

Smartphones And Other Devices In Schools

Results of a
National Survey



About Editorial Projects In Education

Editorial Projects in Education (EPE) is a nonprofit, tax-exempt organization based in Bethesda, Md. Its primary mission is to help raise the level of awareness and understanding among professionals and the public of important issues in American education. EPE covers local, state, national, and international news and issues from preschool through the 12th grade. Editorial Projects in Education publishes Education Week, America’s newspaper of record for precollegiate education, the online Teacher, EdWeek Market Brief, and the TopSchoolJobs employment resource. It also produces periodic special reports on issues ranging from technology to textbooks, as well as books of special interest to educators.

The EdWeek Research Center conducts surveys, collects data, and performs analyses that appear in Education Week and special reports such as Quality Counts, and Technology Counts. The center also conducts independent research studies and maintains the Education Counts online data resource.

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Inside:

Executive Summary.....	4
Introduction	5
Prevalence.....	6
Uses	8
Rules.....	14
Challenges	17
Impact: Parents.....	24
Impact: Interactions	26
Impact: Attention Spans & Distraction	28
Impact: Misbehavior.....	30
Impact:Teaching & Learning	33
Future Outlook.....	39
Demographics	41

Executive Summary

In February of 2020, the EdWeek Research Center fielded a nationally-representative, online survey of 965 teachers and principals. The survey examined educators' perceptions of the uses and abuses of smartphones and other devices in schools, including rules about student cell phones in schools, impacts on teaching, learning and behavior, and challenges. Although the survey was administered before U.S. schools closed due to Coronavirus in the late winter and early spring of 2020, moving much instruction entirely online, the results remain timely and important in that they paint a portrait of the real uses, advantages, and frustrations of technologies that became all the more central with the closure of bricks-and-mortar schools.

The survey found that, before the Coronavirus closures, just over half of educators said they provided at least one device to every student, a rate that was nearly exactly the same as the last time we asked that survey question in 2019. So-called 1:1 programs are much more common at the secondary level than in elementary schools.

When it comes to the most common student-owned devices (smartphones), the most common approach to regulation is to permit cells on campus as long as they're stored and not used during the school day. However, 63 percent of educators also say students have used their phones for instructional purposes during the 2019-20 school year. These educators are clustered in high schools — where usage rates approach 90 percent—rather than elementaries — where just 29 percent of educators have had their current students use cell phones for instructional purposes. The most common type of instructional practice involves using smartphones as reference tools.

Most survey respondents see at least some advantages to the using devices in schools. For example, the majority of educators say devices have made it easier for students to remediate gaps in skills and knowledge and also to go above and beyond for class. As a result of programs or apps that permit educators to use devices to provide student information directly to parents, parent-teacher communication, student outcomes, and student behavior have improved, most educators say.

However, challenges abound. Most educators say that students misbehave more when they use devices in class. They report that devices have made it easier for students to plagiarize, cheat on tests, and slack off when they're supposed to be doing schoolwork. Devices have also led to shorter attention spans and higher levels of distraction among students, most educators say. In fact, student off-task behavior is educators' top device-related challenge. Nearly three-quarters of high school educators say it is a major challenge that students are too often using devices for one thing when they're supposed to be focusing on another. The top off-task behavior—regardless of grade level? Playing electronic/online games. Other frequent device-related classroom distractions include listening to music, Googling random information, texting, and, even for children as young as kindergarten, social media.

Across the board, secondary educators and teachers are more frustrated and less positive about devices than their elementary peers or principals. For example, 64 percent of high school teachers say the classroom use of devices has led students to misbehave more as compared to 35 percent of elementary school principals.

That said, the news is not all bad. The majority of educators say devices have had a positive impact on teaching. And nearly three-quarters expect them to continue to do so in the five years to come.

