



2019

# THE COMMON SENSE CENSUS:

## Inside The 21st-Century Classroom

COMMON SENSE IS GRATEFUL FOR THE GENEROUS SUPPORT  
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## **CREDITS**

Authors: Vanessa Vega, Ph.D., Rockman et al  
Michael B. Robb, Ph.D., Common Sense

Copy editor: Jenny Pritchett

Designers: Allison Rudd  
Dana K. Herrick

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**Common Sense is the nation's leading nonprofit organization dedicated to improving the lives of kids and families by providing the trustworthy information, education, and independent voice they need to thrive in the 21st century.**



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# A LETTER FROM OUR FOUNDER

As a former teacher, I remember when technology was held up as the great solution to all the problems that plagued the education system in the United States. The revolution began with computer labs, then internet access, laptops for every classroom, laptops for every student, learning management systems, and, of course, the tech directors to buy and manage all the equipment and—thankfully—to help when the wireless went on the fritz.

Meanwhile, as tech tools flooded classrooms, personal computers and broadband exploded at home, and mobile devices became ubiquitous among students, dissolving the boundaries between home and school. This wasn't just a new way to learn; it was a new way to communicate, socialize, collaborate, and, unfortunately, distract, cyberbully, access inappropriate content, and violate people's privacy and identities.

Schools became ground zero for tech and all its related drama, all the promise and the pitfalls. Every school is now tasked with harnessing technology for learning, while also ensuring that kids are using it in safe, healthy, and responsible ways. These modern high-stakes challenges require new tools to ensure students are safe and emotionally healthy.

Until now, little data was available on whether teachers were giving students the needed skills to navigate today's complex digital world, how they were using educational technology tools with students in their classrooms, and what impacts on learning they saw. To address this, Common Sense went straight to the source, surveying a nationally representative sample of more than 1,200 K-12 teachers in the United States. What they told us for *The Common Sense Census: Inside the 21st-Century Classroom* gave us hope but also laid out some challenges to be addressed.

With more than 700,000 educators in 60,000 K-12 schools in all 50 states and around the globe teaching Common Sense's Digital Citizenship Curriculum, we are encouraged to see digital citizenship considered an important and valid part of education.

The report shows that more than 72 percent of teachers surveyed are teaching at least one type of digital citizenship competency, taking on issues such as digital drama, cyberbullying, and hate speech, and almost as many are teaching privacy and safety. For many educators, these aren't one-off lessons but regular touch points at least monthly. And, although educators are increasingly teaching news and media literacy, as fake news reverberates throughout the online world, they continue to worry about students' ability to critically evaluate the growing landscape of questionable content.

The results are powerful. Teachers find that quality lessons effectively help students make smart, safe, and ethical decisions online. And they like many of the tech tools available to them.

Still, while technology can enhance learning, it can also distract and interfere or even be a waste of money. Sometimes, teachers aren't using all the digital tools that are provided to them because, they say, they aren't relevant or engaging, or they haven't been trained to use even the ones they like best. And there continues to be a technology gap at home for many students, affecting primarily students at Title I schools and at schools with predominantly students of color and constraining teachers in those schools to work they can assign that requires access to digital devices.

Recognizing that digital technology is here to stay and will continue to evolve at a dizzying pace is critical. That's why we have to band together, approaching media balance and digital well-being as issues that affect every aspect of family life and our society as a whole.

