

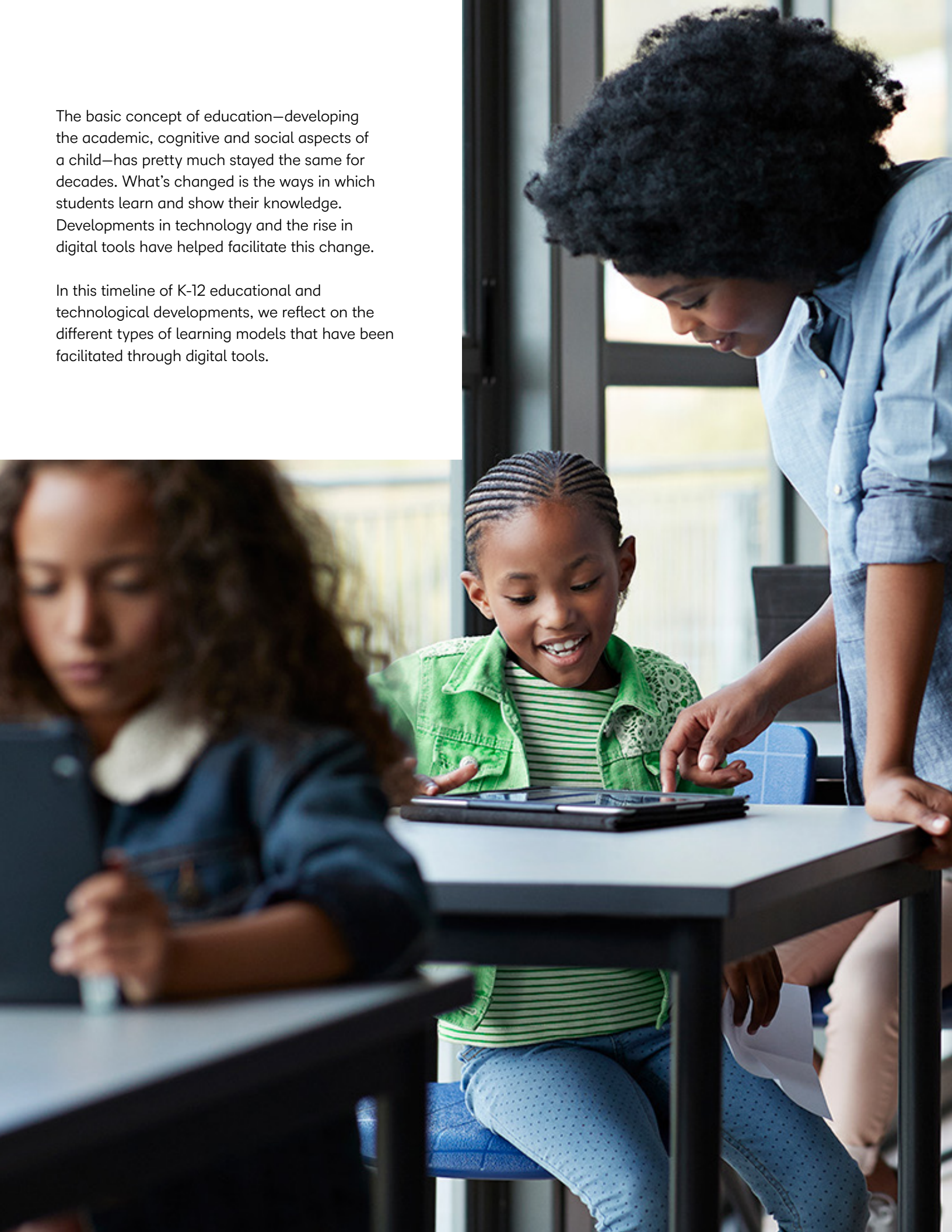
D2L



**From Traditional to Tech-Enhanced
Learning: K-12 Education Today**

The basic concept of education—developing the academic, cognitive and social aspects of a child—has pretty much stayed the same for decades. What’s changed is the ways in which students learn and show their knowledge. Developments in technology and the rise in digital tools have helped facilitate this change.

In this timeline of K-12 educational and technological developments, we reflect on the different types of learning models that have been facilitated through digital tools.



The History of K-12 Educational and Technology Developments



Improved Postal Systems and the Rise of Correspondence Education

1830-1870

One of the first formats of distance education was called correspondence education. Educational materials, including textbooks, homework assignments and tests, were mailed to students. Once students completed the assignments, they would mail them back to their instructors for grading.

In the 1840s, Isaac Pitman, an English teacher from Bath, England, began using this learning model to teach shorthand. He is now recognized as the developer of the Pitman shorthand system.

In the 1860s and 1870s, correspondence education gained popularity in countries outside Europe, such as Canada, New Zealand and the United States, where schools used it to help provide rural students with access to learning.



1830-1870

1920-1930

1980-1990

1990-2000

2000-2010

2020-2021

2021-Present



Educational Broadcasting Through Radio

1920-1930

In the 1920s, the integration of different technologies—including over-the-air transmitters, satellite distribution and radio—shifted teaching practices away from correspondence education and toward educational broadcasting. This type of remote learning was used to supplement traditional in-classroom instruction and motivate students who lived in remote areas. What differentiated educational broadcasting from face-to-face and correspondence instruction was that these programs added to existing traditional K-12 curriculum by discussing issues like public health.

