

Will the iPad Revolutionize Education?

Yes

It's true that the iPad brings many of the same functionalities to the classroom that the laptop does: 24/7 access to multimedia and information, wireless Internet connectivity, and portability. As such, some view the iPad as simply a replacement for the laptop. But the tablet is truly a new platform for classroom computing.

And we've proven it at my school, Marymount School of New York. The iPad gave us the opportunity to transition from long-term projects that incorporated software-specific projects with a steep learning curve to smaller-scale, app-based learning activities. We also view the iPad as a creation tool as opposed to a consumer tool and focus on what the iPad can do instead of on its drawbacks.



Eric A. Walters

Consider Writer's Studio, an app our second grade science class used for a unit on earthworms. Our lower-school science specialist was able to "test drive" and learn the app in less than a day, and the learning curve for the students was

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While walking the aisles at the Texas Computer Education Association (TCEA) conference this year, I bumped into an old colleague, an ed tech and educational publishing veteran escorting a visitor from Europe. "What's hot at the conference?" she asked. "It's all about iPads and other mobile devices," I replied. "What new applications should we be sure to see?" she pursued. I paused. "So far, I haven't seen much that stands out," I finally had to confess.

Sure, there's a lot of excitement. Tablet devices such as iPads are cool technology. Ed tech suppliers are scrambling to make existing programs run on iPad or Android, and due to their portability

and the "wow" factor, a lot of educators will probably start using them. Of course, at that point they'll have the same programs they had before, just more portable. In some cases, that will be an improvement. But "improvement" isn't "revolution."



Michael Baum

Pardon me, but I'm skeptical. Maybe it's my age; I've

considerably lower than it would be for a typical software program. The students produced a book on their earthworm experiments that included text, images, and audio—three modalities in one for a \$2.99 app! And teachers can use the technology as a “book in their pedagogical library,” as it supports the curriculum but does not drive it.

The iPad also allows teachers to experiment with technology with ease. During the summer of 2010, we selected 25 faculty to be iPad Innovators. The teachers received an iPad for the summer and a challenge to redesign their curriculum with whatever apps they wanted. For less than \$200, our faculty developed innovative and creative learning activities for their classes using the tablet. Occam’s razor suggests that this type of success would not have been possible or immediate with a substantive investment in subject-specific software.

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The iPad also allows for portability and kinesthetic interaction that a laptop cannot provide. This fall, our 10th grade studio art teacher wanted her students to sketch the “Big Bambu” exhibit at the Metropolitan Museum of Art. We gave each student an iPad with the Sketchbook Pro app installed. Using her finger, she could sketch one aspect of the exhibit. No need to bring pencils and a sketchbook! Each student started his or her own digital art portfolio, and the teacher easily collected everyone’s assignment. After incorporating the students’ reflections, we produced an e-book of their work.

In the lower school, students are developing their visual and spatial skills. Our first grade assistant teacher, using Doodle Buddy, had each student sketch one room of our school building. After

completing their sketches, the students arranged their iPads to form a 3D map of the school. Students have also arranged the iPads to form a historical timeline and to show the stages of hurricane development.

By providing our faculty with the tools and the opportunity to experiment, we have been able to develop and implement learning activities that allow students to achieve the level of “create” at the peak of Bloom’s Taxonomy. And scaling new heights is really what revolutions are all about.

—Eric A. Walters is director of science and technology at the Marymount School of New York, where he teaches atmospheric science and advanced physics. He is the recipient of the 2009 Vernier Technology Award, and Marymount School received the 2010–11 Apple Exemplary Program Award for its use of iPods and iPads.

seen too many other things that were going to revolutionize education: programmed learning, computers, the Internet, laptops, interactive whiteboards. They’ve all become common and made some things possible or easier than before. But the average classroom and its approach to teaching are about the same as they were 50 or 100 years ago. (OK, I’m not quite old enough to remember 100 years ago, but I remember my history of education.)

Will tablet devices fundamentally change the way students learn and teachers teach? Doubt it. Will tablets facilitate the move to one-to-one computing? Maybe, but laptops were already doing that, and tablets will not be cheaper than laptops soon, if ever. What retards one-to-one initiatives other than money? There are the worries about breakage and theft, but tablets have no advantage there and are in fact perhaps more vulnerable.

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The rush to the iPad is like the rush to digitize print content. Huge amounts of print material have been put online. If the content was effective pedagogy before, it’s effective now. If not, putting it on a screen doesn’t improve it. New technology revolutionizes only if its new capabilities actually improve learning. Unless the new medium causes the student to learn more, or faster, or with more retention, or with greater self-efficacy, that’s no revolution, it’s just regime change.

So here’s a challenge to tablet developers: Revolutionize education—

please. Use the unique capabilities of tablets—portability, “always on anywhere” capability, graphics, camera, easily chunked content—to increase the factors that really drive learning: engaged time, feedback, a culture of learning, practice of essential skills, and individualization. And don’t forget the teachers! Make things easier and more effective for them, because the teachers are really the ones who can revolutionize education.

If you do all that, I’ll be happy to say those three little words: “I was wrong.”

—Michael Baum started out teaching English back when computers filled whole buildings. Formerly CEO of Renaissance Learning, he now helps organizations develop product visions, branding, messaging, marketing, growth strategies, and evidence-based positions on educational issues.