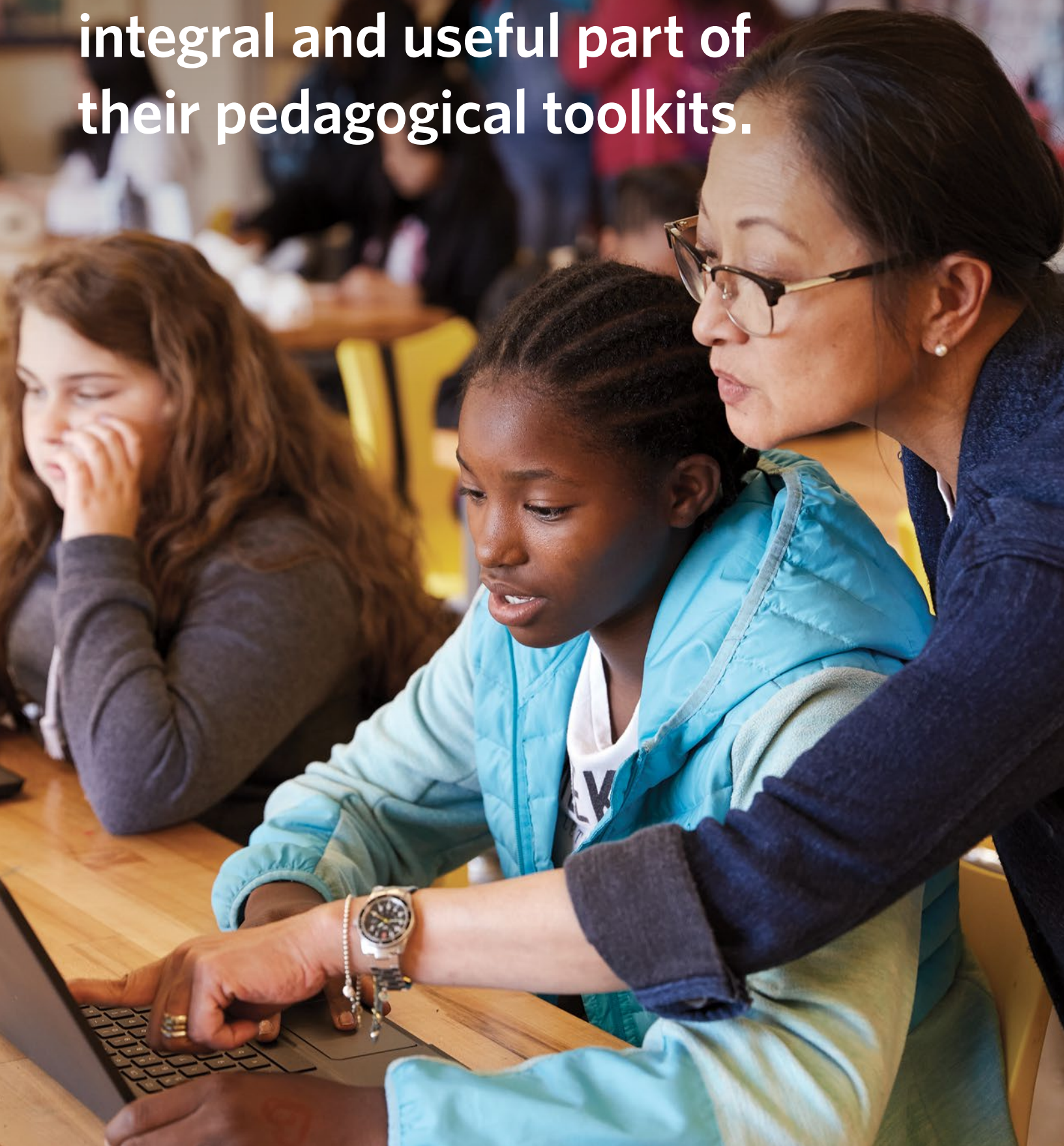
With this research, Common Sense will continue to lead the conversation around what it takes to support and prepare students as learners, leaders, and citizens in the digital age.



**James P. Steyer,**  
founder and CEO

A handwritten signature in black ink that reads "Jim Steyer". The signature is written in a cursive, slightly slanted style.

Many educators see educational technology as an integral and useful part of their pedagogical toolkits.



# INTRODUCTION

Educational technologies continue to be integrated and embedded into school districts, changing how teachers and students work and learn. Previous research has examined the many ways in which schools are evolving, including understanding what products teachers are using, how socioeconomic status relates to classroom technology access, and the barriers teachers face in integrating technology effectively (e.g., Bill and Melinda Gates Foundation, 2015<sup>1</sup>; Blackboard and Speak Up, 2017<sup>2</sup>; and Takeuchi and Vaala, 2014<sup>3</sup>). However, much remains to be learned about classroom technology use. Common Sense, working with Rockman et al, set out to learn more about the state of the 21st-century classroom by surveying classroom teachers about their experiences and attitudes around educational technology. Teachers provide a wealth of knowledge about the impact of educational technology in their classrooms. This report examines how K-12 teachers across the U.S. are currently using educational technology tools with students in their classrooms and what impacts on learning they are observing, with consideration given to students' broader learning contexts.

Using the results of a nationally representative survey of over 1,200 K-12 teachers, this report covers four main topic areas:

- **Digital citizenship curricula and competencies.** In a digital world, the skills needed to think critically and engage online in a safe and responsible manner are highly important. Yet little research has examined the extent to which U.S. teachers are engaging in classroom practices to develop students' digital citizenship competencies. The present study examines the prevalence of teaching and perceived effectiveness of digital citizenship competencies and the use of digital citizenship resources.
- **K-12 teachers' usage of digital tools and perceptions of their effectiveness for student learning.** The impact of educational technology on learning often depends on the context in which, and purpose for which, the technology is used. Teachers' usage of and perceptions of the effectiveness of various types of educational technology tools are examined, while considering the contexts of teaching and learning.
- **Access to technology for classroom learning.** What does students' access to technology devices for classroom learning at home and at school look like? Classroom teachers also report on how their students' access affects their ability to do homework, as well as the nature of parent-teacher communications about classroom technology.
- **Technology-integration policies.** To understand how technology is used in the classroom, school policies related to educational technology are examined, especially in the context of teachers' technology-related concerns.

With this report, we hope to shed light on the state of educational technology in U.S. classrooms, with a goal of helping teachers, administrators, school districts, and others who have a stake in children's education make smart, evidence-based decisions on what is most effective for students.

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1. Bill and Melinda Gates Foundation. (2015). *Teachers know best: What educators want from digital instructional tools (2.0)*. Seattle, WA: Bill and Melinda Gates Foundation. Retrieved from <http://k12education.gatesfoundation.org/resource/what-educators-want-from-digital-instructional-tools-2-0/>
  2. Project Tomorrow. (2017). *2017 digital learning report*. Retrieved from <https://tomorrow.org/speakup/speak-up-2016-trends-digital-learning-june-2017.html>
  3. Takeuchi, L., and Vaala, S. (2014). *Level up learning: A national survey on teaching with digital games*. New York, NY: Joan Ganz Cooney Center. Retrieved from <http://joanganzcooneycenter.org/publication/level-up-learning-a-national-survey-on-teaching-with-digital-games/>



Educators say classroom access to technology is nearly universal, and effective in engaging students.



