Miller Singleton, a high school student, recently produced a video that shared her vision of a program in which learners could use materials from the MIT OpenCourseWare (OCW) initiative to obtain a college degree. She calls the program the Open Content Educational Program: “OCEP is a program that is offered to high school seniors that gives them the information needed to use the [OCW] if they cannot afford or are not able to go to college. With this program comes a new era of college students that are educated with technology and that are able to get a college education and ultimately a good job. . . . Open content technology is changing lives.”
The fact is, open content is not yet changing students’ lives because there are questions that should be answered first:

- How can sources of open content be vetted, rated, and evaluated?
- How can conversations and learning experiences evolve around open content?
- Do students have the skill sets to use these learning environments?
- Are the dominance of the English language and the lack of accessibility for those with disabilities creating additional hurdles?
- Can learning through open content be validated?
- Can content area experts emerge from open content environments?
- Can colleges and universities continue to fund open content initiatives without receiving compensatory payback for their contribution to learning at large?
- Should future technological innovations that more closely connect humans with the rote knowledge of the Internet redefine the content that is being delivered?

Open students want to learn and peruse the landscape and need to have validated proof of their learning. However, with unaccredited organizations selling diplomas and with the proliferation of charlatans free of peer accountability, seasoned educators know that we must progress toward a true model of open education—but with boundaries that preserve and increase excellence in education. As John Hagel III, John Seely Brown, and Lang Davison note in *The Power of Pull*: “On one hand, we can’t make progress without first making sense. The myriad of surface changes can quickly distract and disorient us. On the other hand, making sense will not help us unless we can use our understanding to craft a journey that will honor where we are today and help us to make progress in measured and pragmatic steps.”

MIT’s OCW has emerged as one of the leading sources of open content, but as online content increases exponentially, how can a prospective student determine the quality of various sources? Although the sources are free, students are spending a valuable, finite resource: their time.

**Conversations and Learning Experiences**

Should listen-only lectures and read-only texts be considered the sole means of knowledge acquisition? Good educators know that conversations between students and teachers create symbiotic learning experiences as questions are asked and answered together. Team projects force group members to apply learning in real-world environments while they learn to collaborate and get along. The best learning is participatory, but open content today is mostly one-way. How can students find groups with a quality and intent level that matches their own?
A Typical Open Student

Miller Singleton is in high school. She is typical of the open students that colleges and universities will be enrolling in the near future. The following are some of her experiences from the eighth through the tenth grades.

8th Grade
Miller learned to type over 70 words a minute in a keyboarding course, she joined the private Ning group for the class and learned to blog, and she created a keyboarding video about how to “learn to type” using the correct technique.

9th Grade
In the first week of school, Miller learned to use her cell phone to Google definitions and language translations as well as manage her calendar and to-do list. In the second week of school, she learned to build her PLN (personal learning network) using iGoogle, which included her Google calendar, her to-do list, and resources relating to her other subjects. In the third week of school, she was collaboratively writing a wiki and using the Diigo group to research and annotate current digital citizenship topics. She collaborated with students from seven different countries on the Digiteen project in this year (http://digiteen2008.wikispaces.com/Digital+Etiquette), and her “offline action project” was to use virtual worlds to teach children about safety. She and the other students on her team created avatars in Google Lively and used them in a scripted activity to teach students about online safety. They had some students “hide” in the library and operate some of the avatars in the role of a “friendly stranger” (a friend who is playing the role of a stranger to help a child role-play) to attempt to “trick” the middle-schoolers into revealing inappropriate information.

When Google decided to shut down Lively, Miller and her friends held a protest in Lively and created a blog, the Digiteen Dream Team (http://digiteendreamteam.blogspot.com). Their writing garnered some coverage on major blogs, and when Lively shut down anyway, the students were given the opportunity to continue their dream using OpenSim on Reaction Grid. They learned how to monitor their blog statistics, how to comment on backlinks to their blog, and how to augment their feed using Feedburner. They created Digiteen Island on Reaction Grid as a place to teach digital citizenship. They documented their work on the wiki and via their YouTube (http://www.youtube.com/user/digiteendreamteam) and Ustream channels. (http://www.ustream.tv/recorded/11276666). They were recognized as OpenSim Pioneers by Leon Cych in the United Kingdom and were interviewed in-world and via Skype (http://www.l4l.co.uk/?p=592).

