

LESSONS LEARNED

What I Learned From Teaching Algebra on TikTok

LAST SUMMER, Harvard Teacher Fellow Olivia Phillips (@miss.phillips) was about to begin her first-year at Chelsea High School in Chelsea, Massachusetts, teaching algebra 2 virtually. Knowing students might need help getting back up to speed after an iffy pandemic spring and summer, she came up with the idea to create algebra refreshers on TikTok. In no time, she amassed a huge following—especially for an educator. As she explains...

I was homeschooled through fourth grade, where my experience with education technology began. In third and fourth grade, I watched a video curriculum for my coursework, and all growing up I was inundated with educational television shows and computer games.

I find it ironic how educational technology continues to play such a central role in my life, as I'm now teaching high school math fully remotely at Chelsea High School. I began my education learning from home, and now I'm beginning my career teaching from home.

I was reflecting on how the start of the year often seems like such an obstacle for students to remember what they were learning before the summer, and how this could only be exacerbated by the insanity that this last year has brought. My sister is a high school senior, and both hearing from her and preparing for my own students got me thinking a lot about gaps in mathematical literacy.

My sisters were actually on TikTok a whole year before me, and one of them had a huge following before I even got started. Watching her create videos inspired me, because I realized that if I wanted to reach more students preparing to go back to school, TikTok is where I could find them. I created a video introducing students to my new series of algebra refreshers and encouraged them to follow me as they prepared to go back to math

class in the fall. And apparently a 100,000 students took me up on that offer!

The biggest thing I've learned from teaching on TikTok is how to focus on the bare bones of a lesson. TikToks are only up to one minute long, so you have less than 60 seconds to teach the main idea you're trying to get across. Making videos has taught me how to think about math topics super granularly, without trying to put too much into a single video.

Keep things fast-paced, add in humor whenever you can, and keep up with whatever effects and sounds are trending on the app!

There's no such thing as "math people!" I watched a TED Talk recently by Eddie Woo, and I'll echo one of his main points. If someone can't see well, they don't shrug it off and say "Well, I guess I'm not a seeing person." No! They get glasses to help them see the world around them.

Math is something that comes more naturally to some people than others, but that doesn't mean it isn't for you. I'm an atrocious runner, but just because I'll never win the Olympics doesn't mean I can't enjoy a run (let's be real, a jog) around my block.

I'm just a diehard math nerd! I was a weirdo who did prime factorization for fun in middle school and cracked nerdy jokes with fellow mathletes on the way to math meets in high school. I can't imagine teaching anything other than math.

I've always had this ingrained assumption that I'd teach one day. I remember sitting in my fifth-grade classroom, taking mental notes of things that my teacher was doing to file them away for when I became a teacher.

High school students are not morning people. First period is rough.

Teenagers are procrastinators. I have had too many students submit assignments at 3 or 4 a.m. I'm always impressed and concerned when I see the timestamps.

Expect the unexpected with high schoolers. From the most random messages in the Zoom chat to hearing that one of my students built his own PC, they never cease to surprise.


I have learned an absurd amount of patience teaching virtually. Wait time online means not just giving think time, but giving typing time as well.

I'm still waiting on Zoom to create a "dot-dot-dot-so-and-so-is-typing" feature. I never know if a student is typing or asleep, or their Wi-Fi cut out or my Wi-Fi cut out, or they're straight up ignoring me.

Huge shout out to Mr. Kelly, my American literature and AP language teacher in high school. Classes were discussions rather than lectures, and he taught us about life and how to think deeply even as he taught us the themes in *The Great Gatsby* or how to avoid dangling modifiers.

I remember staying after school one day long after the teachers were required to stay as Mr. Kelly helped me diagram my life on the whiteboard in an effort to come up with a topic for my college essay. It was through his encouragement that I let go of my fear of failure and took a poetry course in college. And he still helps me to this day, giving great teaching advice and sharing his own new-teacher-struggle stories when I'm venting about my first year.

Have so much grace for both your students and yourself. Nobody's perfect. When a lesson flops, don't dwell on it. Make note on what you'll change for next time, and keep going. Teaching is an iterative process, full of ups and downs. Don't give up when those downs come.



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