



Полезная лексика по теме
«Видеоразбор: Стэнфорд или
онлайн-образование?»

Everyone is both a learner and a teacher. This is me being **inspired** by my first **tutor**, my mom, and this is me teaching Introduction to **Artificial Intelligence** to 200 students at Stanford University. Now the students and I enjoyed the class, but it **occurred to** me that while the **subject matter** of the class is **advanced** and modern, the **teaching technology** isn't.

In fact, I use **basically the same** technology as this 14th-century classroom. Note the textbook, the **sage** on the stage, and the sleeping **guy** in the back. Just like today. So my **co-teacher**, Sebastian Thrun, and I thought, there must be a better way.

We **challenged** ourselves to create an online class that would be **equal** or better in **quality** to our Stanford class, but to bring it to anyone in the world **for free**. We **announced** the class on July 29th, and **within** two weeks, 50,000 people had **signed up** for it. And that grew to 160,000 students from 209 countries.

to inspire — вдохновлять

a tutor — учитель, воспитатель

Artificial Intelligence — искусственный интеллект

to occur to somebody — приходить кому-либо в голову

subject matter — предмет изучения

advanced — продвинутый, передовой

teaching technology — технология обучения

in fact — в сущности, в действительности

basically — в основном, по сути

the same — тот же

a sage — мудрец, мыслитель

a guy — парень

a co-teacher — со-преподаватель, коллега

to challenge — бросать вызов

equal — равный

quality — качество

for free — бесплатно

to announce — объявлять

within — в течение

to sign up — записаться



We **were thrilled** to have that kind of audience, and just a bit **terrified** that we hadn't finished **preparing** the class yet. So we got to work. We studied what others had done, what we could copy and what we could change. Benjamin Bloom had showed that **one-on-one** tutoring works best, so that's what we tried to **emulate**, like with me and my mom, even though we knew it would be **one-on-thousands**.

Here, an overhead video camera is **recording** me as I'm talking and drawing on a piece of paper. A student said, "This class felt like sitting in a bar with a really **smart** friend who's explaining something you haven't **grasped**, but **are about to**." And that's exactly what we were **aiming for**.

Now, from Khan Academy, we saw that short 10-minute videos worked much better than trying to record an **hour-long** lecture and put it on the small-format screen. We decided to go even shorter and more interactive.

Our typical video is two minutes, sometimes shorter, never more than six, and then we pause for a **quiz question**, to make it feel like one-on-one tutoring. Here, I'm **explaining** how a computer uses the grammar of English to **parse sentences**, and here, there's a pause and the student has to **reflect**, understand what's going on and check the right boxes before they can **continue**.

Students learn best when they're actively practicing. We wanted to **engage** them, to have them **grapple** with **ambiguity** and **guide** them to synthesize the key ideas themselves. We mostly **avoid** questions like, "Here's a formula, now tell me the **value** of Y when X is equal to two." We **preferred open-ended questions**.