That spring the NetGenEd Project hosted its awards program on Reaction Grid, and Miller and her friends mentored people from around the world, helping them prepare their avatars. While all of this was going on, Miller used more than fifty different software programs and web apps including open-source cloud computing tools and a full suite of offline programs from Adobe and Microsoft. All of this was documented on her efolio on the wiki.

During the year, after her writing and blogging with Digiteen, Miller was offered the opportunity to write for Terry Freedman, a leading blogger and educational technology expert from the United Kingdom. For three months, Miller wrote the column “Ask Miller!” (http://terry-freedman.org.uk/artman/publish/article_1508.php), answering questions about education and technology from people around the world. She was among six students in the class that year who had their stories told through publishing or videos. Miller used Skype to talk with Terry during her study hall time, with teacher supervision, and wrote on the weekends.

At the end of the year, Miller participated in the immersive Flint River Project in the literature and photography group. She used her cell phone to take pictures and upload them to the Flint River Ning group to encourage preservation of the river. She used her video camera to shoot video documenting the week and was one of the student presenters to the middle and elementary schools reporting on “the River Writers” and their activities at the Flint River (http://flintriver.ning.com/video/the-river-writers?xg_source=activity).
Miller participated in the Flat Classroom Project in the fall. She worked with students around the world studying the trends in Thomas Friedman’s *The World Is Flat* (http://flatclassroomproject.org/Mobile+and+Ubiquitous) and applying concepts from Dan Pink’s *A Whole New Mind* to a video story (http://flatclassroomproject.ning.com/video/millers-flatclassroom-video), which she crafted with an outsourced clip from a student in another country. She used another Diigo group to annotate and collaboratively write on the wiki with her partners.

In December, Miller created her own site on Weebly to hold her efolio of work including her videos, writing, and goals and aspirations. She also made pages for her softball and basketball activities in case she decides to pursue playing at the college level.

In February, Miller and her classmates led the India Immersion project, in which Grades 3–8 “followed,” using technology, the seven students and two teachers who went to India to the Flat Classroom Mini-Conference 2010. She led the middle school blogging group, using Class Blogmeister. She developed a thirty-minute course on blogging netiquette, ethics, and privacy and presented it to the middle school group, helped set up all of the IDs, and coordinated the permission forms with a classmate. She taught the teacher how to monitor the blogs and helped the students learn how to embed video on their blogs. Other classmates led groups working with Skype, Voice-Thread, and video documentaries. Over one hundred blog posts were posted during a one-week period as Miller led the implementation team.

In March, Miller and her classmates presented at a librarians’ technology conference at Valdosta State University. Miller chose to present about blogging using Class Blogmeister, while her co-presenters discussed using Ning as a way to communicate (http://digiteenatsvu.wikispaces.com/Nings+and+Blogging). In April, Miller began working with the NetGenEd Project. She again collaborated with students around the world, using a Diigo group and the project wiki to research and write about open content (http://netgened2010.flatclassroomproject.org/Open+Content). She created a video on how a formal program should be created to allow students to demonstrate their learning using open courseware (http://grownupdigital.ning.com/video/wide-open-learning).

Miller is a typical open student. She is well versed in how to communicate and collaborate with students from every part of the world, many of whom are her friends on Facebook. She can discuss the leading trends in technology, she has a firm grasp on the use of technology tools, and she can create artifacts in any type of media.

Miller is one in a class of only twenty-three students in a small rural town in Georgia. As their technology teacher, I interviewed these students on the last day of school about the strengths and weaknesses of the course. Hope, one of the students, said: “We learned more and the class was at its best when we didn’t use the textbook. We were better just using the Internet, and we learned more—when you just opened it up.”

For the open student, the world is the classroom.
The Skill Sets of Successful Students
Curtis J. Bonk asks: “Might there be two distinct forms of humans walking this planet during the coming decades: those with extensive online educational opportunities and the skills to continue learning online, and those without such skills and experiences?”

