mellon’s Open Learning Initiative went significantly beyond the provision of educational content to include cognitive tutors that could assess learning and provide feedback to learners. The OpenCourseWare projects—MIT OpenCourseWare, Open Yale Courses, webcast.berkeley, and India’s National Program on Technology Enhanced Learning (NPTEL)—were all efforts to share course materials (or lecture videos) explicitly in the absence of interaction and assessment that might create a robust learning experience.

The book begins with a review of two early for-profit online learning consortia that emerged in the online courseware space, Fathom and AllLearn. These efforts were both started around the year 2000 and to a certain extent reflected the Internet-bubble optimism of that era. Fathom, initially started by Columbia University, and AllLearn, co-created by—among others—Oxford, Princeton, Stanford, and Yale, both represent strategic attempts by these universities to test the market for noncredit online learning. The details differ somewhat, but in both cases the programs discovered the production costs were high, the market at the offering price was smaller than anticipated, and the for-profit approach was at odds with the ethos of the academic community. The programs both likely would have seen more success had academic credit been offered for completion of the courses, but the universities involved all felt this was a bridge too far.

MIT OpenCourseWare, the effort by the Massachusetts Institute of Technology to publish the core academic materials—including syllabi, lecture notes, assignments, and exams—from all of the Institute’s courses freely and openly on the Internet, is chronicled next. Here one shortcoming of Walsh’s approach becomes apparent, as the sequential presentation of the case studies tends to imply that the lessons from one program were fully understood by the next. While Fathom and AllLearn may have sparked MIT’s efforts to understand its role in the online space, it was far from clear when MIT announced OpenCourseWare that Fathom and AllLearn would not be successful. The free and open model MIT pursued, though, has attracted a large audience, with more than 125 million people worldwide accessing materials drawn from more than 2,100 MIT courses. The book provides an excellent overview of MIT’s decision-making process.
in proposing the OpenCourseWare effort, as well as the current state and financial outlook for the program.

Whereas MIT OpenCourseWare chose to avoid the issue of online learning by publishing classroom materials in the absence of interaction and assessment, Carnegie Mellon’s Open Learning Initiative—profiled next—takes advantage of CMU’s rich expertise in adaptive learning to create online learning experiences of remarkable depth and richness, albeit for a much more limited number of courses. These twelve courses use digital cognitive tutors to assess student mastery and provide feedback, and have received significant critical acclaim from experts in the field. For a variety of reasons discussed in the profile, including production costs, limited marketing budgets, and lower levels of institutional support, the courses have attracted a somewhat lower level of usage that the Carnegie team would have liked, but among all of the programs described in the book, OLI is perhaps the clearest harbinger of the changes to come in higher education.

The book is rounded out by a series of three profiles of other OpenCourseWare efforts: Open Yale Courses, launched in 2007, which seeks to provide high-end video recordings of selected Yale courses; webcast.berkeley, which began as a webcast for Berkeley students and happened to generate an external following; and the National Program for Technology Enhanced Learning (NPTEL), a program designed to share the expertise of India’s IIT faculty with the country’s mid-tier universities. These three profiles taken together illustrate the breadth of purposes to which open sharing of educational resources can be applied, and show why OpenCourseWare can be best understood as a form of educational infrastructure that supports a wide range of purposes including public relations, enhancement of the campus experience, and systemic improvement of educational systems.

Unlocking the Gates is impressive in both scope and depth, and represents a tremendous amount of work on Walsh’s part over a number of years. It would not be fair to fault Walsh for not capturing the full scope of the online courseware movement, but there are groundbreaking efforts that were not profiled, including MERLOT, Connexions, and the Open University’s OpenLearn site. It’s also worth noting that the book gives the impression that the field of online/open courseware is the province of elite US institutions, which is far from the truth. The OpenCourseWare Consortium (http://ocwconsortium.org) includes more than 280 universities and organization worldwide that have collectively published materials from over 21,000 courses. Significant centers of activity within the consortium
include China, France, Japan, Korea, Turkey, Spain, the United Kingdom, and Latin America—just hinting at the international breadth of the movement. In the United States, significant numbers of community colleges and a handful of state universities are involved.

