

The Khan Academy

The goal of the Khan Academy (<http://www.khanacademy.org> or <http://youtube.com/khanacademy>) is to use technology to provide a free, world-class education to anyone, anywhere. It is currently a library of 1176 videos on YouTube (and mirrored elsewhere) covering everything from basic arithmetic to advanced calculus, chemistry, economics and biology. The videos are supplemented by software that dynamically generates exercises and captures data on student usage and progress.

The video library has been profiled on CNN and USA Today and is being used by over 80,000 students (and growing 10-20% per month). The content is also being distributed on off-line servers in Africa, India and Latin America by partner organizations. All of the videos and software have been produced by Salman Khan who is a recently announced Microsoft Tech Award Laureate in Education.

Access to high quality math and science instruction is spotty in the developed world and nonexistent in much of the developing world. Putting all cost issues aside, it is extremely difficult to find people in rural villages with the skill set to even teach basic arithmetic, much less higher mathematics and science. Truly world class instructors with deep subject knowledge and strong communication skills are rare in even the top universities.



Individualized instruction cannot be economically supported within the legacy educational framework. This forces even the best instructors to teach to a common denominator at a set pace—with some portion of the students being lost and some portion being bored. Even more, students and teachers get most of their "data" on comprehension from sporadic exams, after which it is time to move on to the next concept. Regardless of the level of comprehension, students are pushed forward only to struggle and become more disengaged in more advanced topics—the end result being that school serves to filter rather than educate students. There is a lot of talk about data and assessment, but, largely due to the "low-tech" nature of the legacy model, there is no real data or analytics measured by the standards of other industries.

Several universities—most notably, MIT—have made videos of their courses available to the general public. The need, however, is greatest in k-12 education. Even the efforts to-date for university level topics, while extremely admirable, are a hodgepodge of live lecture videos putting the onus on the student to navigate through long lectures by professors of inconsistent quality (some of the top researchers make some of the worst instructors). Students needing help on a specific concept (like the Chain Rule or Glycolysis) have no direct way of honing in on what they need to see.

As the dominant source of k-12 video content, the Khan Academy is already reshaping how "lectures" are done and consumed. It is more personal, more intimate, and can be viewed at the viewer's pace and convenience. The testimonials from users around the world speak to the effectiveness of Salman's library. The software completes the offering by allowing instruction, practice and assessment to all occur in one data-driven environment.

Most of what the Khan Academy is today was developed by Salman while also working at a hedge fund in Palo Alto, CA. Seeing no better use for his time, he has recently left his career in investment management to become a full-time “teacher to the world.” His goal is nothing short of teaching all subjects, starting with those with the highest need. Potential foundational support would be used to support Salman and a small team of engineers to extend the learning platform to include even more extensive videos and software.

Primarily from word-of-mouth, the site has already had 8.5 million video views and is attracting 80,000 students per month watching 35,000 videos per day (rivaling and surpassing the open course efforts of major research universities).

The beauty of the Khan Academy is the evergreen, scalable and analytic nature of the content. Once a video is done on “mitosis” or “Newton’s Laws” or “entropy” it will forever be available for anyone, anywhere. Even more, all data on usage is captured real time. We even capture data on student attention during videos. Coupled with the software, we can perform comparative analytics on the effectiveness of particular videos or software modules. All of this can reach millions of students around the world with a budget that is less than that of even the smallest physical schools. Already, we are reaching tens of thousands of students on a daily basis on a budget lower than a single school principal’s salary.

Several other non-profits are distributing the Khan Academy content. World Possible has created stand-alone servers containing a snapshot of Khan Academy, Wikipedia and the Gutenberg Texts which it is distributing in India, Ethiopia and Latin America. UConnect.org is distributing the content in Uganda. K16bridge is deploying it within the California community college system. The Miami-Dade school system has used some of the Khan Academy videos for teacher training. Schools from New York to London to Australia are even showing the videos in the classroom.

Students on the Khan Academy almost universally find it not only to be the best instruction on the Internet, but the best instruction they’ve ever had access to in general.

Here are some testimonials/letters:

Mr. Khan,

No teacher has ever done me any good--this may sound harsh but I mean it quite literally. I was force fed medication to keep me from talking and chastised for not speaking out when called on. Where I am from blacks are not welcomed with open arms into schools--my mother and her sisters had to go to a small shack two hours from home when they went to school. About five years ago my family collected enough money to move from where I was born, so that I could have a chance at having an education and living a real life. But without a real mastery of elementary math I was slow to progress.

“The power of what Sal has created cannot be overstated. The same instruction that captivated our middle-class children who study in Switzerland and England is proving equally captivating to the teachers and students in rural villages in Uganda ... There is no reason why they can't reach and engage every student on the planet as long as the Internet exists. These videos give students so much more than just a technical proficiency in maths and physics (although they do this quite well); they give students a love for mathematics and learning generally. That is priceless!”

-Daniel Stern, founder of UConnect.org

I am now in college and learning more than I ever have in my life. But an inadequate math background has been holding me back. I found the Kahn Academy in June of 2009, right after I completed Math 141 (a college algebra course). I have spent the entire summer on your youtube page. And I just wanted to thank you for everything you are doing. You are a Godsend. Last week I tested for a math placement exam and I am now in Honors Math 200. No question was answered incorrectly. My placement test holder was so impressed by the breadth of my knowledge of math that he said I should be in Linear algebra.

Mr. Khan, I can say without any doubt that you have changed my life and the lives of everyone in my family.

I wish you and the kahn academy the best of luck,

Hello, Sal- My 12 year old son..., has Autism and has had a terrible time with math! We have tried everything- viewed everything- BOUGHT everything... well, we stumbled across your video on decimals and it got through!!!! Then, we went to the dreaded fractions. Again, he GOT IT!!! We could not believe it! He was so excited! It is your soothing voice and calm manner, coupled with an easy- going explanation and examples! I cannot say thank you enough- you are a hero!!! I had all but given up on math with him. ... I am homeschooling 2 children, both with challenges- both who respond well to you. You are the magic math teacher!! You are so wonderful, I cannot say so enough! I emailed your video clips to everyone I know who are in similar situations to my own, and there are many of us! Thank you so much and God bless you....

I don't know who you are but in my mind you are a savior. My children really struggle with math; there is an inherited learning disability in my family. They get it but only after seeing it done multiple times. Your videos will allow us to help our children get caught up with their peers. As a parent I have to say, Thank You Thank You Thank You.

Murray, UT

Sal, Just wanted to personally thank you for everything you've done! I'm 23, and was homeschooled (poorly I might add), so I never had a great education, and have jumped from awful job to awful job since I "graduated" at 17. I've always wanted to go to school for Electrical Engineering, but never thought it was possible. I decided to give it a shot anyway, and started studying for my ACT's about a month ago. After numerous confusing books, I was almost ready to give up until I stumbled upon one of your video's on youtube. From there, I went to your website and started the adaptive math program. In the past 2 weeks, I've made it all the way up to "Limits of a Function", and will soon be done with the entire program. I signed up to take my ACT's on June 13th, and decided to take the full "timed" practice test last night, and I scored a 25. The score required for Admission into CSU's engineering program is 23. I never thought that was possible, and I still have almost 2 months to continue studying. Just wanted to again, thank you for your help! You are truly an inspiration, and an obviously wonderful person.