

# How is digital culture influencing learning through play?

REPORT | 11 Aug 2022

The concept of learning through play has been around forever. But advancements in digital culture have accelerated new innovations and enabled exciting opportunities to bring them together. How are schools and educational institutions incorporating edtech into lessons as a way of engaging students?

## AUTHORS

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## LOCATIONS:

## GENERATIONS:

GEN Z (BORN  
1997-2010)

GEN ALPHA (BORN  
2011-PRESENT)

## SECTORS:

CAREERS  
EDUCATION



## EXPERTS



Natalia Kucirkova

Chloe Barrett

## HIGHLIGHTS

- 01** With gaming becoming a much bigger part of young people's lives, schools are finding ways to incorporate gameplay into learning
- 02** Social media and online communities are allowing students to take their learning into their own hands and also helping teachers connect and share best practices
- 03** Educational gaming apps that gamify the learning experience provide an alternative and fun way for kids to demonstrate their learnt skills

## DATA

- Only 54% of Gen Zers feel their education has successfully prepared them to prosper in 2030
- When asked to rank educational importance, 77% of Gen Zers listed environmental literacy and career development in the top three
- 87% of companies globally are experiencing skills gaps

## SCOPE

Felisa Ford is neither a pro at Minecraft nor a gamer, but as a teacher for over 29 years, she recognised the need for children to learn outside the classroom. It's what made her see the potential of Minecraft to not only capture students' imagination but engage them in learning every kind of subject. In 2015, Ford became a digital learning specialist and completed certifications as a Microsoft Innovative Educator and a Global Minecraft Mentor. [1]

Then the pandemic hit and, in the summer of 2020, Black Lives Matter protests began. Ford began working on a way to teach students about social justice movements around the world through video games, specifically Minecraft. The game, which was launched in 2011, is the highest-selling video game of all time, with more than 238 million copies sold. [2][Minecraft: Education Edition](#) was launched in 2016 and has approximately 35 million licensed school users across 115 countries. M:EE, which is free to Microsoft Education users, allows educators to create M:EE 'worlds', which are immersive experiences with specific themes or subject areas. They have their own custom landscapes and characters, with curriculum-aligned lessons embedded throughout as part of each player's game challenges.

Ford's world, called 'Lessons in Good Trouble', is designed for third graders up to high school students, and is made up of seven independent lessons, allowing students to navigate through and experience different civil rights movements. The game introduces them to activists such as Malala Yousafzai and Rosa Parks. As of May 2021, Good Trouble had been

downloaded over 3 million times, making it not only the most downloaded world in M:EE's history, but in the entirety of Minecraft. Ford was named one of TIME magazine's Innovative Educators in 2022. [3]

The concept of learning through play has been around for a long time, but advancements in digital culture have allowed for the acceleration of innovations in both and enabled exciting opportunities to bring them together. "It's the natural evolution of education as a field," says Professor Natalia Kucirkova, a professor of early childhood education and development at the University of Stavanger, Norway, and professor of reading and children's development at The Open University, UK. "You don't want to have passive interactions, you want to have actively engaged children, you want to have interactive and meaningful learning. And that is essentially playful learning. Edtech, when designed well, meets these criteria for being interactive, both in terms of the child and device, but also in terms of interacting with other people." [4]

The global edtech market was valued at \$85 billion in 2021 and is expected to reach over \$230 billion by 2028. [5] And with video games, gaming, and gamification being a much bigger part of young people's lives, more schools and educational institutions are taking an interest to incorporate them into lessons as a way of motivating and engaging students. "The first generation of edtech was very much driven by gamification informed by commercial principles," says Professor Kucirkova. "That means you have badges as rewards. You use data to complete, rather than to inform, your learning. A lot of the features we see in social media have been directly applied to edtech, and that's not educational gamification. Increasingly, there is a push for evidence-driven edtech." Edtech innovations are not prioritising engagement, but learning, she says. "It's not about competing against others, but competing against yourself if you deeply want to learn something. So those design principles are only now being implemented in the new generation of gadgets." [4]