Introduction

In the past decade, electronics have proliferated in schools. Ranging from devices provided by the district for instructional purposes to student smartphones stashed in pockets and purses, they have simply become a fact of life. Given their ubiquitousness, it is almost inevitable that they have had some sort of impact on students and classrooms. In February of 2020, the EdWeek Research Center set out to explore that impact by surveying teachers and district leaders about the uses and abuses of devices in schools. The questions explored the ways in which devices have-and have not-impacted important areas of teaching and learning such as remediation, engagement, and teacher-student relationships. They examined how teachers are using devices in the classroom for instruction. They also delved into issues related to student discipline, including devices' impact on student distraction, disruption, off-task behavior, and cheating. Finally, the survey asked educators about the rules governing the use of the most common student-owned device — smartphones. The report that follows provides detailed results and the exact wording of the survey's 32 substantive questions as well as cataloging statistically significant differences by categories including grade level, job title, age, and locale. It is important to note that the survey was administered before U.S. schools closed due to Coronavirus in the late winter and early spring of 2020, moving much instruction entirely online. However, it remains important in that it paints a portrait of the real uses, advantages and frustrations of technologies that became all the more central with the closure of brick-and-mortar schools.

SURVEY DETAILS

Survey Administered: February 2020

Sample: Nationally-representative

Method: Online [Email invitations sent to an online survey]

Respondents: 538 K-12 principals and 427 PreK-12 teachers

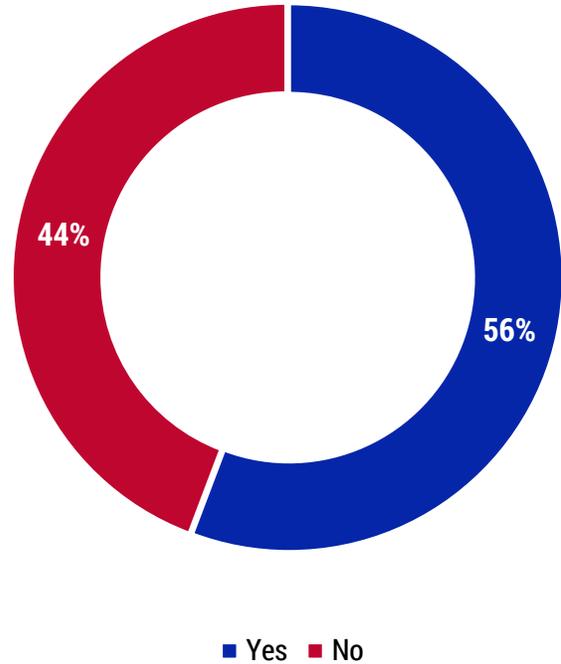
Total Respondents: 965

Prevalence

1:1 Computing

More than half of teachers and principals (56 percent) say their districts and/or schools provide at least one device per student. That's the exact same percentage as in March 2019, when Tech Counts last surveyed educators about so-called "1:1 computing" in schools. A caveat is that the same exact set of educators did not take the surveys both years so results are not completely comparable. Additionally, unlike the 2020 survey, the 2019 study did not include principals — just teachers. However, 57 percent of teachers surveyed in 2020 said their schools provided a device for every student — a figure that is also virtually unchanged since 2019. Combined these results suggest that 1:1 programs have not expanded in the past year.

Does your school have at least one device for every student (1:1 computing)?

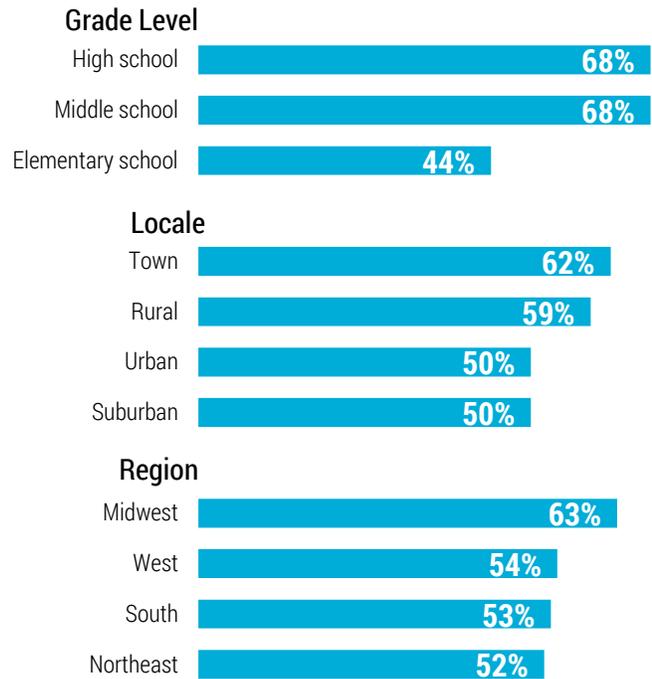


1:1 Access

The 1:1 programs are not evenly distributed. The most dramatic difference involves grade levels: Secondary educators are 24 percentage points more likely than their elementary peers to report that their schools provide at least one device per student. This may be due to concerns about exposing very young children to too much screen time. Elementary access also lagged behind in 2019.

