

# THE FUTURE of EDUCATION TECHNOLOGY

It's virtually impossible to name an industry that has not been transformed by technology. Education is no exception. From Apple computers to smartphones, iPads, and virtual reality, students and teachers are welcoming the exciting educational opportunities brought by technology.

## When Technology Meets Education

IN FALL 2017

**50.7** MILLION STUDENTS

ENROLLED IN PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

**35.6 M** PRE-K THROUGH 8TH GRADE

**15.1 M** 9TH THROUGH 12TH GRADE



More than **30 million** primary and secondary school students use **Google education apps**, such as Docs and Gmail

**\$93.76 BILLION**

Global ed-tech market expected growth by 2020



PERCENTAGE OF DEVICES USED BY K-12 SCHOOLS IN THE U.S.

**Google** 58%

**Microsoft Windows** 22%

**MacOS and iOS** 19%

0 20 40 60 80 100



**75%**



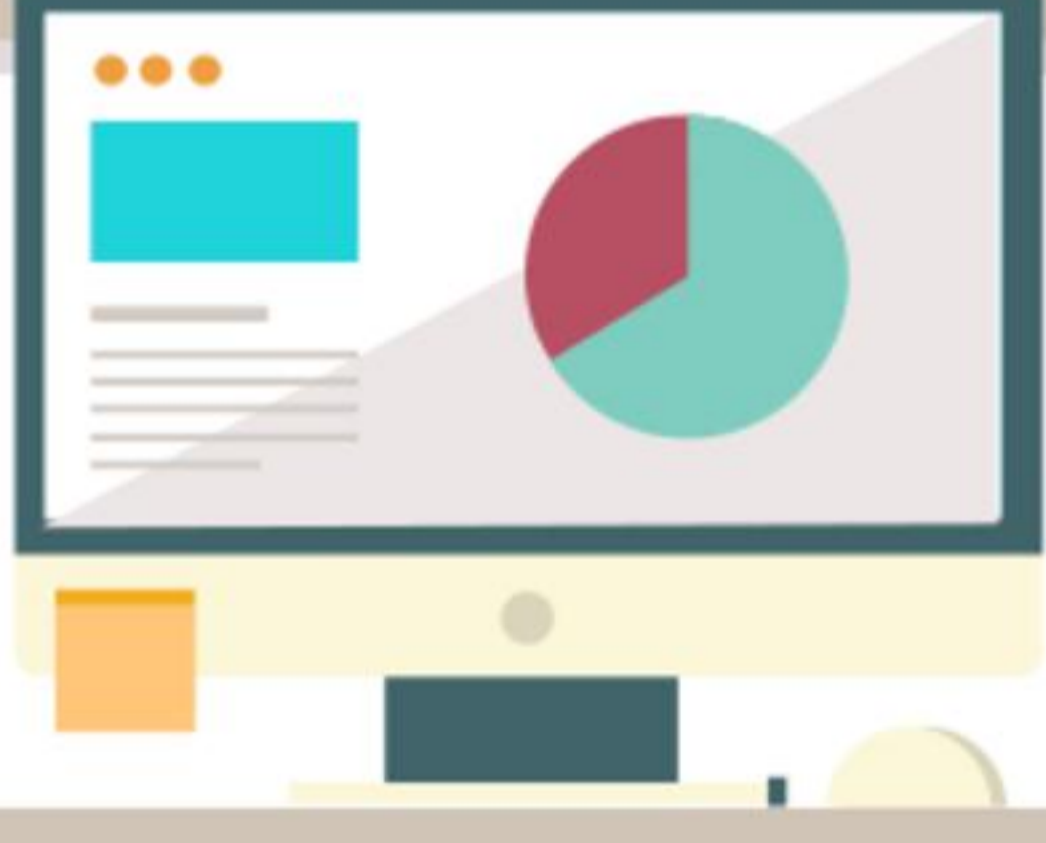
of teachers believe **digital learning content** will completely replace printed textbooks by 2026

## Opening Doors With Technology

Today, **five trends** in technology are **creating** and **improving** education.

