Tynker

Students' Learn to Code Activity Spikes During COVID-19 School Closures

Insights from Tynker

July 2020

The COVID-19 pandemic has caused widespread educational disruption, with school closures in 186 countries affecting 1.2 billion students. Almost overnight, remote learning emerged as the new educational norm, making a blend of digital and in-person learning solutions a necessity for educators and parents alike. Teachers, schools and parents needed solutions to ensure that students' time away from the classroom didn't mean time away from learning.

Offering the Tynker solution for free during this period was not only an opportunity to help during an unprecedented global catastrophe, but also a great chance to provide students all over the globe the ability to learn to code. In addition, it gave Tynker the chance to better understand the needs of our users, so we could further enhance our world-class platform.

The results of this initiative, based on data Tynker collected, illustrate how a well-designed online learning platform can effectively meet the needs of educators, parents, and — most importantly — the students themselves. Tynker's coding curriculum experienced unprecedented demand from around the globe. In just a 10 week period from March to May 2020:

- **32,000** new teachers at **9,000+** schools in 122 countries and in all 50 U.S. states adopted Tynker's remote learning curriculum.
- **190,000** new parents registered their children for Tynker courses outside of a school.
- **6+ million** new students were given access to the full Tynker curriculum through their schools.
- Students spent nearly **2 million** hours on Tynker learning to code.
- **11+ million** lessons were completed on Tynker.

Key Findings

1. Coding Courses Provide a Foundation for the Transition to Remote Teaching

In the face of the pandemic, teachers were asked to overhaul nearly every facet of their jobs and pivot quickly to online instruction. It was a daunting task, to say the least. Classroom-based programs are designed and optimized for in-person teacher support and students learning from other students. Creating an effective remote learning environment is not as easy as simply digitizing existing lesson plans: It requires a thoughtful approach to curriculum design, student assessment, and professional development. In fact, according to experts, it can take more than a year to plan, develop, and implement a single high-quality online course.

97%
Teachers who said Tynker met/exceeded expectations as a hybrid learning platform.

To further assist teachers new to remote education in the wake of school closures, Tynker launched weekly video products, live webinars, and free training. These helped to complement the already robust Tynker platform, which includes 40 self-paced courses; 3,700 learning modules and interactive lessons; and progress tracking, with teacher and parent dashboards. Teachers quickly learned how to administer their own dashboards, monitor student progress in real-time, and manage students remotely. Not surprisingly, **97%** of surveyed teachers stated that Tynker met or

92%
Teachers who would recommend Tynker to other teachers.

exceeded their expectations as a hybrid learning platform. Adoption was swift: From March to May 2020, over 9,000 new schools and 32,000 new teachers embraced Tynker's remote learning curriculum.

4 of 5 teachers granted free licenses were actively using the Tynker platform with their students as of May 2020. Based on this experience, **92%** of surveyed teachers were likely or very likely to recommend Tynker to other teachers.

9,000+

new schools impacted by closures worldwide have embraced Tynker's remote learning curriculum

"I felt tremendous guilt not being able to give my students my normal attention, but I've seen how they are growing accustomed to figuring things out on their own and that was an unexpected benefit of me not being over their shoulders all the time."

- Robert Velamisa, Emma Lazarus School; Brooklyn, New York

2. Learning to Code Reinforces Academic and 21st-Century Skills

Code fuels the technology in our world — from microprocessors in everyday items, like refrigerators or water heaters, to sophisticated programs that operate our cars and buildings. Learning to code has become an essential element of a child's education. As one teacher conveyed, "I teach French Immersion. I still think coding is important for kids to learn."

Learning to code has been proven to reinforce academic performance in core courses, such as math. For example, when students program a game in which they need to keep score and health, they use variables and arithmetic. When they make shapes with a pen drawing, they use geometry while working with angles and numbers. When they build the logic of a computer program, they use expressions and test inequalities. And when they animate and move objects on their screens, they use coordinate geometry.

Top 3 Reasons Parents Choose Tynker

1. I want my child to learn important skills, like problem solving, logic and critical thinking.
2. I believe that knowing how to code is an essential skill.
3. Tynker is screen time that is fun AND also educational.

Learning to code also helps to reinforce students' core reading skills: For example, the step-by-step order in which instructions should occur — a key computational thinking competence acquired while learning to code — is fundamental to reading comprehension. Students who code come to understand that, unlike communicating in most spoken languages, if a mistake is made when writing in a programming language, the recipient of the message — the computer — can't ask for clarification or glean meaning based on the broader context. Coding demands a higher degree of specificity, or accuracy. In recognition of its ability to fortify students' academic skills, many schools are now adding coding to their core curriculum.

But, learning to code doesn't merely reinforce academics. Children who learn to code develop essential 21st-century skills, such as problem-solving, creativity, and critical thinking. Some argue that coding is the literacy of the 21st century. Learning how to code empowers students to think in new ways, solve problems that they have not previously encountered, and become the true architects of their future — all of which will be mission-critical in the post-pandemic era.

3. A Successful Platform Integrates Fun with Learning

Remote learning can be as difficult for students as distance teaching is for educators. School closures have forced students to shift from classrooms designed to support learning, to their bedrooms and kitchen tables, where distractions abound. As a result, many parents and teachers have witnessed a lack of motivation among their learners.

