

The Khan Academy video lesson - Dla lektora

How to:

1. Teacher asks students whether they have some experience of learning online, and how successful they think it was, and if they recommend it or not, and why?
2. Teacher plays the video and asks students to watch and make notes on what the video is about.
3. Teacher asks one student to say briefly what the presentation was about, at that point other students will contribute with what they have learnt from the video. Teacher asks students whether they believe this is the future of education, and if they share the enthusiasm of the presenter for such methods. Alternatively, video can be watched once, see point 4.
4. Students watch the video again with script and fill in the gaps.
5. Teacher checks the answers with the group and explains the words if necessary, see the glossary section.
6. Teacher divides the class in two groups. One group's job is to make a list of arguments in favor of online learning. The other group makes a list of all possible disadvantages. Teacher should tell the students to think of people their age (One of my groups used children as the basis for discussion, and it did not work at all☹).
7. The teacher plays devil's advocate with the group telling students that they must take a position he or she does not necessarily agree with, for the sake of debate.
8. If necessary teacher moderates discussion, and finally nominates, in his opinion, the winning party.

Script:

The Khan Academy is most known for its collection of videos, so before I go any further, let me show you a little bit of a montage.

(Video) Salman Khan: So the (1) hypotenuse is now going to be five. This animal's fossils are only found in this area of South America -- a nice clean band here -- and this part of Africa. We can integrate over the (2) surface, and the (3) notation usually is a capital sigma. National Assembly: They create the Committee of Public Safety, which sounds like a very nice committee. Notice, this is an aldehyde, and it's an alcohol. Start differentiating into effector and memory cells. A galaxy. Hey, there's another galaxy. Oh look, there's another galaxy. And for dollars, is their 30 million, plus the 20 million dollars from the American manufacturer. If this does not (4) blow your mind, then you have no emotion.

SK: We now have on the order of (5) 2,200 videos covering everything from basic arithmetic all the way to (6) vector calculus and some of the stuff you saw there. We have a million students a month using the site, watching on the order of 100 to 200,000 videos a day. But what we're going to talk about in this is how we're going to the next level. But before I do that, I want to talk a little bit about really just how I got started. And some of you all might know, about five years ago I was an analyst at a hedge fund, and I was in Boston, and I was (7) tutoring my cousins in New Orleans, remotely. And I started putting the first YouTube videos up really just as a kind of nice-to-have, just a (8) supplement for my cousins -- something that might give them a refresher or something.

And as soon as I put those first YouTube videos up, something interesting happened -- actually a bunch of interesting things happened. The first was the feedback from my cousins. They told me that they preferred me on YouTube than in person. (Laughter) And once you get over the (9) backhanded nature of that, there was actually something very profound there. They were saying that they preferred the automated version of their cousin to their cousin. At

first, it's very unintuitive, but when you actually think about it from their point of view, it makes a (10) ton of sense. You have this situation where now they can pause and repeat their cousin, without feeling like they're wasting my time. If they have to review something that they should have learned a couple of weeks ago, or maybe a couple of years ago, they don't have to be embarrassed and ask their cousin. They can just watch those videos. If they're bored, they can go ahead. They can watch it at their own time, at their own pace. And probably the least appreciated aspect of this is the (11) notion that the very first time, the very first time that you're trying to get your brain around a new concept, the very last thing you need is another human being saying, "Do you understand this?" And that's what was happening with the (12) interaction with my cousins before, and now they can just do it in the intimacy of their own room.

The other thing that happened is -- I put them on YouTube just -- I saw no reason to make it private, so I let other people watch it, and then people started stumbling on it, and I started getting some comments and some letters and all sorts of feedback from random people from around the world. And these are just a few. This is actually from one of the original calculus videos. And someone wrote just on YouTube -- it was a YouTube comment: "First time I smiled doing a (13) derivative." And let's pause here. This person did a (14) derivative and then they smiled. And then in a response to that same comment -- this is on the thread. You can go on YouTube and look at these comments -- someone else wrote: "Same thing here. I actually got a natural high and a good mood for the entire day. Since I remember seeing all of this (15) matrix text in class, and here I'm all like, 'I know kung fu.'"