# KEY FINDINGS

## 1

### Digital citizenship is being taught in a majority of schools.

Approximately six out of 10 U.S. K-12 teachers used some type of digital citizenship<sup>4</sup> curriculum or resource with students in their classrooms, while approximately seven out of 10 taught at least one type of digital citizenship competency. The most commonly addressed topic areas were digital drama, cyberbullying, and hate speech (taught by 46 percent of teachers), followed by privacy and safety (taught by 44 percent of teachers). Among those teachers who taught any type of digital citizenship competency, nearly six out of 10 did so at least monthly.

## 2

### Teachers believe digital citizenship is effective in helping students make smart, safe, and ethical decisions online.

Among teachers who used any type of digital citizenship curriculum in their classrooms, an overwhelming majority (91%) said it was at least “moderately” effective, including approximately half (52 percent) who said it was “extremely” or “very” effective in helping students make smart, safe, and ethical decisions online. Only 10 percent said it was “slightly” or “not at all” effective.

## 3

### Teachers worry about their students’ ability to critically evaluate online content.

Teachers’ top technology-related concern was that “students lack skills to critically evaluate online information,” which 35 percent observed “frequently” or “very frequently” in their classrooms. Relatedly, news and media literacy was the fourth most taught digital citizenship competency. The second top concern was that “technology distracts students from the learning experience and interferes with learning,” reported by 26 percent of teachers as “frequent” or “very frequent” in their classrooms. This issue was also reported more often as grade levels increased.

## 4

### More than a quarter of high school teachers report sexting as an issue.

Twenty-seven percent of high school teachers reported that sexting occurred in their classrooms at least occasionally, compared to 19 percent of middle school teachers, 5 percent of third- through fifth-grade teachers, and 9 percent of kindergarten through second-grade teachers.

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4. Defined in the survey as “thinking critically, behaving safely, and participating responsibly in the digital world.”

## 5

### **Video is the king of edtech in the classroom.**

Video-streaming services (e.g., YouTube, SchoolTube, Netflix) were the most commonly used type of digital tool, used by approximately 60 percent of K-12 teachers with students in their classrooms. Productivity and presentation tools (e.g., Google G Suite for Education, Microsoft Office) constituted the second most common type of digital tool, used by approximately half of teachers with their students. The least used digital tools were tools for well-being and health (25 percent), digital creation tools (25 percent), and social media (13 percent).

## 6

### **Teachers place a high value on digital creation tools in developing 21st-century skills, but these tools are among the least used in the classroom.**

Productivity and presentation tools (e.g., Google G Suite, Microsoft Office), digital creation tools (e.g., iMovie, Photoshop, Scratch), and learning management systems (e.g., Google Classroom, Canvas, Moodle) were rated by teachers as the most effective digital tools for developing students' 21st-century skills in communication, collaboration, critical thinking, and/or creativity. While productivity and presentation tools were used in about half of classrooms, digital creation tools were only used in 25 percent of classrooms.

## 7

### **The gap between the edtech products teachers use and what they say is effective is real and cuts across subjects.**

For example, ELA teachers rated productivity and presentation tools and assistive technology as the most effective types of digital tools for developing ELA content knowledge and skills, but they often used other digital tools that they rated as less effective with greater frequency. Similarly, math teachers rated supplemental apps or websites as the most effective digital tools for developing students' content knowledge and skills in math, but they used them less often than many other digital tools that they rated as less effective.

## 8

### **Many teachers are not receiving effective professional development (PD) to support their use of educational technology.**

Only four out of 10 teachers considered the PD they received to support their use of educational technology to be "very" or "extremely" effective.

## 9

### **Many technology products purchased by schools and districts go unused.**

Approximately one-third of teachers said that they did not, or practically never, use a technology product that was provided to them by their school or district. Top reasons for not using such products were that they were not relevant to students' learning needs, not engaging for students' learning, or not effective for developing students' knowledge and/or skills.

# 10

## **Home access to technology continues to be a challenge for teachers and students in schools serving lower-income students.**

Approximately one out of 10 teachers (12 percent) reported that the majority of their students (61 percent to 100 percent) did not have home access to the internet or a computer. These teachers were more likely to teach in Title I schools or schools serving predominantly students of color. This may have been a challenge because, as grade levels increased, teachers were more likely to assign homework that required access to digital devices and/or broadband internet outside of school. Teachers of grades 6–12 were more likely than teachers of grades K–5 to assign homework at least once a week that required access to digital devices and/or broadband internet outside of school (41 percent of high school teachers and 34 percent of middle school teachers vs. 23 percent of grade 3–5 teachers and 20 percent of K–2 teachers).

# 11

## **Teachers who assign homework that requires access to digital devices and/or broadband internet outside of school are more likely to teach in affluent, non-Title I schools than in Title I schools.**

Approximately four out of 10 teachers (42 percent) in Title I schools “never” assigned homework that required digital access outside of school, as compared to three out of 10 (31 percent) of teachers in non-Title I schools who “never” did so. This is a greater issue as children enter middle and high school and teachers are more likely to assign homework that requires computers and the internet.