The programs that are chronicled, though, provide important context for anyone seeking to understand the new generation of massive online learning offerings, and Walsh’s treatment of them is exhaustive and even-handed. Walsh examines the model for each, the challenges encountered, the outcomes, and each program’s sustainability. Perhaps the most significant weakness to Walsh’s work is that in creating a comparative work, she continually blurs the line between online courses and online courseware, tending to evaluate all projects along the single axis of effectiveness as a learning tool. While this may be the common ground shared by all of the projects, only AllLearn, Fathom.com, and OLI purported to offer learning opportunities; the other programs provide educational resources that serve a much wider array of purposes.

That these OpenCourseWare resources have proven to be effective opportunities for independent learning is a fascinating discovery with important implications that should be better understood, but it does a disservice to these programs to compare them on only this basis to programs designed to specifically support learning directly. The comparison ignores, for instance, that some 60 percent of the documented usage of MIT OpenCourseWare is not independent learning, but rather as a reference tool by educators for designing educational programs, courses, and materials; by learners in planning formal study at traditional universities; by working professionals in tracking field developments and completing a work-related project or task; and for a host of other uses that treat the site more as a reference like Wikipedia than as courses to be taken beginning to end.

What is consistent for me between these projects and the subsequent MOOCs at Stanford and MIT is that they are all in one way or another institutional answers to the question MIT president Charles Vest posed in 2000 to the committee that ultimately recommended MIT OpenCourseWare: How will the Internet change education, and what should our university do about it? That charge has echoed throughout the open-education community in the last decade as schools continue to grapple with these fundamental issues, and with the emergence of the newest generation of open online offerings, MOOCs, these questions take on increasing urgency.
Education is more fortunate than many industries in having additional time to try to understand these questions. Industries that are more purely based on content—music, movies, television, journalism—are all in the midst of wrenching transformations brought on by the Internet’s capacity for low-cost distribution. Because content is just one part of an educational experience, education has been less exposed to the impacts of the Internet. However, Web 2.0 technologies have matured, and learners have become accustomed to their use, enabling educational interactions to join educational content on the web. Artificial intelligence and adaptive learning technologies—including those pioneered by Carnegie Mellon University—are also allowing the Internet to deliver another key component of education, assessment.

With the arrival of robust interaction and assessment on the Web, educational organizations now ignore the Internet at their peril. It’s still not the case that these MOOCs offer an equivalent experience to full-time enrollment in a traditional campus based program, and it probably won’t be the case for some time, but that may be beside the point. These courses offer an educational experience that scales massively, an experience in which a handful of instructors can serve hundreds of thousands of students at no cost to the learner. In a world where many people have no educational opportunities whatsoever, these courses don’t need to be better than live instruction, they have to be better than nothing, and these courses are. That will be enough to keep them going, and over time, they will get better.

One of the key insights of MIT OpenCourseWare’s experience has been the enormous number of independent learners that end up being Walsh’s basis for comparing MIT’s project to the others in Unlocking the Gates. As I said before, these learners were not the intended audience for our OCW program. MIT set out to provide a resource that would help improve traditional educational systems, a tool for educators to create materials for their own classroom. Along the way, we discovered a huge unmet need for informal learning opportunities that wasn’t being served by the for-profit distance-learning market. Each month, some 400,000 such learners come to our site alone.

This unmet need likely buys the education field a little more time. Scaled online learning can expand outward considerably before it becomes a direct competitor to campus programs. Scaled educational opportunities also depend in critical ways on campuses where the best teachers, students, and researchers in the world come together. There is, however, little doubt that
change will come to higher education, and soon. The questions confronting educational institutions are the same as the ones Dr. Vest articulated ten years ago. What has changed is the urgency with which the questions must be answered.

If the history of the Internet is any indication, we can expect a defensive effort by educational institutions, fought mostly through litigation, lobbying, and legislation. Music, film, television, and to a lesser extent journalism have all gone down this path, primarily using copyright as a defense against the Internet’s capacity to distribute content widely and cheaply. Education will not have such an easy recourse—in many ways copyright is at odds with the goals and ethos of education, but more critically, education is not simply content that can be protected with copyright. This may force educational institutions to be more forward thinking about how campus instruction and the new scaled educational offerings interact, and what the new business models will be for education in the digital age.

In this regard, *Unlocking the Gates* is an inspiration, sharing how even early on universities began confronting rather than denying the impact of the Internet. Certainly the institutions involved have developed a competitive advantage by accruing experience in this new space. But that experience, through books like Walsh’s and as shared through organizations in the open educational space like the OpenCourseWare Consortium, is an open resource for all institutions to learn from. And it couldn’t come at a more crucial time. 📚