to be thrilled — БЫТЬ ВЗВОЛНОВАННЫМ, СИЛЬНО ВОЛНОВАТЬСЯ

to be terrified — БЫТЬ В УЖАСЕ

to prepare — ПОДГОТОВИТЬ

one-on-one — ОДИН НА ОДИН, ТЕТ-А-ТЕТ

to emulate — ИМИТИРОВАТЬ, ПЕРЕНЯТЬ

one-on-thousands — ОДИН НА ТЫСЯЧУ

to record — ЗАПИСЫВАТЬ

smart — УМНЫЙ

to grasp — СХВАТЫВАТЬ, ПОНИМАТЬ

to be about to — СЛУЧИТСЯ ВСКОРЕ, ПРОИЗОЙДЕТ ВСКОРЕ

to aim for — СТРЕМИТЬСЯ, ДОБИВАТЬСЯ

hour-long — ЧАСОВОЙ ПРОДОЛЖИТЕЛЬНОСТИ

a quiz question — ПРОВЕРОЧНЫЙ ВОПРОС

to explain — ОБЪЯСНЯТЬ

to parse — ДЕЛАТЬ ГРАММАТИЧЕСКИЙ РАЗБОР

a sentence — ПРЕДЛОЖЕНИЕ

to reflect — ОБДУМЫВАТЬ, РАЗМЫШЛЯТЬ

to continue — ПРОДОЛЖАТЬ

to engage — ВОВЛЕКАТЬ

to grapple — СРАЖАТЬСЯ, БОРОТЬСЯ

ambiguity — ДВУСМЫСЛЕННОСТЬ, НЕОПРЕДЕЛЕННОСТЬ

to guide — НАПРАВЛЯТЬ

to avoid — ИЗБЕГАТЬ

a value — ЦЕННОСТЬ, ЗНАЧИМОСТЬ

to prefer — ПРЕДПОЧИТАТЬ

an open-ended question — ВОПРОС, ПРЕДПОЛАГАЮЩИЙ РАСШИРЕННЫЙ ОТВЕТ В СВОБОДНОЙ ФОРМЕ



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| <p>One student wrote, "Now I'm seeing Bayes networks and examples of game theory everywhere I look." And I like that kind of response. That's just what we were going for. We didn't want students to memorize the formulas; we wanted to change the way they looked at the world. And we succeeded. Or, I should say, the students succeeded. And it's a little bit ironic that we set about to disrupt traditional education, and in doing so, we ended up making our online class much more like a traditional college class than other online classes.</p> <p>Most online classes, the videos are always available. You can watch them anytime you want. But if you can do it any time, that means you can do it tomorrow, and if you can do it tomorrow, well, you may not ever get around to it.</p> <p>So we brought back the innovation of having due dates. You could watch the videos any time you wanted during the week, but at the end of the week, you had to get the homework done. This motivated the students to keep going, and it also meant that everybody was working on the same thing at the same time, so if you went into a discussion forum, you could get an answer from a peer within minutes.</p> <p>Now, I'll show you some of the forums, most of which were self-organized by the students themselves. From Daphne Koller and Andrew Ng, we learned the concept of "flipping" the classroom. Students watched the videos on their own, and then they come together to discuss them.</p> | <p>a response — отклик, реакция to memorize — запоминать to succeed — иметь успех to disrupt — разрушать to end up — прийти к</p> <p>available — доступный to mean — значить to get around to something — найти время для чего-либо</p> <p>brought back (от to bring back) — возвращать a due date — дата сдачи домашнего задания, проекта during — в течение to motivate — мотивировать, подталкивать to keep going — продолжать, не останавливаться a discussion — обсуждение a peer — ровесник, однокурсник, одногруппник</p> <p>flipped classroom — формат обучения, при котором студенты изучают новый материал дома, а на занятиях выполняют упражнения, проводят лабораторные и практические исследования to flip — переворачивать on one's own — самостоятельными усилиями, без посторонней помощи</p> |
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| <p>From Eric Mazur, I learned about peer instruction, that peers can be the best teachers, because they're the ones that remember what it's like to not understand. Sebastian and I have forgotten some of that. Of course, we couldn't have a classroom discussion with tens of thousands of students, so we encouraged and nurtured these online forums.</p> <p>And finally, from Teach For America, I learned that a class is not primarily about information. More important is motivation and determination. It was crucial that the students see that we're working hard for them and they're all supporting each other. Now, the class ran 10 weeks, and in the end, about half of the 160,000 students watched at least one video each week, and over 20,000 finished all the homework, putting in 50 to 100 hours. They got this statement of accomplishment.</p> <p>So what have we learned? Well, we tried some old ideas and some new and put them together, but there are more ideas to try. Sebastian's teaching another class now. I'll do one in the fall. Stanford Coursera, Udacity, MITx and others have more classes coming. It's a really exciting time.</p> <p>But to me, the most exciting part of it is the data that we're gathering. We're gathering thousands of interactions per student per class, billions of interactions altogether, and now we can start analyzing that, and when we learn from that, do experimentations, that's when the real revolution will come. And you'll be able to see the results from a new generation of amazing students.</p> | <p>instruction — обучение, преподавание to encourage — поощрять, поддерживать to nurture — взрастить, способствовать развитию</p> <p>primarily — в первую очередь, преимущественно determination — настойчивость crucial — ключевой, критически важный to support — поддерживать ran (от to run) — длиться at least — по меньшей мере a statement of accomplishment — справка об окончании учебного курса</p> <p>to put together — комбинировать fall — осень to be coming — быть на подходе exciting — волнительный</p> <p>data — показатели, данные altogether — в совокупности a revolution — революция a generation — поколение amazing — удивительный, потрясающий</p> |
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