# 12

## **Approximately a third of teachers (29 percent) said that it would limit their students’ learning “a great deal” or “quite a bit” if their students didn’t have home access to a computer or the internet.**

Teachers in schools with student populations of predominantly students of color were more likely to say that it would limit their students’ learning “a great deal” or “quite a bit” if their students did not have adequate access to broadband internet or a computing device at home to do homework (34 percent), as compared to teachers in schools with a mix of white students and students of color or teachers in schools with predominantly white students (26 percent vs. 27 percent, respectively).

# HIGHLIGHTS

## Digital Citizenship Curricula and Competencies

- **Approximately six out of 10 U.S. K-12 teachers used some type of digital citizenship curriculum or resource with students in their classrooms, while approximately seven out of 10 taught at least one type of digital citizenship competency.** The most commonly addressed areas were digital drama, cyberbullying, and hate speech (taught by 46 percent of teachers), followed by privacy and safety (taught by 44 percent of teachers). Among those teachers who taught any type of digital citizenship competency, nearly six out of 10 did so at least monthly.
- **Among teachers who used any type of digital citizenship curriculum in their classrooms, approximately half (52 percent) said it was “extremely” or “very” effective in helping students make smart, safe, and ethical decisions online.** Only 10 percent said it was “slightly” or “not at all” effective.
- **Teachers in Title I schools were more likely to use digital citizenship curricula or resources than teachers in more affluent schools** (62 percent of teachers in Title I schools vs. 52 percent of teachers in non-Title I schools). However, there were no differences in the frequency of teaching digital citizenship competencies according to Title I status.
- **Teachers in schools with more diverse student populations were more likely to use digital citizenship curricula or resources** (61 percent) than teachers in schools with predominantly white student populations (50 percent). Similarly, teachers in schools with more diverse student populations were more likely to teach digital citizenship competencies (75 percent), as compared to teachers in schools with predominantly white student populations (66 percent).
- **Teachers’ top technology-related concern was that “students lack skills to critically evaluate online information,” which 35 percent observed “frequently” or “very frequently” in their classrooms.** Relatedly, news and media literacy was the fourth most taught digital citizenship competency. The second top concern was that “technology distracts students from the learning experience and interferes with learning,” reported by 26 percent of teachers as “frequent” or “very frequent” in their classrooms. This issue was also reported more often as grade levels increased.
- **The frequency of both cyberbullying and online hate speech increased with grade level, with middle and high school teachers reporting higher frequencies of cyberbullying and online hate speech than elementary school teachers.** Approximately one out of 10 teachers (13 percent) said that cyberbullying occurred in their classrooms “frequently” or “very frequently,” and three out of 10 (34 percent) said it occurred at least “occasionally.” Approximately one out of 10 teachers (8 percent) reported that online hate speech occurred in their classrooms “frequently” or “very frequently,” and two out of 10 (22 percent) said that it occurred at least “occasionally.”
- **High school teachers reported sexting as an issue more than teachers at any other grade level.** The frequency of teachers’ reports of sexting also increased with grade level: Twenty-seven percent of high school teachers reported that sexting occurred in their classrooms at least occasionally, compared to 19 percent of middle school teachers, 5 percent of third- through fifth-grade teachers, and 9 percent of kindergarten through second-grade teachers.
- **Digital citizenship competencies were taught most heavily in high school. Approximately eight out of 10 high school teachers taught at least one type of digital citizenship competency.** However, high school teachers reported using digital citizenship curricula or resources less often than teachers of other grade levels, suggesting there may be a lack of curricular resources for this group.
- **Overall, the findings show that teachers’ reports of technology-related concerns increase with grade level, underscoring the need to teach digital citizenship competencies, especially in upper grade levels.**

## Usage and Perceptions of Effectiveness of Digital Tools

- **Most K-12 teachers use a variety of digital tool types (4.6 on average) with students in their classrooms.** Only 5 percent of K-12 teachers used no digital tools, and 75 percent used three or more types of digital tools with students in their classrooms. Teachers used more digital tools, on average, in grades 3–5 and 6–8.
- **Video-streaming services (e.g., YouTube, SchoolTube, Netflix) were the most commonly used type of digital tool, used by approximately 60 percent of K-12 teachers with students in their classrooms.** Productivity and presentation tools (e.g., Google G Suite for Education, Microsoft Office) constituted the second-most-common type of digital tool, used by approximately half of teachers with their students. The least used digital tools were tools for well-being and health (25 percent), digital creation tools (25 percent), and social media (13 percent). Video-streaming services, productivity and presentation tools, and/or learning management systems were the most frequently used type of tool, with approximately three out of 10 K-12 teachers using them at least two to three times per week.
- **Most digital tool types, with the exception of social media, were rated as effective for engaging students in learning.**
- **Productivity and presentation tools (e.g., Google G Suite for Education, Microsoft Office), digital creation tools (e.g., iMovie, Photoshop, Scratch), and learning management systems (e.g., Google Classroom, Canvas, Moodle) were rated by teachers as the most effective digital tools for developing students' 21st-century skills in communication, collaboration, critical thinking, and/or creativity.** Though teachers by a wide margin saw digital creation tools as being effective for developing 21st-century skills, they were among the least used tools in the classroom.
- **Within subject areas, there are mismatches between the types of technology products teachers use most frequently and the types of technology products they rate most effective for developing content knowledge and skills.** For example, ELA teachers rated productivity and presentation tools and assistive technology as the most effective types of digital tools for developing ELA content knowledge and skills, but they often used other digital tools that they rated as less effective with greater frequency. Similarly, math teachers rated supplemental apps or websites as the most effective digital tools for developing students' content knowledge and skills in math, but they used them less often than many other digital tools they rated as less effective.
- **Teachers generally report positive experiences with assistive technology (AT), although almost a quarter of teachers (24 percent) believe that AT gives students an unfair advantage over other students, while slightly more than half of teachers (55 percent) disagree.**
- **Forty-five percent of teachers identify "access to equipment" as a barrier to using AT more often, while 31 percent identify "lack of training/knowledge of what is available."** Teachers in Title I schools are more likely to identify insufficient access to equipment as a barrier.

