The Khan Academy: Changing the Face of Education?

Teaching and technology go hand in hand. Gone are the days when electronics and gadgets are seen as a threat to learning.

“The Steve Jobs Model for Education Reform” by Rupert Murdoch argues that educators must harness technology to spark students’ imaginations.

“The minute they step back into their classrooms, it's like going back in time. The top-down, one-size-fits-all approach frustrates the ones who could do more advanced work. And it leaves further and further behind those who need extra help to keep up,” writes Murdoch.

One organization that has found a way to improve education through technology is the Khan Academy. By providing an online library of math videos and assessments for students to use, they have created a self-driven, individualized curriculum that motivates students with immediate feedback and positive rewards. Reconstructing the classroom lets students drive the pace and content of their learning, having teachers stand by as coaches and experts.

Khan Academy’s vision began in 2004, when founder Salman Khan’s cousin called and asked him for math tutoring. He was eager to help, but needed a creative solution to bridge the 1000 miles that separated them. Khan, a former hedge fund analyst with degrees from MIT and Harvard, picked up the telephone and used Yahoo Doodle to work through the math problems with his niece. From then on, her math performance improved, and he began making videos of lessons to share with family members and friends. Within weeks, his YouTube videos became a sensation, attracting hits from all over the world.

In 2009, Khan quit his job and began working full-time on educational videos and accompanying materials with the mission of “…changing education for the better by providing a free world-class education to anyone, anywhere.” Within a year, his efforts garnered attention and funding from prominent sources like Ann Doerr, Bill Gates, and Google. Today, over 2.5 million unique users have visited Khan Academy, which has expanded to include videos about Science, Economics, Finance, and History. Anyone with a computer and a Facebook or Google account can log onto the Khan website to take advantage of Khan’s vast library.

After that, it was a straight shot to success. In 2010, the Superintendent of California’s Los Altos School District heard about Khan Academy, and decided to pilot the program in five classrooms in the district. Students were given laptops and allowed to work at their own pace via personalized “Knowledge Maps” and videos. Khan Academy also built personalized “dashboards” for the teachers’ laptops to monitor each student’s progress.

Sundar Subbarayan, Khan Academy’s Implementation Lead, knows why this new teaching style is so successful. Having worked for Google, Microsoft, and McKinsey & Co, Subbarayan brings a broad perspective on the kind of education children need in the modern age.

“We observed two kinds of data in the pilot classrooms,” Subbarayan told us. “Qualitative and quantitative. Qualitatively, we saw increased student engagement. Students who typically didn’t think they were capable in math realized that they could do it after all. We saw students’ confidence and motivation improve.” In one classroom, he saw students write their name on the board next to topics in which they either needed help or could offer help. He also liked the way teachers could immediately tell when students were struggling, and could step in to help before students got frustrated.

Quantitatively, standardized test scores soared. For one remedial seventh grade class, he saw a 78% improvement in math test scores. Los Altos was so impressed by the results, they decided to implement the program for all fifth and sixth grade classrooms in 2011 as well as more seventh and eighth grades.

Khan Academy is now piloting its curriculum in fifteen other Bay Area districts, and teacher-training is one of its most important focuses. Khan Academy coaches meet with teachers and help them work through challenges. The data they are collecting helps build a body of “Best Teaching Practices” that can be passed along to more teachers in the future who wish to implement the program.

Subbarayan is quick to credit good teaching for the Khan Academy’s classroom success. “Teachers manage the class, step in when ideas are confusing, and help students explore challenging questions. They also help students with goal-setting, which is a very important life skill.”

Khan Academy is pleased by what they’ve accomplished, but hope to keep pushing the limits of what they can provide. They are building a library of project-based, hands-on lessons as well as developing a model for high school, where classes are more topic-specific. He also hopes to build his own school, where “students spend 20 percent of their day watching videos and doing self-paced exercises and the rest of the day building robots or painting pictures or composing music.” Sounds like a dream school to us.