And we get a lot of feedback all along those lines. This clearly was helping people. But then, as the viewership kept growing and kept growing, I started getting letters from people, and it was starting to become clear that it was actually more than just a nice-to-have. This is just an (16) excerpt from one of those letters. "My 12 year-old son has autism and has had a terrible time with math. We have tried everything, viewed everything, bought everything. We stumbled on your video on (17) decimals and it got through. Then we went on to the dreaded (18) fractions. Again, he got it. We could not believe it. He is so excited." And so you can imagine, here I was an analyst at a hedge fund. It was very strange for me to do something of social (19) value.

But I was excited, so I kept going. And then a few other things started to dawn on me. That, not only would it help my cousins right now, or these people who are sending letters, but that this content will never go old, that it could help their kids or their grandkids. If Isaac Newton had done YouTube videos on calculus, I wouldn't have to. Assuming he was good. We don't know.

The other thing that happened -- and even at this point, I said, "Okay, maybe it's a good supplement. It's good for motivated students. It's good for maybe (20) home schoolers." But I didn't think it would be something that would somehow penetrate the classroom. But then I started getting letters from teachers. And the teachers would write, saying, "We've used your videos to (21) flip the classroom. You've given the lectures, so now what we do ... " -- and this could happen in every classroom in America tomorrow -- " ... what I do is I (22) assign the lectures for homework, and what used to be homework, I now have the students doing in the classroom."

And I want to pause here for -- I want to pause here for a second, because there's a couple of interesting things. One, when those teachers are doing that, there's the obvious benefit -- the

benefit that now their students can enjoy the videos in the way that my cousins did. They can pause, repeat at their own (23) pace, at their own time. But the more interesting thing is -- and this is the unintuitive thing when you talk about technology in the classroom -- by removing the one-size-(24) fits-all lecture from the classroom and letting students have a (25) self-paced lecture at home, and then when you go to the classroom, letting them do work, having the teacher walk around, having the peers actually be able to interact with each other, these teachers have used technology to humanize the classroom. They took a fundamentally dehumanizing experience -- 30 kids with their fingers on their lips, not allowed to interact with each other. A teacher, no matter how good, has to give this one-size-fits-all lecture to 30 students -- (26) blank faces, slightly antagonistic -- and now it's a human experience. Now they're actually interacting with each other. So once the Khan Academy -- I quit my job and we turned into a real organization -- we're a not-for-profit -- the question is, how do we take this to the next level?

Glossary:

1. Hypotenuse - przeciwprostokątna
2. Surface - płaszczyzna
3. Notation - notacja matematyczna
4. To blow one's mind – zaskakiwać
6. (Vector) calculus - rachunek różniczkowy
7. To tutor – uczyć kogoś (najczęściej lekcje indywidualne)
8. Supplement – dodatek
9. backhanded nature (And once you get over the backhanded nature of that, there was actually something very profound there) - Ale gdy się przyjrzeć temu bliżej, okazuje się, że coś w tym jest.
10. Ton – tona, mnóstwo
11. Notion – pojęcie, wyobrażenie, pogląd, idea
12. Interaction – interakcja
13. Derivative – pochodna
14. Derivative – pochodna
15. Matrix – macierz
16. Excerpt – fragment, wypis
17. Decimals – liczby dziesiętne
18. Fractions – ułamki
19. Value – wartość
20. Home schoolers – osoby uczące się w domu w systemie edukacji domowej
21. To flip – wywrócić
22. To assign – zadać, np.: pracę domową
23. Pace – tempo
24. To fit – pasować
25. Self-paced – we własnym tempie
26. Blank – obojętny

Cały film - <http://www.youtube.com/watch?v=nTFEUsdhfs>