## Access to Technology for Classroom Learning

- **Eight out of 10 K-12 teachers have computing devices in their classrooms.**
- **Four out of 10 teachers have 1-to-1 access for their students in their classrooms**, three out of 10 have shared devices with fewer than five students per device, and one out of 10 have shared devices with more than five students per device. Public school teachers reported more often than teachers in private schools that they had 1-to-1 access to technology in their classrooms (43 percent vs. 29 percent, respectively).
- **Approximately one out of six teachers (16 percent) reported that their students' classroom access to computing devices was best described as students bringing their own devices to the classroom** (e.g., students' own cellphones and/or tablets or laptops). Teachers in non-Title I (more affluent) schools were more likely to report that their classroom access to technology primarily consisted of students bringing their own devices (20 percent of teachers in non-Title I schools vs. 13 percent of teachers in Title I schools). High school teachers were more likely than teachers of other grade levels to report that their students brought and used their own devices as the primary mode of classroom technology access: Thirty-three percent of high school teachers reported students brought their own devices, compared to 15 percent of middle school teachers, 4 percent of grade 3-5 teachers, and 6 percent of K-2 teachers.
- **One-to-one access increases with grade level.** High school and middle school teachers were more likely than K-5 teachers to report that their students have 1-to-1 classroom access to computing devices, while teachers of grades 3-5 were more likely than K-2 teachers to report that their students have 1-to-1 classroom access (49 percent and 47 percent of high school and middle school teachers, respectively, vs. 38 percent and 29 percent of grade 3-5 and K-2 teachers, respectively).
- **Approximately one out of 10 teachers (12 percent) reported that the majority of their students (61 percent to 100 percent) did not have home access to the internet or a computer.** These teachers were more likely to teach in Title I schools or schools serving predominantly students of color (>75 percent).
- **As grade levels increase, teachers are more likely to assign homework that requires access to digital devices and/or broadband internet outside of school.** Teachers of grades 6-12 were more likely than teachers of K-5 to assign homework at least once a week that required access to digital devices and/or broadband internet outside of school (41 percent of high school teachers and 34 percent of middle school teachers vs. 23 percent of grade 3-5 teachers and 20 percent of K-2 teachers).
- **Teachers who assign homework that requires access to digital devices and/or broadband internet outside of school are more likely to teach in affluent, non-Title I schools than in Title I schools.** Approximately four out of 10 teachers in Title I schools (42 percent) never assigned homework that required such digital access outside of school, as compared to three out of 10 teachers in non-Title I schools (31 percent) who never did so.
- **Teachers with 21 or more years of experience are more likely than teachers with one to five years of teaching experience to never assign homework that requires such digital access outside of school** (43 percent of teachers with 21 or more years of experience vs. 37 percent of teachers with one to five years of experience).
- **Approximately a third of teachers (29 percent) said it would limit their students' learning "a great deal" or "quite a bit" if their students didn't have home access to a computer or the internet.** Many teachers (42 percent) did not believe it would limit their students' learning very much if their students did not have access to a computing device or the internet at home.
- **Teachers in schools with student populations of predominantly students of color were more likely to say that it would limit their students' learning "a great deal" or "quite a bit" if their students did not have adequate access to broadband internet or a computing device at home to do homework** (34 percent), as compared to teachers in schools with a mix of white students and students of color or teachers in schools with predominantly white students (26 percent vs. 27 percent, respectively).
- **Teachers in schools serving predominantly students of color were less likely to agree that technology has made it easier to have meaningful parent communication.** However, three out of four teachers overall agree that technology has made it easier to have meaningful communication with parents.
- **High school teachers were more likely than elementary school teachers to agree that parents have expressed concerns that their school requires too much technology use (22 percent vs. 14 percent, respectively).**