The 1:1 programs are also more common in rural areas and in towns than in urban or suburban locations. This may be because geographically isolated schools may rely more heavily on distance learning programs that require 1:1 access. Finally, 1:1 programs are significantly more common in the Midwestern United States than they are elsewhere in the nation.

Percentage providing at least one device per student

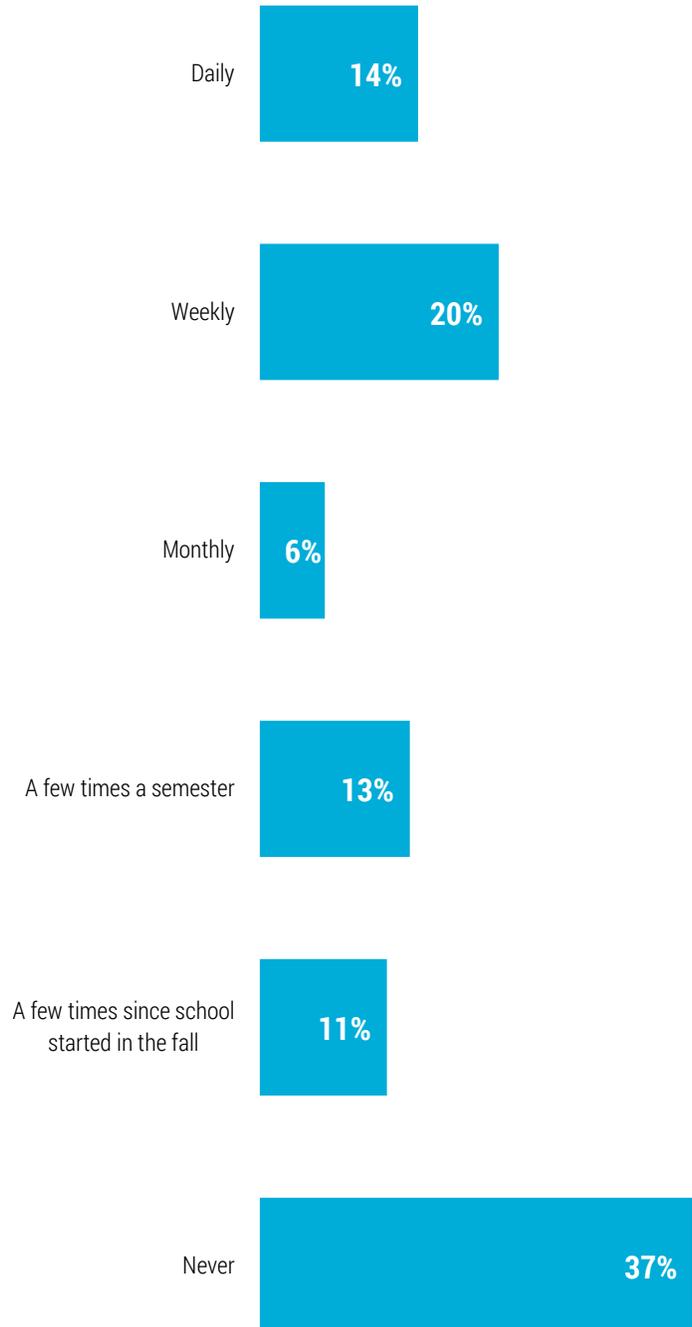


Uses

Instruction

Sixty-three percent of educators whose schools permit students to access their cell phones during class time say their students have used the phones for instructional purposes during the current school year. Just over 1 in 3 say the usage is weekly or daily. It's monthly, a few times a semester, or a few times a year for another third. The remainder don't let students use phones for instructional purposes.

During the current school year, how often have your students used smartphones for instructional purposes during class time?

