

# Khan Academy Wants to Make 'Mastery Learning' Mainstream. Will Partnering With Schools Help?

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A big idea driving Khan Academy is a belief in “mastery learning”—that students should show proficiency in one set of materials before moving on to the next. The nonprofit’s latest push to make mastery learning mainstream involves partnering with school districts who adopt Khan Academy’s materials and platform.

The approach has taken off during the pandemic, growing from nine districts two years ago to more than 200 today.

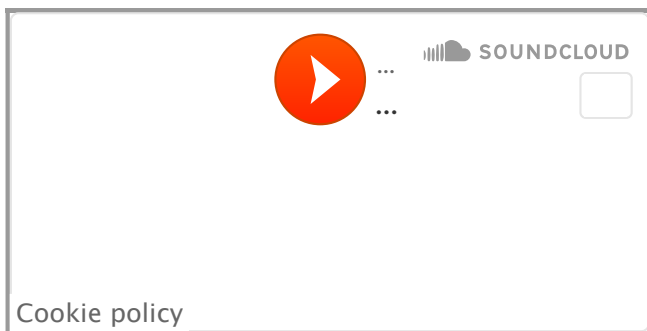
Khan Academy has now been around for more than a decade, and it has gotten huge. It grew even more popular during the pandemic, now reaching 18 million learners a month and translated into 51 languages.

But what about CEO and founder Sal Khan’s broader goal of changing the

education system, by basing it more on mastery learning, not grades? How is that part going?

This week, we asked Sal Khan just that, as well as what's next for Khan Academy.

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*Below are highlights of the conversation, lightly edited for clarity.*

**EdSurge:** One of the newest efforts that you have at Khan Academy is one aimed at school districts to integrate Khan Academy videos and your whole learning platform around those, for a small fee. Since Khan Academy is free anyway, how is this different than what you did before?

**Sal Khan:** As you mentioned, there's hundreds of thousands of teachers who are using Khan Academy. But when we went to districts they said, "We need support. We need training. We need integration with our rostering systems. Ideally, integration with our assessments. We want integration with district-level dashboards." That's when we said, "Look, this is going to take extra resources. And for us to be able to continue to build and invest there,

we've got to co-resource this with the district itself, or maybe even other local philanthropists."

**Paint a picture of what an individual teacher's experience would be that might be different when their school is part of this partnership approach.**

In the grassroots model, a teacher would issue a class code, and kids sign up. It might be a different email address than the kids are using someplace else. Here, we're formally rostering with the district. So the system will know, okay, student A is part of teacher B's classroom. And that's valuable. One, it simplifies it for the teacher to just have all of that stuff auto-rostered. But also, it's more valuable for the school leaders and the district leaders to be able to roll things up and understand, "Where is the engagement good? Where could there be more work on the engagement? Where are the kids progressing? Where might they be having more trouble progressing?"

The other thing that the teachers get is support in training. We've been able to do very lightweight forms of that with our free offering. But as you can imagine, more intense support, more intense training takes a lot of resources. So that's where we co-resource that with the district.

**From the beginning, one of your key philosophies has been mastery learning. For those who may not know that concept, what is your elevator pitch for mastery learning?**

In a non-mastery system, students move together at a fixed pace. After a little bit of lecture and homework for a couple of weeks, you give an assessment. If, let's say, you get a 90 percent, I get a 70 percent, even though that test has identified gaps on what just happened to be on the test, you didn't know 10 percent of it, I didn't know 30 percent, we give students those grades. You get an A- or a B+. I get a C. And then we move on to the

next concept. And especially in areas like math or science, you're usually going to be now building on the gap. So I didn't know 30 percent of basic exponents. Now, we're moving on to logarithms or now we're moving on to negative exponents. Now, I'll be lucky if I get to a 70 percent on that. Maybe I get to a 60 percent. But now, we're going to move on to equations that deal with exponents. And so those gaps, not only do they persist, but it becomes much harder to learn future topics.

And this isn't theoretical. We know the numbers in America right now. Seventy percent of students going to college have to get remediation. And remediation isn't that they're going to take an 11th grade or 12th grade type of math. Seventy percent of kids aren't even placing into college algebra, which is really Algebra II. So when they're not placing into that and they're going into remedial math, which isn't credit-bearing at the college level, they're essentially taking sixth or seventh grade math. So in this non-mastery world, this is the great majority of kids in America.

And if you look at kids from historically under-resourced communities, you're looking at 90 something percent of those students, they go through the motions of sixth grade, seventh grade, Algebra I, Algebra II, geometry. Some of these kids take pre-calculus and calculus, then the colleges say, "You have so many gaps, we're going to take you back to sixth or seventh grade."