## Technology-Integration Policies

- **The most common type of technology policy that schools implement is a cellphone policy (80 percent)**, followed by a student data privacy policy (74 percent), a technology acceptable/responsible use policy (72 percent), and a social media policy (71 percent). Approximately half of teachers' schools (48 percent) implemented digital citizenship policies.
- **Approximately a third of high school teachers' schools do not implement digital citizenship policies, and approximately a quarter said their schools do not implement cellphone policies.** Teachers of grades 3-8 were more likely than K-2 or high school teachers to report that their schools had implemented cellphone policies (85 percent of grade 3-5 teachers and grade 6-8 teachers vs. 78 percent of K-2 teachers and 73 percent of high school teachers).
- **Approximately a quarter of teachers find cellphone policies difficult to follow, while roughly two-thirds find them easy to follow.** Teachers found the student data privacy policies, social media policies, and technology acceptable/responsible use policies easier to follow than cellphone policies.
- **High school teachers were more likely than teachers of other grade levels to report that implementing cellphone policies, social media policies, and digital citizenship policies in their classrooms was difficult.**
- **Approximately nine out of 10 teachers participated in school- or district-provided professional development (PD) to support their classroom technology use during the last school year.** Of teachers who received such PD in the last school year, teachers spent 14.3 hours on average in school- or district-provided PD to support their classroom technology use. However, 48 percent of teachers received under five hours of PD, including 13 percent who received none at all.
- **Only four out of 10 teachers consider the PD they received to support their use of educational technology to be "very" or "extremely" effective.**
- **Teachers in schools with digital citizenship policies are more likely to teach digital citizenship competencies, to learn about digital citizenship in their school- or district-provided PD, and to view the digital citizenship curricula or resources they used as effective.**
- **Eight out of 10 teachers reported that they make the decision about whether or not to use digital products in their classrooms, with middle and high school teachers being more likely to say that they make the decision as compared to elementary school teachers.** Although most teachers checked an approved list or confirmed that technology products complied with school or district policies, most had autonomy over whether or not they used approved digital products in the classroom.
- **Approximately a third of teachers said that they did not, or practically never, used a technology product that was provided to them by their school or district.** Top reasons for not using such products were that they were not relevant to students' learning needs, not engaging for students' learning, or not effective for developing their knowledge and/or skills.
- **When asked what they did not like about the technology that their school or district provided, teachers cited insufficient access to equipment, old or outdated equipment, technology being hard or difficult to use, and/or technology being unreliable, breaking down, or otherwise not working.** When asked what they liked about the technology that their school or district provided, most teachers cited the educational value, convenience, and usability, and many appreciated having sufficient access to and variety in their technology.

# THE COMMON SENSE CENSUS

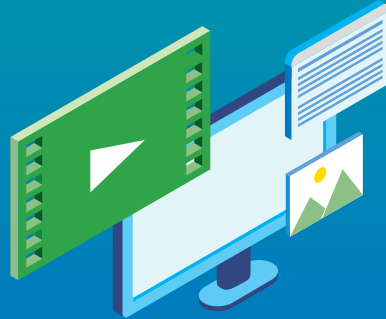
## Inside the 21st-Century Classroom

K-12 teachers share their experiences and attitudes around educational technology, how it's used, and its effects on learning.

### TOOLS IN THE CLASSROOM

## TEACHERS SAY VIDEO IS KING.

**58%** say they use video-streaming services.



Percent of teachers who use these other tools in the classroom:

- 54% Productivity and presentation tools
- 25% Tools for well-being and health
- 25% Digital creation tools
- 13% Social media

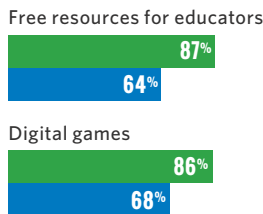
## DIGITAL TOOL USE VS. EFFECTIVENESS

Across subjects, there are gaps between the tech products teachers use and what they say is effective.

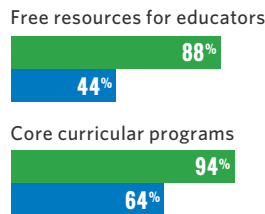
- FREQUENCY**  
Percent who use tool at least 2-3x a month
- EFFECTIVENESS**  
Percent who rate tool "moderately," "very," or "extremely" effective



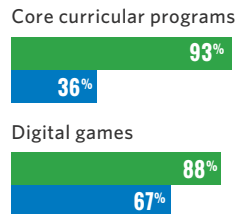
### ELA



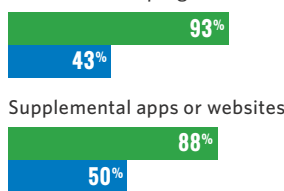
### MATH



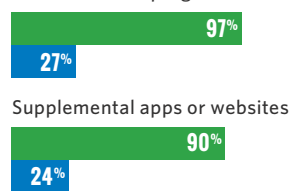
### SCIENCE



### SOCIAL STUDIES



### PHYSICAL EDUCATION



**43%** consider the professional development they receive to support their use of educational technology to be "very" or "extremely" effective.



**36%** do not, or practically never, use a technology product that was provided to them by their school or district.

## EDUCATORS' TOP TECH-RELATED CONCERNS

Percent of teachers observing this "frequently" or "very frequently":

35%

Students lack skills to critically evaluate online information.

26%

Technology distracts students from learning.

21%

Commercial advertising mixes with learning.