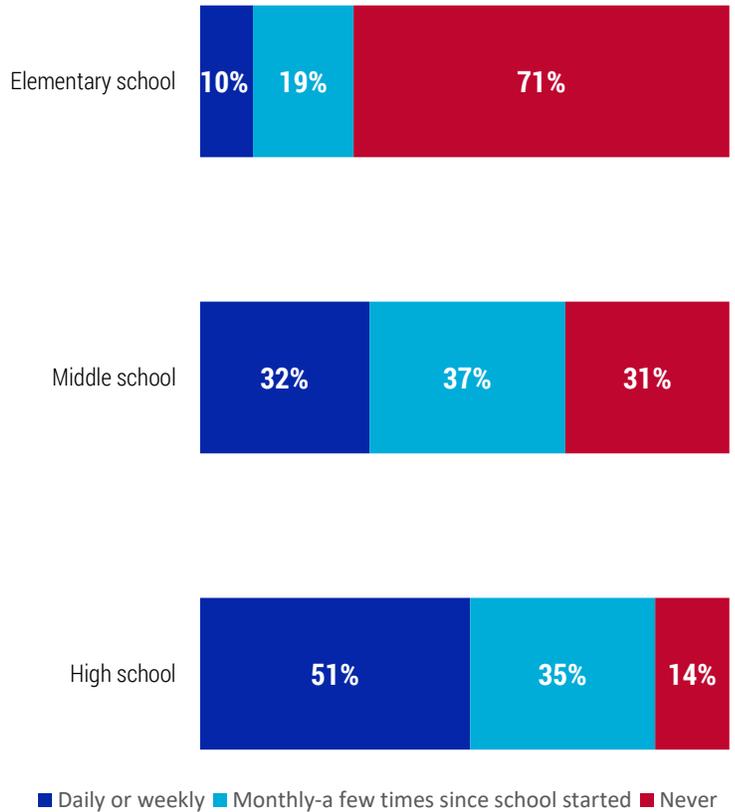


Instruction by Grade Level

In schools that permit students to access their cells during class time, high school educators are significantly more likely than their elementary and middle school peers to report regular use of smartphones for instructional purposes: more than half say it happens daily or weekly.

By contrast, 71 percent of elementary educators say their students never use phones for instructional purposes. This is likely due to age-related disparities in cell phone ownership. Ninety-one percent of 18-year-olds but just 19 percent of 8-year-olds have their own cell phones, according to a 2019 survey by Common Sense Media. It's difficult for teachers to use phones for instructional purposes when most don't have their own.

During the current school year, how often have your students used smartphones for instructional purposes during class time?

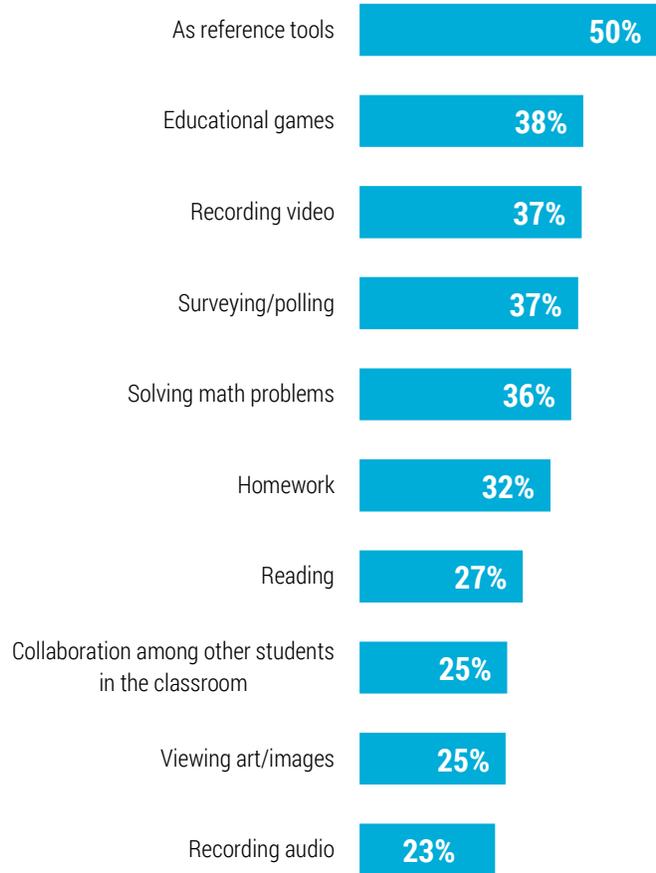


Instructional Uses: Generational Differences

Fully half of educators whose students have used cell phones for instructional purposes during the current school year say that the devices have been used as reference tools. That's the most common use. Baby Boomers and GenerationXers are roughly twice as likely as Millennials to report that their students use cell phones as reference tools: 55 percent of Boomers and 52 percent of GenXers have had their students use smartphones to look up information as compared to 24 percent of Millennials.