In 1924, Sidney L. Pressey also created a teaching machine that may have laid the foundation for today’s learning management system (LMS). The machine looked like a typewriter and was used to administer tests where students would press one of four keys that corresponded to the right answer. Pressey’s teaching machine was used to record test answers and deliver marks.



Integration of Telematics in Learning

1980-1990

The 1980s also delivered significant technological advancements. During this time, schools began to integrate telematics into learning. Telematics is the use of telecommunication and information technology products that help retrieve, process and communicate materials. An example would be audio links alongside traditional class materials. These tools brought a new aspect to traditional teaching practices and promoted synchronous and asynchronous learning. Not only did the integration of telematics give remote students access to learning materials, but it also helped students experience learning at different times.



1830-1870

1920-1930

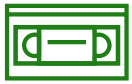
1980-1990

1990-2000

2000-2010

2020-2021

2021-Present



Videocassettes, Computers and the Internet



The Rise of the LMS

1990-2000

In the 1990s, video helped enhance learning environments that used audio and telematics. Like the advantages that online learning environments offer learners today, videocassettes allowed students to watch and rewatch class material at their leisure. In classes where being able to study detailed imagery was important, video meant one could zoom in on photos and pictures. However, videocassettes did have drawbacks. For example, the average recording time was between 90 and 120 minutes. And since the longer tapes were made of thinner material, they were much more prone to breaking.

Perhaps more significant than videocassettes was the widespread adoption of the computer. By 1991, most U.S. elementary schools had a computer and the ratio of students to computers was shrinking. This technological adoption was eventually accompanied by the rotation model of learning, in which students move from classroom to computer lab and back. This decade also saw a milestone moment: the World Wide Web launched in the public domain in 1993. This would pave the way for technology in education—and beyond—as we know it.

2000-2010

In the 2000s, we saw the introduction of the open-source LMS. These systems resembled an amalgamation of historical digital tools and technology used for teaching, but they offered educators new ways to integrate and manage learning. They not only functioned as class repositories but also helped manage and automate teaching practices. Today, an LMS does more than simply administer questions. These systems now have many different functions and capabilities, including testing, assignment submissions and video feedback, placing them at the heart of modern learning.



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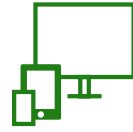
2021-Present



COVID-19 Pandemic and Emergency Remote Online Teaching

2020-2021

In 2020, school systems around the world had to adapt to emergency remote teaching (ERT). ERT can be defined as an emergency-prompted shift to a different mode of teaching that enables education anytime, anywhere. This usually consists of taking in-person teaching and learning experiences and placing them online. Because of the COVID-19 pandemic, educational stakeholders like students, parents, teachers and school leaders had to adjust and adapt to this new model.



Moving Toward Technology-Enhanced Learning

2021-Present

ERT gave students access to instruction during a crisis and served as a catalyst for change. At the start of 2021, school systems worked to limit disruptions to learning and create more equitable and engaging educational experiences. This consisted of working with teaching and learning stakeholders, including parents, leaders in education and technology partners, to reimagine the ways in which students' needs are met. One example is by integrating digital tools that not only host content but also have reward features and leaderboards to engage students through gamification.

To continue to do this successfully, schools and school systems need to have a tool like an LMS in place and the right pedagogical practices to support its integration. While ERT had its fair share of problems, implementing technology in a blended learning environment has been accompanied by myriad benefits. These benefits have shown the importance of building on the positive aspects of ed tech tools and rectifying the negative ones. The right LMS will provide students, teachers, parents and district leaders with the ability to seamlessly transition from the traditional classroom to the virtual one and back. In an increasingly digital world, it's important to include these tools in the classroom so that students can become familiar with them early on.



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2021-Present

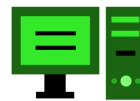
How Students, Teachers and Parents Benefit From Using Tech-Enhanced Personalized Learning

Education has come a long way from the advent of correspondence education nearly two centuries ago. With the rapid advances of today, it's hard to imagine a world where technology doesn't play a critical role in classrooms all over the world. The introduction of digital tools has already leveled the playing field for millions of students around the globe who may have otherwise been unable to access education at all; for others, it has made it easier to learn on their own terms and at a pace that suits them best. Many U.S. districts have even moved to a 1:1 ratio of devices to students, especially in higher grades.

As these digital tools continue to evolve, the ways in which students can learn in the 21st-century classroom are limitless. But in order to fully realize the benefits of tech-enhanced learning, educators, parents, district leaders and technology partners must strategically work together to ensure every learner's unique needs, challenges and interests are being considered without adding more work to the educator's plate. Each stakeholder plays an important role in the successful implementation of these tools.

Discover How to Implement Tech-Enhanced Learning in Your District

1. Check out the infographic [How Teachers, Parents and Students Benefit From Using Tech-Enhanced Personalized Learning](#)
2. Read the article [How to Safely Adopt New Tech as Educators](#)
3. Learn more by reading [The Complete Guide to Personalized Learning](#).



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2021-Present

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ABOUT D2L

D2L is a global learning innovation company, reshaping the future of education and work. We're leading the way into a new era of personalized learning, driven by the belief that everyone deserves access to high-quality education, regardless of their age, ability or location. Our signature technology products—D2L Brightspace and D2L Wave—enhance the learning experience for millions of learners at every stage of life, from the earliest days of school to the working world.

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