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### **A Self-Appointed Teacher Runs a One-Man 'Academy' on YouTube**

**Are his 10-minute lectures the future?**

*By Jeffrey R. Young*

The most popular educator on YouTube does not have a Ph.D. He has never taught at a college or university. And he delivers all of his lectures from a bedroom closet.

This upstart is Salman Khan, a 33-year-old who quit his job as a financial analyst to spend more time making homemade lecture videos in his home studio. His unusual teaching materials started as a way to tutor his faraway cousins, but his lectures have grown into an online phenomenon—and a kind of protest against what he sees as a flawed educational system.

"My single biggest goal is to try to deliver things the way I wish they were delivered to me," he told me recently.

The resulting videos don't look or feel like typical college lectures or any of the lecture videos that traditional colleges put on their Web sites or YouTube channels. For one thing, these lectures are short—about 10 minutes each. And they're low-tech: Viewers see only the scrawls of equations or bad drawings that Mr. Khan writes on his digital sketchpad software as he narrates.

The lo-fi videos seem to work for students, many of whom have written glowing testimonials or even donated a few bucks via a PayPal link. The free videos have drawn hundreds of thousands of views, making them more popular than the lectures by the Massachusetts Institute of Technology, famous for making course materials free, or any other traditional institution online, according to the leaders of YouTube's education section.

Mr. Khan calls his collection of videos "Khan Academy," and he lists himself as founder and faculty. That means he teaches every subject, and he has produced 1,400 lectures since he started in

2006. Now he records one to five lectures per day.

He started with subject matter he knows best—math and engineering, which he studied as an undergraduate at MIT. But lately he has added history lectures about the French Revolution and biology lectures on "Embryonic Stem Cells" and "Introduction to Cellular Respiration."

If Mr. Khan is unfamiliar with a subject he wants to teach, he gives himself a crash course first. In a recent talk he explained how he prepared for his lecture on entropy: "I took two weeks off and I just pondered it, and I called every professor and everyone I could talk to and I said, Let's go have a glass of wine about entropy. After about two weeks it clicked in my brain, and I said, now I'm willing to make a video about entropy."

Some critics have blogged that this learn-as-you-go approach is no way to run an educational project—and they worry that the videos may contain errors or lead students astray.

But to Mr. Khan, occasional mistakes are part of his method. By watching him stumble through a problem, students see the process better, he argues. Sometimes they correct him in comments on his YouTube videos, and he says this makes students more engaged with the material. "Sometimes when it's a little rough, it's going to be a better product than when you overprepare," he says.

The Khan Academy explicitly challenges many of higher-education's most sacred assumptions: that professional academics make the best teachers; that hourlong lectures are the best way to relate material; and that in-person teaching is better than videos. Mr. Khan argues that his little lectures disprove all of that.

Watching his videos highlights how little the Web has changed higher education. Many online courses at traditional colleges simply replicate the in-person model—often in ways that are not as

effective. And what happens in most classrooms varies little from 50 years ago (or more). Which is why Mr. Khan's videos come as a surprise, with their informal style, bite-sized units, and simple but effective use of multimedia.

The Khan Academy raises the question: What if colleges could be retooled with new technologies in mind?

#### College From Scratch

Mr. Khan is not the only one asking that question these days.

Clay Shirky, an associate teacher at New York University and a popular Internet guru, recently challenged his more than 50,000 Twitter followers with a similar thought exercise:

"If you were going to create a college from scratch, what would you do?"

Bursts of creativity quickly Twittered in, and Mr. Shirky collected and organized the responses on a [Web site](#). The resulting visions are either dreams of an education future or nightmares, depending on your viewpoint:

- All students should be required to teach as well, said @djstrouse.
- Limit tenure to eight years, argued @jakewk.
- Have every high-school senior take a year before college to work in some kind of service project away from his or her hometown, said @alicebarr.

Some Twittering brainstormers even named their fictional campuses. One was called FailureCollege, where every grade is an F to desensitize students to failure and encourage creativity. Another was dubbed LifeCollege, where only life lessons are taught.

When I caught up with Mr. Shirky recently, he described the overall tone of the responses as "bloody-minded." Did that surprise him?

"I was surprised—by the range of responses, but also partly by the heat of the responses," he said. "People were mad when they think about the gap between what is possible and what happened in their own educations."

Mr. Shirky declined to endorse any of the Twitter models or to offer his prediction of how soon or how much colleges will change. But he did argue that higher education is ripe for revolution.

For him the biggest question is not whether a new high-tech model

of higher education will emerge, but whether the alternative will come from inside traditional higher education or from some new upstart.

#### **Voting With Their Checkbooks**

Lately, several prominent technology entrepreneurs have taken an interest in Mr. Khan's model and have made generous contributions to the academy, which is now a nonprofit entity.

Mr. Khan said that several people he had never met have made \$10,000 contributions. And last month, Ann and John Doerr, well-known venture capitalists, gave \$100,000, making it possible for Mr. Khan to give himself a small salary for the academy so he can spend less of his time doing consulting projects to pay his mortgage. Over all, he said, he's collected about \$150,000 in donations and makes \$2,000 a month from ads on his Web site.

I called up one of the donors, Jason Fried, chief executive of 37signals, a hip business-services company, who recently gave an undisclosed amount to Khan Academy, to find out what the attraction was.

"The next bubble to burst is higher education," he said. "It's too expensive for people—there's no reason why parents should have to save up a hundred grand to send their kids to college. I like that there are alternative ways of thinking about teaching."

No one I talked to saw Khan Academy as an alternative to traditional colleges (for one thing, it doesn't grant degrees). When I called a couple of students who posted enthusiastic posts to Facebook, they said they saw it as a helpful supplement to the classroom experience.

Mr. Khan has a vision of turning his Web site into a kind of charter school for middle- and high-school students, by adding self-paced quizzes and ways for the site to certify that students have watched

certain videos and passed related tests. "This could be the DNA for a physical 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 or whatever," he said.

The Khan Academy is a concrete answer to Mr. Shirky's challenge to create a school from scratch, and it's an example of something new in the education landscape that wasn't possible before. And it serves as a reminder to be less reverent about those long-held assumptions.

*College 2.0 covers how new technologies are changing colleges. Please send ideas to [jeff.young@chronicle.com](mailto:jeff.young@chronicle.com) or @jryoung on Twitter.*

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