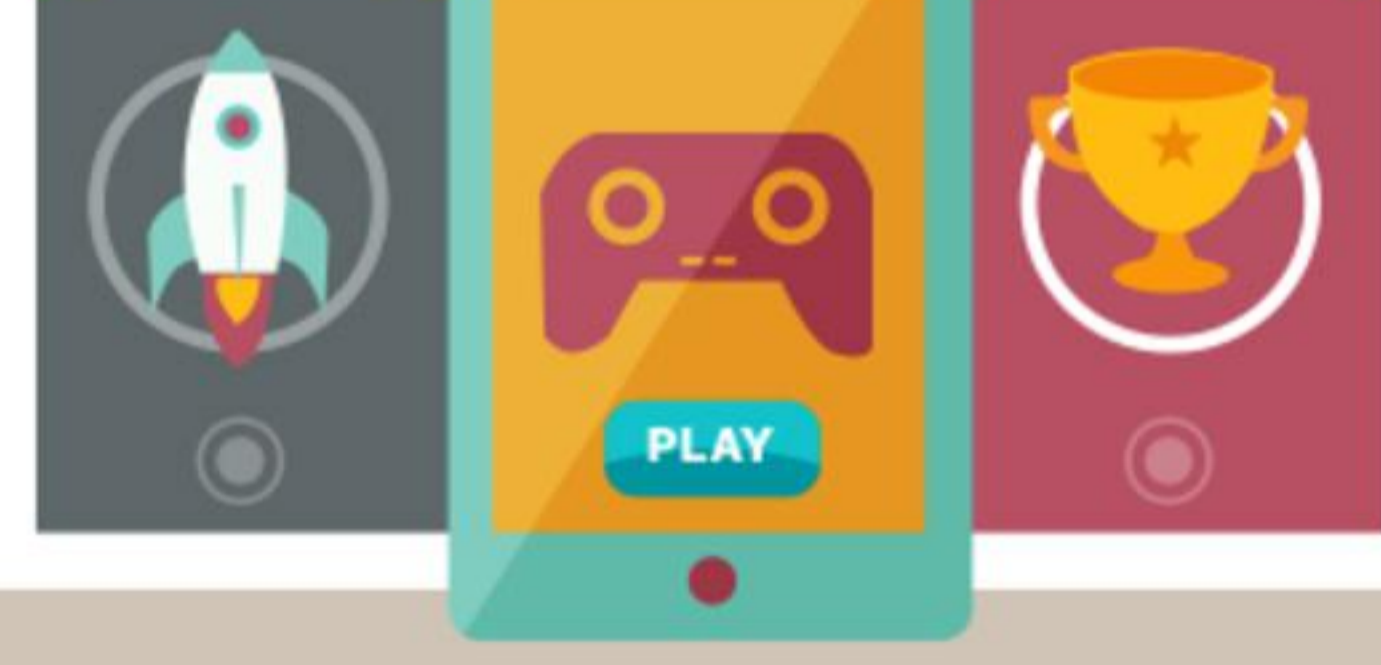
### LEARNING MANAGEMENT SYSTEM (LMS)

- ▶ The technology is a platform to create and track online training initiatives
- ▶ Teachers upload material that can then be accessed by students remotely



### GAMIFICATION

- ▶ Using algorithms, educational games create personalized and engaging learning experiences



### AUGMENTED REALITY (AR) AND VIRTUAL REALITY (VR)

- ▶ In AR, information is overlaid onto a physical environment; in VR, an entirely new environment is simulated



### CODING AND ROBOTICS

- ▶ School media centers are introducing robotics programs and coding initiatives and aiding teachers in adapting curriculum to teach these technology skills



### SMART CLASSROOM

- ▶ From smart tables to biometric devices, voice recognition technology, and natural language processing using sensors and artificial intelligence (AI), smart classrooms will create personalized and individualized learning experiences



## Embracing Technology in the Classroom

Many schools and districts across the United States have seen the positive results of embracing technology in the classroom; **Mooresville Graded School District** is just one example.