Gamified apps and platforms such as Tynker, which was explicitly designed for student engagement in independent environments, can help increase learner motivation. Some students learn faster online than in a traditional classroom setting, and retain the lessons learned better. Students can't get enough of Tynker: "Tynker was my favorite activity. Tynker is hard, but fun." Teachers also report that students regularly request to work on Tynker on their own time: "My students are enjoying their work with Tynker a lot more than the work they are assigned in their Google Classrooms."

9 of 10 surveyed teachers rated the Tynker platform as "engaging" or "very engaging" for students.

"Tynker is intuitive and the curriculum is rich."

"My students love Tynker! They ask all the time, "Will we be using Tynker today?"

"Kids like feeling independent. The courses have built in tutorials and they do not need to go to a Zoom class with me to get instruction. I'm glad too."
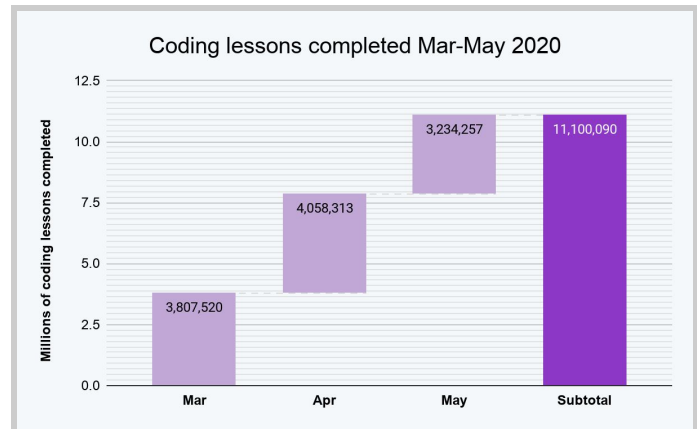
"The courses are enjoyable and easy to follow without direct teacher interface. The lessons are short and attainable, the self guided tutorials are easy to follow."

"To date, Tynker has been the most successful resource that I have used while on lockdown."

May 11, 2020 Tynker Teacher Survey

Over 11 Million Lessons Completed on Tynker in Less Than Three Months

From March through May 2020, students who were newly granted access to Tynker, either through their school or via a parent registration, took full advantage of their licenses. These students completed over 11 million lessons across Tynker's diverse course offerings, from block coding to programming in Python, JavaScript, and HTML/CSS.

Coding lessons completed Mar-May 2020

4. The Best Online Learning Platforms Offer a Broad and Deep Curriculum

Sifting through the flood of online educational resources can be difficult for teachers to navigate and even more challenging to manage on an ongoing basis. The best online learning platforms have a broad and deep curriculum that provide consistency and flexibility for both teachers and students. In addition, it's essential that the platform engage students, allowing them to learn while exploring their individual interests and hobbies.

The Tynker platform, developed and curated over eight years, provides a clear learning pathway for students from PreK through 12th grade. The platform includes 600+ hours of coding curriculum, leveraging fun activities to teach block coding, Minecraft mods, text coding, and Python programming. The essential benefit of Tynker is that there are deep courses across a number of subjects that interest children, including, but not limited to Minecraft, music creations, game making, text coding, and adventure games.

Tynker has a deep well of content for kids ages 5 to 17.

"With Tynker, I have been able to find courses for my special education students, as well as my beginner and intermediate computer technology and game design students."

"I love that my students can progress in a familiar environment from advanced block coding to Python, HTML, and Javascript. I appreciate having one environment where I can work with almost all my students, ages 5 to 13."

"I have multiple classes with multiple grade-levels. Tynker has been great at giving students options for coding and... content-based projects."

"The volume of Tynker courses and the breadth of it, for 5 year-old kids to high school students, is amazing!"

May 11, 2020 Tynker Teacher Survey

Market-Leading EdTech Companies Innovate to Exceed Expectations

The abrupt shift to remote learning has proved challenging, as any sudden, global educational transition in the face of a crisis would be. There have, however, been some positive outcomes to the recent, forced remote learning. For many, school schedules have suddenly become more fluid, allowing students more choice over when and how they do their school work. Overcommitted students with jam-packed schedules have finally had a chance to slow down. And teachers, parents, and students worldwide have experienced first-hand the benefits of learning to code via platforms like Tynker that are deep in content and easy to use.

Clearly, the new age of blended learning is upon us. In the post-pandemic world, classrooms will become progressively more digitized, remote learning will grow ever more essential, and data will increasingly be used to enable personalized learning experiences. Market-leading edtech companies like Tynker will continue to innovate to provide engaging, interest based, in-depth remote learning solutions that meet the evolving needs of students, parents, schools, and educators.

About Tynker

Tynker empowers kids of all ages to become Makers by enabling them to develop coding skills to design, develop, and power animations, games, toys, smart devices, and more. The company's award-winning platform helps to engage students at home, at school, and on the go, so they develop the critical thinking, reasoning, and programming skills that turn them into the Makers of today and tomorrow. Tynker's highly successful STEM teaching platform has been used by one in three U.S. K-8 schools, 90,000 schools globally, and over 60 million students across 150 countries. Tynker's partners include some of the world's most respected brands including Apple, Google, Microsoft, Mattel, PBS, Lego, NASA, BBC Learning, and more. Tynker is accessible from any computer with an Internet browser, as well as via the Tynker and Tynker Junior mobile apps, and offers both a free and paid subscription option. For more information, visit http://www.tynker.com.

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