It's hugely demoralizing for everyone. It's a huge cost in wasted resources. It's the biggest predictor of not being able to graduate college. And in my view, it's primarily because we haven't focused on mastery. We focus just on seat time. So the alternative is, as you're working, if you get a 70 percent, you should have the opportunity and incentive to get that to at least a reasonable level of proficiency. You don't have to necessarily gate the student, like keep working on it until you get a 90 or 100. We say, "Look, maybe you'll move on to the next thing, but keep working on this thing

because that's going to come back to bite you later." And intellectually, it makes a lot of sense to every educator. But if we were having this conversation 50 years ago, you necessarily would have to have students working at different paces, because every student has different gaps and students are ready to move on at different rates.

And so with one teacher and 30 kids in a classroom, how do you navigate that logistically? And that's where Khan Academy can be valuable—because now the students can learn and master at their own time and pace. The teachers get dashboards that help them keep track of these multiple paths that all of these students are on, and are able to do focused interventions for the students who are still struggling, even if the interventions on Khan Academy aren't fully meeting their needs, they can have one-on-one time, small group times. Teachers can pair students with each other, help tutor each other in the classroom.

And then more students are likely to be operating in their zone of proximal development, their learning edge. They actually have the opportunity and incentive to master concepts. And then from a social and emotional point, rather than sitting passive in a class that they might be bored or lost in, they're engaging with each other and engaging on a human-to-human level.

### **Do you feel like Khan Academy is moving the needle on how much schools in America have adopted this model of mastery learning?**

It's a mixed answer for right now. I think we have helped put these ideas into the zeitgeist. And we have also helped make this somewhat self-service for a lot of students, families and teachers. But it has not been to the point yet that it has become the norm in classrooms, by any stretch of the imagination.

So the conversations we continually have within Khan Academy are, "How do

we meet the system where they are, around synchronous teacher-directed assignments, everyone doing the same thing at the same time?" We can support that... and that, in and of itself, is valuable.

But then if we can make that a hook into mastery learning, maybe over the next decade we can make these ideas that we just talked about more mainstream.

The other lever I think we have is working with the system itself, where we move to a competency-based world. I view competency-based learning as a form of mastery learning. Mastery learning tends to apply to the individual skills or small sets of skills, while competency is, do you know algebra now? Can you write well? Things like that.

For example, in the state of New Hampshire, if you can get certified mastery in a course on Khan Academy, they'll give you high school credit for that. Or we're doing a pilot right now with Howard University, where we're going into Title I high schools, and this goes right to the heart of this college algebra question. And if the students in those Title I high schools get mastery on this course (it's not a public course yet, so people shouldn't expect to find it yet) they're going to get transferrable college credit from Howard University. They wouldn't even have to take remedial math. They're actually going to place out of the college algebra itself.

And so those are the types of systemic things that I think we can start laying the groundwork for, which will make it even easier for school districts and teachers to say, "OK, now the system is respecting mastery as well, respecting competency-based learning. Now, I can just also move my classrooms more in that direction."

**Has it been harder to move teachers and systems toward mastery learning than you thought when you first started talking about this,**

## when you first started Khan Academy?

Yes and no. I think the ideas of it have had a more positive response than I could have expected. When I made [that first TED Talk in 2011](#), it got an immediate positive response, not just from the ed reform type crowd, but from teachers. Every teacher will tell you, "The 30 kids in my room—they're all at different levels. I can see the gaps in their knowledge, but I feel the pressure to just keep moving forward and covering more material."

I think the implementation has been harder than I suspected. There is so much gravity, even just the way that grades are done. They're not done in a mastery-based way. Once someone gets a C, that C is there forever. We have no systems in place right now that if a year or two later you understand the material, that should get modified. Most fifth graders have mastered their second grade material. So why should that C in second grade sit there?

It's just so much inertia—and so much dogma—because we all grew up in the non-mastery system. But I do remind folks that in other domains, like learning to play an instrument, learning a martial art or learning a sport, they have always and continue to be mastery learning. And that's why you don't see kids who are on the basketball team in college who don't know how to dribble, or someone who, if they've really been doing piano, they got their scales right. But you see that all the time in core academics, especially in math.

**So Khan Academy has grown in so many directions over the years. You [run a lab school](#). You [moved into early learning](#) with Khan Academy Kids. What area is next?**

We are continuing to expand our content. In science, there's a big push there. We're exploring a push in the humanities. Obviously, that's been a hot topic. I think there's a way to do that where most of America would feel really

excited about it. I think this notion of connecting Khan Academy mastery to credit or opportunity in the real world, that's where that Howard pilot around college algebra credit for mastery on Khan Academy plays in.

### **Is there anything else you'd like to add?**

I think we're in an interesting time with the pandemic and everyone talking about online learning. There's a lot of negatives. But all of what we've talked about—personalization, mastery learning and learning not being bound by time or space—it's even more important now than it was two years ago because we all know the variation in student preparedness has widened. Just as we've had a K-shaped recovery in the economy, we've had [K-shaped learning progress](#) in the country, where families that had digital access, that were in more well-resourced schools with more at-home support, they kept on learning during the pandemic while a lot of kids didn't.

My hope is now people are seeing it in even starker contrast. And so they feel a little bit more urgency around solving this.