Younger educators, by contrast, are significantly more likely to say their students use cell phones' multimedia capacities. For example, 56 percent of Millennials say their students have made videos with cell phones as compared to 39 percent of GenXers and 31 percent of Boomers.

How have students used cell phones for instructional purposes during class-time this school year? Select all that apply.



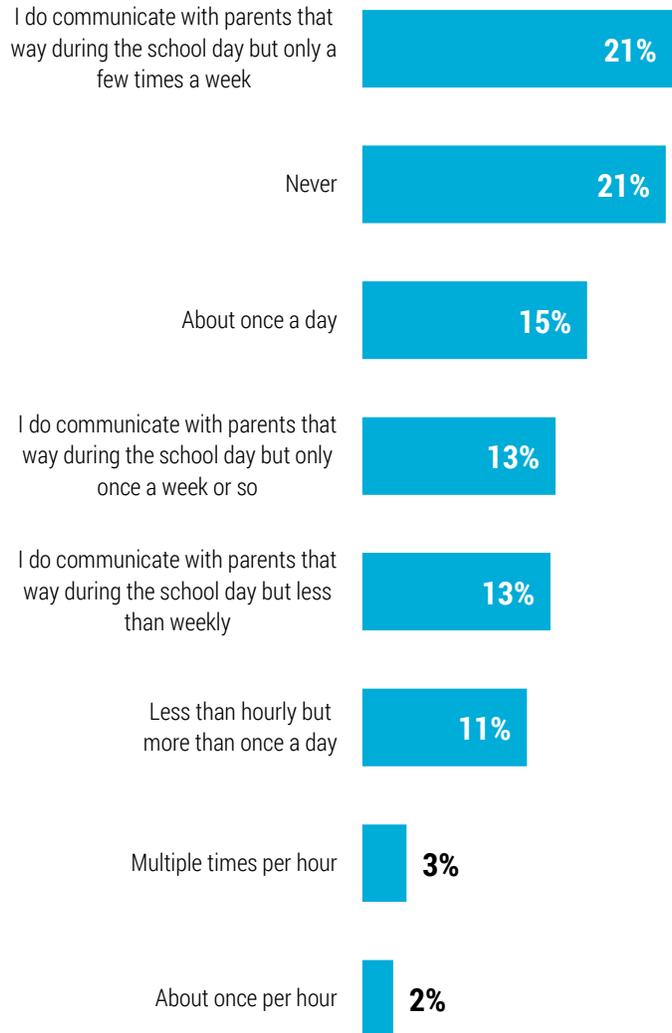
Note: The survey included 36 different answer options. The chart shows the top 10 responses.

Communicating with Parents: Frequency

In addition to using smartphones and other devices for instructional purposes, educators also use them to keep in touch with parents. They do so by reaching out to parents directly via smartphone or other device or by uploading information to a program or app that parents can access.

During the school day, the typical educator communicates with parents in this way a few times a week.