PLN (Personal Learning Network) Construction
Students should know how to use RSS readers, e-books, and online tools to “pull” people and resources related to the topics at hand into their learning dashboard. Hagel, Brown, and Davison define pull as “the ability to draw out people and resources as needed to address opportunities and challenges.” How can students take advantage of the serendipitous learning experiences that happen naturally on college and university campuses without effectively creating their own personal learning network?

Technology Fluency
Technology tools are evolving rapidly; however, user manuals are largely online, and upgrades must be done by the users themselves. How can students get help on every click without being fluent at learning new technology?

Collaborative Capabilities
Working with others is often done online: from editing Wikipedia (http://www.wikipedia.org/) to contributing to the Encyclopedia of Life (http://www.eol.org/), learners must also be collaborators. How can open students collaborate without understanding tools such as wikis and content management systems and without knowing how to communicate effectively with other collaborators?

Transparency
A character in Steve Farber’s book Greater Than Yourself states: “Nothing will flow unless there is trust present between people.” Many educational networks have been bombarded with “trolls” who hijack conversations and content to promote themselves and their products. Such users have often stymied the growth of previously burgeoning networks of discussion. Should students in open content learning spaces understand effective behaviors to mitigate those who are exhibiting troll behaviors and understand the ethics of full disclosure?

Digital Citizenship
How can students create and use content without understanding copyright, netiquette, privacy protection, e-commerce, and the other issues and social conventions necessary to effectively interact on and use the Internet?

Focus
According to a 2005 study published in the Journal of Experimental Psychology, people overestimate the amount of time they think they have in the future to get things done, leaving them with overbooked calendars and more incomplete commitments. A Times magazine article stated: “When a New York Times reporter interviewed several recent winners of MacArthur ‘genius’ grants, a striking number said they kept cell phones and iPods off or away when in transit so that they could use the downtime for thinking.” Will students who cannot accurately determine the amount of time they have to spend on learning and who cannot turn off distractions be able to focus and learn in a self-directed way from open content sources?

The Language of Learning
Although less than 25 percent of people worldwide speak English, the dominant language of open content is English. How can non-English-speaking students take advantage of these resources? Likewise, many web technologies (e.g., Adobe Flash Player) are not “friendly” to those with disabilities. With open content often being created by web technology amateurs, how can those with disabilities access and use the content? Will they join a course only to find that sources of information are blocked to them and there is no way of reporting it?

The Diploma of Doing
With resources such as CheatHouse (http://www.cheathouse.com), can those who verify learning continue to trust that the content created by students is original? Without student interaction and engagement, can educational organizations verify content knowledge and learning? Should students who invest hundreds of hours learning content through open content portals be allowed to prove learning and receive credentials for their work?

Amateur Experts Rising
Formal education is competing against the invisible racehorse of excellence in amateur learning. What happens when a person achieves a multiple-Ph.D.-level education as evidenced by his or her work but doesn't have the formal education to match? When these content area experts emerge from the open content movement, will the world take notice and realize that existing educational institutions have ceased to measure learning effectively? Will this result in a shift in funding, and will the very columns continue learning online, and those without such skills and experiences?”

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holding up the ivory towers of educational excellence crumble?

Funding the Future
Will colleges and universities producing open content adopt the model currently used by recording artists and moviemakers to extract compensatory benefit from the content they are producing? Can the institutions and foundations generously funding the open content movement survive without such compensation? What happens when open content cannibalizes the very institutions that gave it birth?

Connecting “the Net” with the Neural Net
As “the Net” becomes more closely connected with the human neural net, will rote learning and knowledge become less important than the understanding of process and problem solving? Can current open content delivery methods shift to provide environments that will produce educated decision-makers at a time when information is as easily accessible as a thought pattern?

The future of the “open student” is directly related to the willingness of those of us in both secondary and higher education to openly discuss these questions. Finding the answers will allow us to jump these hurdles to the future of learning. These are a few of the questions. Which people and organizations will answer them?

Notes
The greatest Socratic teacher I’ve ever known, Dr. Phil Adler, Professor Emeritus of Strategic Management with the Georgia Institute of Technology, is my inspiration for this article, which is dedicated to him. Dr. Adler taught me to question the status quo, to be unafraid to answer my own questions with experimentation, and to progress toward the future hand-in-hand with other Socratic students of the future of mankind.


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