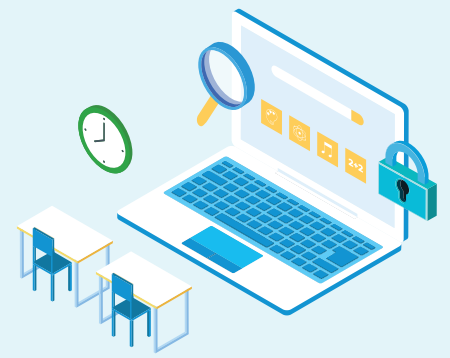
19%

School intervenes in off-hour digital incidents.



# 91%

say digital citizenship curricula are effective at helping students make safe, smart, and ethical decisions online.



## MOST POPULAR DIGITAL CITIZENSHIP TOPICS

46%

Digital drama, cyberbullying, and hate speech

43%

Privacy and safety

38%

Relationships and communication

38%

News and media literacy

33%

Digital footprint and identity

25%

Media balance and well-being

72% of educators are teaching at least ONE type of digital citizenship.

# 1 out of 10

teachers say that the majority of their students do not have adequate home access to the internet or digital devices to do homework.



## TITLE I VS. NON-TITLE I SCHOOLS

Percent of teachers who say the majority of students **DON'T** have adequate access:

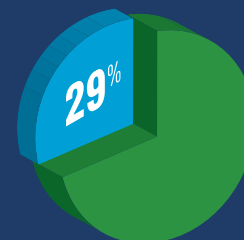
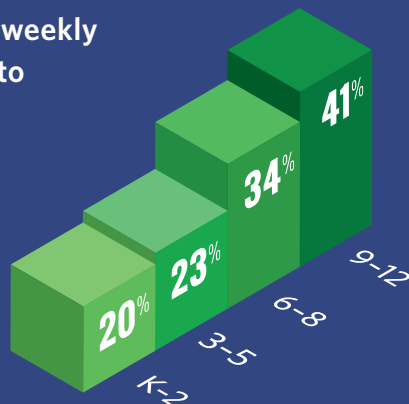
17%

TITLE I SCHOOLS

4%

NON-TITLE I SCHOOLS

Percent of teachers assigning homework weekly that requires access to digital devices or broadband internet:



Approximately a third of teachers say that it would limit their students' learning "a great deal" or "quite a bit" if their students didn't have home access to a computer or the internet.



The nature of the classroom is changing, and teachers are concerned with integrating technology effectively.

# METHODOLOGY

To develop the national survey, Rockman et al conducted three focus groups with nine teachers from the Midwest region. The nine participants were asked to complete a draft survey in advance of the focus group and to provide qualitative feedback about how well response options captured a broad variety of technology-integrated practices; whether survey items were easy to understand, interpret, and answer; how close-ended responses could be improved; and where open-ended questions or response options were needed.

The online questionnaire was designed to take 20 minutes and administered to a nationally representative sample of 1,208 U.S. K-12 teachers in May 2018 by Rockman et al and national survey sampling consultants Peter Gold, Jordan Losen, and Joe Citoli (VeraQuest Inc.). Random-probability sampling of a national teacher database was used with sampling quotas to provide an even distribution of teachers from four grade-band levels and to reflect trends in the national teacher population based on the most recently available NCES statistics (NCES, 2017)<sup>5</sup>. The sample was constructed from a combination of U.S. Census data and data from the National Center for Educational Statistics (NCES) to be representative of the teacher population and the students they teach. Targets were based on census divisions, the race/ethnicity of students, Title 1 status of schools, and school type (public vs. private). Targets were also set by grade groupings and residential status of the student population. A common rrim-weighting technique (i.e., iterative proportional fitting) adjusted sample proportions to resemble the proportions of the target population. The margin of error was plus or minus 3 percent (95 percent confidence interval).

Aggregated and disaggregated results were analyzed and reported for each of six key characteristics:

- **Grade-band level**  
(four levels: K-2, 3-5, 6-8, 9-12)
- **Average years in the classroom**  
(four levels: 1-5 years, 6-10 years, 11-20 years, 21+ years)
- **Regional context**  
(three categories: rural, urban, suburban)
- **Racial/ethnic diversity at teachers' schools**  
(three categories: predominantly white [75%+ white], diverse [26%+ students of color and less than 75% white], predominantly students of color [75%+ students of color])
- **Title I status**  
(Title 1 or non-Title 1)
- **Subject area taught**  
(eight categories: science, math, English language arts, social studies, fine arts, foreign language, physical education, other)

Differences in responses according to school or teacher characteristics were reported for significant differences based on t-tests using a p value of < .05 and percentage point differences greater than 5 points.

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5. National Center for Education Statistics. (2017). *The condition of education 2017* (No. 2017-144). Retrieved from <https://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2017144>

# CONCLUSIONS

**It's clear that many educators see educational technology as an integral and useful part of their pedagogical toolkits. Classroom access to technology is nearly universal, and teachers rank many kinds of products as effective in engaging students and in supporting 21st-century learning. However, with the nature of the classroom changing, we think it's worth noting the following observations:**

**1. The increasing frequency of technology-related issues reported by teachers of the upper grade levels underscores the importance of teaching digital citizenship at secondary grade levels.** It also suggests a need for more study of teachers' practices and needs for curricula or other pedagogical supports in this area. As 1-to-1 access increases with grade level, students' digital citizenship competencies are more likely to be performed in the classroom, providing additional opportunities for issues related to learners' safety and well-being to surface.