## SOCIAL MEDIA AS A CATALYST FOR AUTONOMOUS PEER-TO-PEER LEARNING

Although peer learning has long been a recognised pedagogical approach that emphasises the social process of formulating ideas and understandings, new social media avenues transfer that control from the teacher setting up a lesson, to students taking schooling one another into their own hands. TikTok, in particular, is a go-to destination for young people who are discovering everything from [career advice](#) to sex education, informing each other in a language they know. [6] In May 2020, TikTok announced the #LearnOnTikTok initiative and brought together 800 household names, media publishers, educational institutions, and real-world professional experts to bring learning material to the platform. [7] They also announced a \$50 million Creative Learning Fund for this initiative. [8] On TikTok, organisations and nonprofits such as Aquarium of the Pacific, Headspace, and It Gets Better have created explainer videos and shared information on everything from endangered giant sea bass to gender-identity mindfulness in conversation. [7] [#LearnOnTikTok](#) has over 357 billion views.

In addition, TikTok challenges provide a new opportunity for playful learning through the platform. A TikTok challenge was started by two students of the UK's Kingston School of Art to inspire environmental action among secondary school pupils, for instance. The pair encouraged students to recycle and spotlight ways to reduce wasteful habits. As part of the challenge, participating students were asked to include one fact about recycling. [9] "There's definitely a change in behaviour in terms of how everyone is looking at how to use technology in education," says Chloe Barrett, the CEO and co-founder of Immersify Education, an educational platform for dental students. "The pandemic accelerated that because everyone had to embrace it. And there's a huge shift from this next generation of students as well and the expectations they have from content. If they go on the web and don't find something in three seconds, they go to another page. One type of learning is just not good enough for us anymore. We learn by video, we learn by animations, we learn by engagement." [10]

It's not just students who are using social media to learn from one another. [Comunidad Atenea](#), an Americas-based social network, is a place where "teachers can connect, share best practices, take inspiration from peers, access MOOCs, and create projects with colleagues." [11] It recently formed an alliance with TikTok to launch a learning challenge for Latin American teachers with the hashtag #aprendeentiktok.



Multiplayer games such as 'Mathletics' have interactive activities for students

Mathletics | Facebook (2022)

## WORLD-BUILDING PLATFORMS ARE GETTING KIDS EXCITED ABOUT STEM SUBJECTS

There's been a huge shift in the community and social media aspect of edtech, according to Barrett, who says that ultimately, lifting each other up instead of competing is where the ideal approach is heading. Multiplayer games such as [Mathletics](#) and [English Type](#), as well as workshop player games, and even quizzes are interactive activities where students can learn together. "You can log on and play with your partner, your friends, and your peers," Barrett says. [10] At Immersify Education, the company she co-founded, Barrett says they've included cohorts and leaderboards, which while encouraging friendly, light-hearted competition, can be hugely collaborative as well.

With an unlimited amount of knowledge at their fingertips, the purpose of education has moved away from simple knowledge retention in students towards figuring out what to do with that information. New world-building games allow young people to explore ideas and apply learned skills in environments limited only by their imagination. Such skill sets are manifesting in a new social outlook, [a world-builder behaviour](#) that sees younger generations intent on building new solutions to the problems they see. In a blog post on the M:EE website, Ford explains how their school district, with a high percentage of students from families with low socioeconomic status and high free and reduced lunch rates, faced the additional challenge of keeping students engaged while also addressing the literary and math gaps across classrooms and schools in the district. "We knew that if the teachers just introduced the Minecraft platform to their class, the students would take it and run with it," Ford says. That's exactly what happened. "That's when the light clicked for us: we would flip our Minecraft PL on its head and let the students be the leaders and train the teachers, and the APS Minecraft Student Ambassadors Program as we know it was born! We wanted to make sure that this program gave students – the true Minecraft experts – the opportunity to be the student leaders they wanted to be." [12]

Minecraft isn't the only game in town. In November 2021, Roblox, another popular digital gaming platform popular with six to 10-year-old kids, unveiled a \$10 million Roblox Community Fund (RCF) to build out its educational offering. [13]

And in April this year, LEGO and Fortnite developer Epic Games announced a 'long-term partnership to shape the future of the metaverse', with a focus on building safe gaming spaces for young players. [14]



English Type is an interactive and fun way for students to learn typing

English Type | Facebook (2022)

## PLAY AS AN ALTERNATIVE WAY TO DEMONSTRATE SKILLS

Only 54% of Gen Zers feel their education has successfully prepared them to prosper in 2030. When asked to rank school subjects in terms of educational importance, 77% listed environmental literacy and career development among the top three, with financial literacy, global citizenship, digital literacy, and entrepreneurship also ranking highly. [15]

On the employer side, while educational institutions are working harder than ever to provide learning opportunities to the increasing number of students they serve, "gaps still exist in the skills needed by employers once students graduate," writes Steven Butschi, head of education at Google Cloud. [16] He points to a survey in which 87% of companies report experiencing skills gaps. [17] Advancements in AI mean that the gamified learning tools can respond to an individual's learning needs, he says.