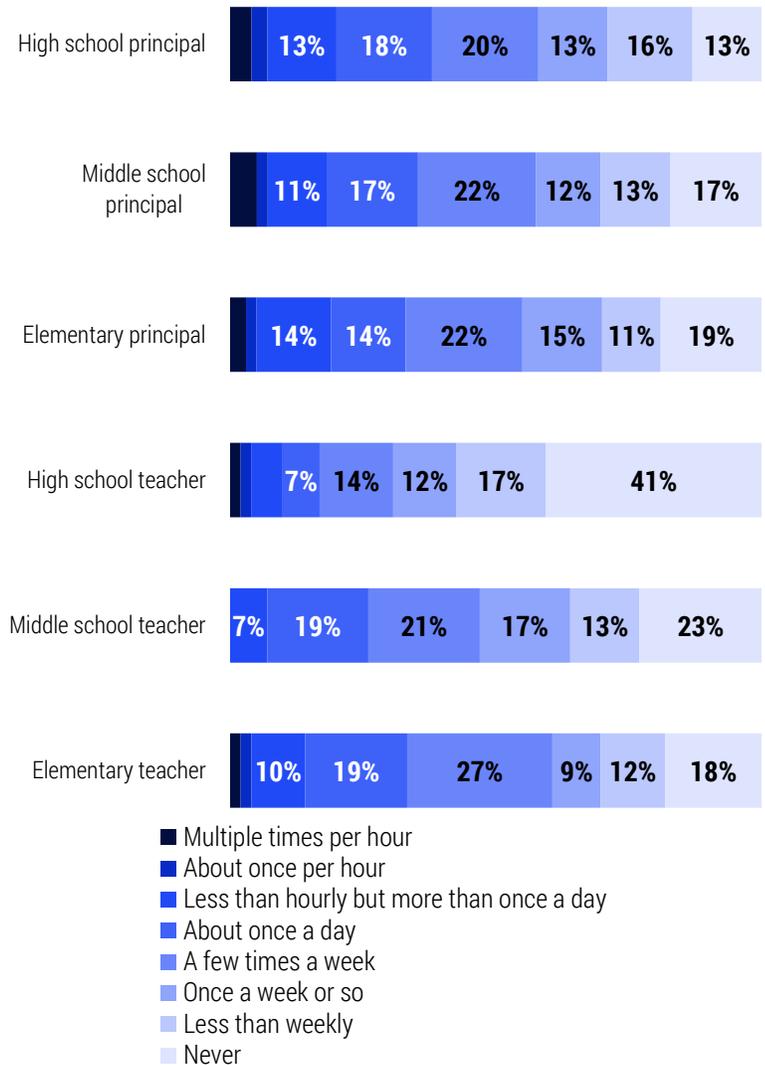
During a typical school day, how often do you communicate with parents directly via a smartphone or other device or by uploading information to apps/programs parents can access?



Communicating With Parents: Grade Level & Role

Compared to teachers and principals at other grade levels, high school principals most frequently communicate with parents during the school day directly via smartphones or other devices or by uploading information to apps or programs accessible to parents. The typical high school principal communicates with parents in this way several times per week. At the other end of the scale, the typical high school teacher uses apps or devices to communicate with parents during the school day, but less than weekly. In fact, 41 percent of high school teachers say they never use apps/devices to communicate with parents during the school day, possibly because they are busy teaching.

During a typical school day, how often do you communicate with parents directly via a smartphone or other device or by uploading information to apps/programs parents can access?



Communicating With Parents: Adequacy

Most educators say they spend the exact right amount of time communicating with parents during the school day using smartphones or other devices or by uploading information to a program or app that parents can access.

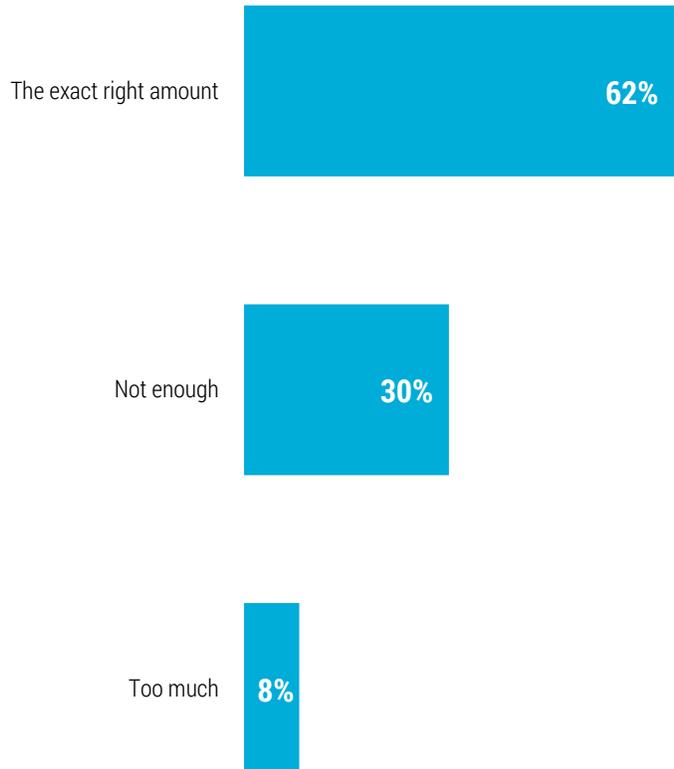
However, educators are roughly four times more likely to say they do not spend enough time communicating in this way as to say they spend too much time.