**2. Nearly all K-12 teachers use a variety of digital tools with students in their classrooms.** Teachers considered most digital tools to be effective for engaging students in learning but were in more disagreement about which tools were effective for developing 21st-century skills and subject-specific content knowledge and skills. Of the ones asked about, productivity and presentation tools, learning management systems, and digital creation tools were rated as more effective than other types of digital tools for developing students' 21st-century skills. Perhaps because teachers viewed many tools as effective for engaging students in learning, teachers across subjects frequently used many types of digital tools that they rated as relatively less effective for developing subject-specific content knowledge and skills. This mismatch may result in a waste of resources—namely, teachers' and students' time, district funds, ill-targeted professional development, and a general lack of efficiency in using digital tools for students' learning.

**3. Inequity in access to the internet and computing devices for classroom learning appears more in students' home access than in their classroom access.** Teachers in Title I schools and in schools in which students of color comprised more than 75 percent of the student population were more likely to report that their students lacked adequate home access to broadband internet and computing devices. Teachers in Title I schools were less likely to assign homework requiring home access to the internet or a computer, and many teachers felt that lack of access to technology for learning at home limited their students' learning.

Additionally, most K-12 teachers agreed that technology made it easier to communicate with parents, and most communicated with parents at least a few times a year about their students' use of technology for school purposes. However, in schools serving predominantly students of color, teachers tended to disagree that technology had made it easier to communicate with parents. Communicating and forming relationships with students' families is an important strategy for K-12 teachers to seek guidance and support in helping youth reach their educational goals and potentials.

This finding further suggests that inequities in technology access for learning tend to occur with students' and families' access to technology outside of school. Models showing how schools and teachers that serve predominantly students of color overcome technology barriers to communicate with parents could potentially be valuable for addressing this type of inequity. In addition, teachers seeking to incorporate technology into their students' learning at home and outside of school will need special guidance to support families who have limited access to and fluency with technology.

**4. Professional development to support teachers' use of educational technology is quite prevalent.** Nine out of 10 teachers participated in an average of 14 hours of professional development that covered issues such as integrating digital games into instruction and formative assessment. However, only 40 percent of teachers felt that the PD they received to support their use of educational technology was effective. The results suggest there is room for improvement in terms of the quality of the professional development that schools and districts provide to support teachers' technology implementation. Schools and districts might benefit from conducting needs assessments with their teachers to understand the optimal amount of training time and issues in technology integration that teachers are most interested in.

**5. High school teachers' most frequently observed concerns were related to digital technology, including some of the more serious safety issues, such as cyberbullying and hate speech.** These data suggest that there is perhaps greater need for high schools to address technology-related concerns with cellphone policies, digital citizenship policies, and social media policies, but schools likely need more support and models for successfully implementing these types of policies.

**6. The correlational data showed that schools that implemented digital citizenship policies were more likely to teach digital citizenship competencies, to learn about digital citizenship in their school- or district-provided PD, and to view the digital citizenship curricula that they used as effective.** Teachers in schools with digital citizenship policies were also more likely to report that their schools intervened in digital incidents involving students outside of school and that parents were more likely to post supportive messages about them or the administration online. Future research involving longitudinal correlational data can better address the question of whether digital citizenship curricula and/or policies are helping schools mitigate technology-related concerns that are prevalent at their schools. Successful models of digital citizenship policies and instruction in elementary, middle, and high school contexts would likely be of interest to the many schools that are already implementing digital citizenship or related policies with difficulty (e.g., cellphone and social media policies) and to the schools that are observing unsafe and concerning behaviors related to technology (e.g., cyberbullying, online hate speech, students unable to critically evaluate online information, etc.).

**7. The data confirm that teachers make important decisions about the technology they use in their classrooms.** The majority of teachers do consider their students' privacy, safety, and security in their decisions about what technology to use in their classrooms. But approximately a third of teachers have abandoned school- or district-provided technology that they felt was ineffective, irrelevant, or not engaging for their students, unreliable, or hard to use. This is wasteful on many levels and should lend itself to better communication between teachers and their schools or districts about what is needed in the classroom.

While this report addresses many topics of importance related to 21st-century classrooms, there is far more to learn about the state of the modern classroom. For example, our understanding of what works and what doesn't would be immeasurably improved by longitudinal, wide-scale evaluations examining the effectiveness of different technologies, products, curricula, and teaching strategies. However, understanding in-classroom teachers' perspectives on edtech is critical. This report provides valuable and actionable information for educators, administrators, policymakers, and other stakeholders to design equitable educational experiences that prepare all students for a successful future in the digital age.

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## OUR OFFICES

### San Francisco Headquarters

650 Townsend Street, Suite 435  
San Francisco, CA 94103  
(415) 863-0600

### Los Angeles Office

1100 Glendon Avenue, 17th Floor  
Los Angeles, CA 90024  
(310) 689-7535

### New York Office

575 Madison Avenue  
New York, NY 10022  
(212) 315-2138

### Washington, D.C. Office

2200 Pennsylvania Avenue NW  
4th Floor East  
Washington, D.C. 20037  
(202) 350-9992



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