Examples of this include [DuoLingo's](#) language app, which is gamifying learning at scale, embedding micro-learning moments and offering rewards as motivation, as well as [Plume](#), a web and mobile application in France, which uses playful and visual stories to develop students' writing skills (aged eight to 12). Plume has been adopted by many National Education teachers and is an officially recognised digital resource for schools. Plume uses machine learning to adapt the content to the level and development of each student, which means they are fully autonomous and in control of their own learning.

"The big advantage of personalisation is that it can connect a school and a home," says Professor Kucirkova. "Especially in higher income and better resource families, you see that happening more and more. Because the technology travels with the child, it documents the learning not only in school but also at home. It literally grows with the child. And if you

add AI to it, with personalised recommendations, you can see the benefit for the individual child's learning in the sense that you get much more diverse recommendations than a single teacher could ever provide." [4]



Learning through gaming is becoming a key element of education

Alvaro Reyes (2020)

## INSIGHTS AND OPPORTUNITIES

### A COMMON-SENSE APPROACH TO INNOVATION

Engagement and time remain the biggest challenges teachers face in the classroom. When English teacher Claudine James started posting short YouTube lessons for class assignments, she found that none of her videos were getting any views, and her students continued to make the same mistakes. Instead, she took to TikTok, with short, bite-sized videos. In less than a week, she had 10,000 followers. Today, she has four million. [18] It's important to show teachers the value for them and how emerging technologies can help them do their jobs and support their students better, says Barrett. "We tell them, use our resources and embed them in your lecture and use the time you've saved to provide more personal, interactive sessions to your students," she says. [10] Having a dedicated resource with guidance and ratings and a quick overview of which platform is suitable for which subject area and for which age group, would be incredibly beneficial for teachers, says Professor Kucirkova. "In the UK it's very fragmented. You have so many organisations that it's getting confusing for teachers," she says. "I would say that the approach the US has taken with [Common Sense Media](#) is what teachers need. Teachers need both the training and the guidance." [4]

### ASSESSING STUDENT CAPABILITIES

Each student has their own set of needs and standardised testing is no longer working. It's bloated, and people have figured out how to game it, many experts believe. [19] "We build experiences," says Barrett of Immersify Education. "So talking about dentistry in a clinical setting, for example, you could have a simulated patient and perform a virtual

procedure on them. If you were to administer local anesthesia, you could do that in a simulated head on your phone. Then, there's the personalisation. It will tell you how you've gone wrong, where you've gone wrong, what you need to look at again, and it will provide you with modules and lessons." [10] It's this sort of real-time individualised feedback that can be incredibly valuable in helping students assess their own capabilities and become aware of their own particular areas of improvement.

## PERSONALISED LEARNING JOURNEYS FOR EQUAL LEVELING UP

We don't all learn in the same way, says Barrett. We're seeing less and less interest in book learning but even with edtech, each student works at their own pace. Addressing individual strengths and weaknesses in a traditional classroom can be extremely difficult, but personalised learning through technology can greatly minimise that challenge. [Wise](#), a platform driven by a research team at the University of California, Berkeley, allows teachers and students the opportunity to do inquiry-based science. "The platform can guide the student through questions and it uses natural language processing, so it recommends different areas of the text that students can then look up," says Professor Kucirkova. "It automatically scores what they have written in their essay and gives them different drafts and images. It's the sort of visual demonstration of knowledge that many teachers cannot provide." [4] It is important, Professor Kucirkova says, that edtech become a solution to and not an enabler of inequality in learning. "We need to make sure that the differences we have between high-income and low-income students are addressed." However, she warns, it's important to ensure that the personalisation is reacting to a child's needs and not trapping them in predetermined bubbles. [4]