Educators in higher poverty districts are significantly more likely to say they don't spend enough time during the school day communicating with parents via devices or programs (24 percent for those from districts where half or fewer students live in poverty versus 36 percent in higher-poverty districts).

Compared to colleagues who work in towns, or rural or urban settings, suburban educators are least likely to say they don't dedicate enough time during the school day to communicating with parents via devices or apps (18 percent as compared to 36 percent of urban educators, 35 percent of educators who work in towns, and 34 percent of their rural peers).

Finally, public school educators are significantly more likely than their private school peers to say they don't spend enough time during the school day reaching out to parents via devices or programs (32 percent versus 18 percent, respectively).

How would you describe the amount of time you currently spend during a typical school day communicating with parents directly via smartphone/computer or by uploading information to apps/programs parents can access?



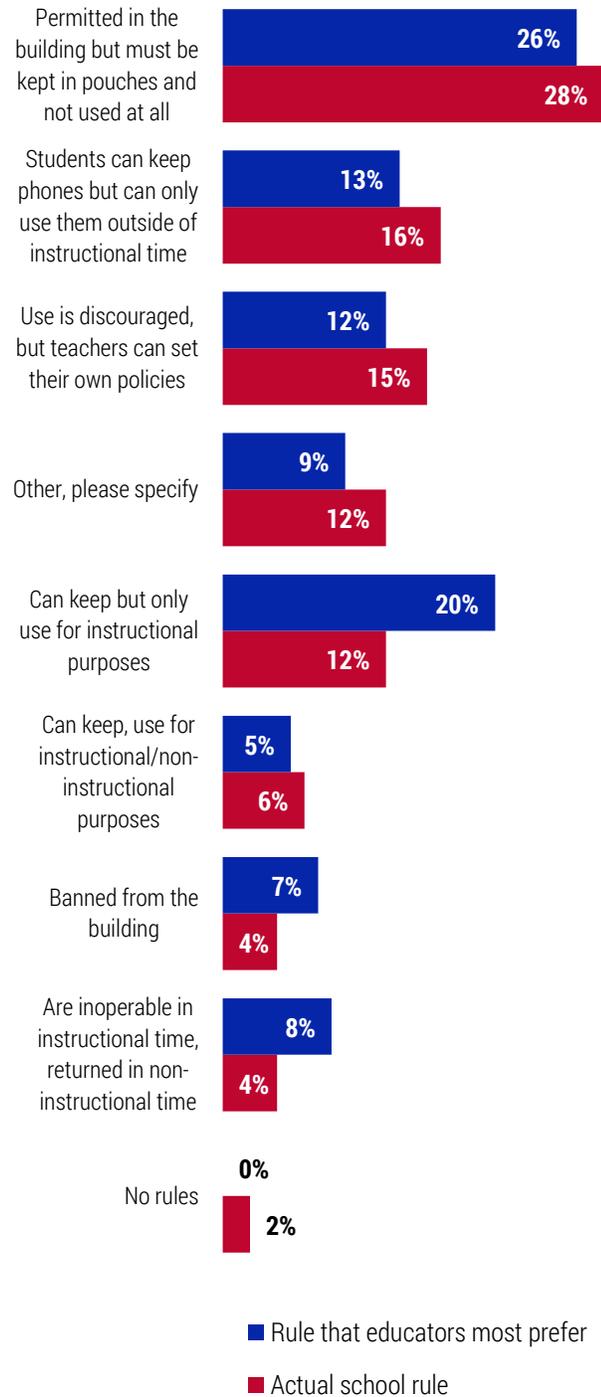
Rules

School Rules Versus Educator Preferences

Gone are the days when schools treated cell phones like rodents, all but expelling them from the building. In fact, just four percent of educators say that student cell phones are banned altogether. That said, you won't necessarily see them on students' desks during class. The most common approach is to permit students to bring them to school as long as they are stored or rendered inoperable (e.g., with sleeves that prevent them from being accessed) during the school day.