### A PIONEER TO ADMIRE

#### MOORESVILLE GRADED SCHOOL DISTRICT

Students in 3rd through 12th grade were issued a laptop

#### TEACHERS WERE ABLE TO

“tailor instruction to specific groups of students, providing more challenging problem sets to accelerated learners, while simultaneously reviewing concepts with those who require reinforcement.”

ACCORDING TO AN ARTICLE BY U.S. NEWS & WORLD REPORT

#### RESULTS (three years later)

GRADUATION RATE INCREASED FROM 80 PERCENT TO

**91%**

88%

OF STUDENTS ACROSS GRADES AND SUBJECTS MET THE PROFICIENCY STANDARDS COMPARED WITH 73 PERCENT

### HOW TO ADAPT AND LEAD WITH TECHNOLOGY

#### RECOGNIZE HESITATION TO CHANGE

Naturally, technology disrupts; it requires changing habits and routines. Teachers and school administrators need to identify the causes of hesitation and understand the potential benefits of teaching with technology.

#### SECURE FUNDING AND SUPPORT

Purchasing tech devices and software will require a financial commitment. Schools may need to cut funding in certain areas, hold fundraising events, or ask parents to pay a fixed annual fee for their students' access to technology.

#### IDENTIFY OPPORTUNITIES

It's important to understand where and how the changes will be made. Teachers and school administrators need to set goals and expectations for how technology will help improve the ways curriculum is taught across every subject area and assist students who are struggling.

#### PUT THEORY IN ACTION

Once the tools are in place and teachers are on board, it's time to put plans into action. Teachers will need a strong support system as they start to adapt, make changes to the curriculum, and overcome obstacles.



Naturally, change is faced with hesitation, uncertainty, and doubt. When it comes to children's education, it's understandable that teachers, school administrators, and parents would prefer to stick to what has worked well in the past: the traditional classroom. But the reality is the past has been transformed into our present world—one that is driven by technology. The future of education is teaching with technology.

**AU** SCHOOL of EDUCATION  
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#### SOURCES

[www.nces.ed.gov/fastfacts/display.asp?id=372](http://www.nces.ed.gov/fastfacts/display.asp?id=372)  
[www.pcmag.com/article2/0,2817,2488347,00.asp](http://www.pcmag.com/article2/0,2817,2488347,00.asp)  
[www.edsurge.com/product-reviews/dreambox-learning](http://www.edsurge.com/product-reviews/dreambox-learning)  
[www.elearningindustry.com/edtech-trends-and-challenges-in-2017](http://www.elearningindustry.com/edtech-trends-and-challenges-in-2017)  
[www.techcrunch.com/2018/01/19/education-technology-is-a-global-opportunity](http://www.techcrunch.com/2018/01/19/education-technology-is-a-global-opportunity)  
[www.nytimes.com/2017/05/13/technology/google-education-chromebooks-schools.html](http://www.nytimes.com/2017/05/13/technology/google-education-chromebooks-schools.html)  
[www.elearningindustry.com/what-is-an-lms-learning-management-system-basic-functions-features](http://www.elearningindustry.com/what-is-an-lms-learning-management-system-basic-functions-features)  
[www.nytimes.com/2012/02/13/education/mooresville-school-district-a-laptop-success-story.html?\\_r=1](http://www.nytimes.com/2012/02/13/education/mooresville-school-district-a-laptop-success-story.html?_r=1)  
[www.techcrunch.com/2017/04/27/as-chromebook-sales-soar-in-schools-apple-and-microsoft-fight-back](http://www.techcrunch.com/2017/04/27/as-chromebook-sales-soar-in-schools-apple-and-microsoft-fight-back)  
[www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-digital-education-survey.pdf](http://www2.deloitte.com/content/dam/Deloitte/us/Documents/technology-media-telecommunications/us-tmt-digital-education-survey.pdf)  
[www.forbes.com/sites/centurylink/2017/08/07/classroom-of-the-future-where-technology-learns-as-much-about-children-as-they-do-from-it/#3f6047931163](http://www.forbes.com/sites/centurylink/2017/08/07/classroom-of-the-future-where-technology-learns-as-much-about-children-as-they-do-from-it/#3f6047931163)