For the most part, schools' approaches to governing student cell phone use match educators' preferences. For example, 28 percent of teachers and principals say student cell phones are permitted in the building as long as they're not used during the school day. And 26 percent say that's the rule they support. That said, 20 percent of educators say students should be allowed to use their phones but only for instructional purposes. Yet just 12 percent report that their schools have adopted that approach.

Student Cell Phones: Actual Rules Versus The Rules Educators Would Most Prefer

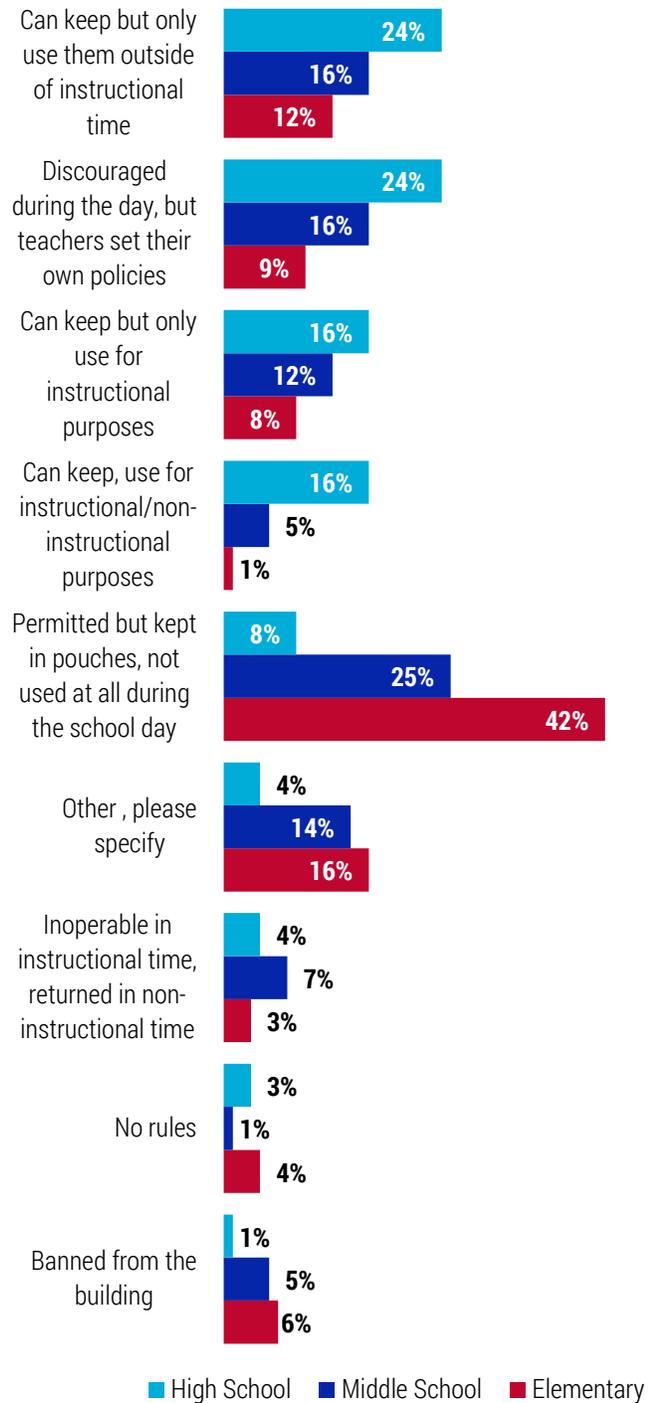


The Grade Level Divide

Not surprisingly, given the different cell phone ownership rates and developmental needs of their students, approaches and attitudes toward student cell phone use vary by grade level.

For example, high school educators are most likely to report that students can keep the devices during the day as long as they are only used outside of instructional time like lunch or that individual teachers set their own policies. By contrast, middle and elementary school teachers are most likely to report that cell phones are permitted in the building only if the devices are stored or rendered inoperable during the school day. This is also the most popular approach with middle and elementary school educators. By contrast, there are two different approaches that are most popular with high school educators. One involves letting students keep the phones all day as long as they only use them during non-instructional time. The other is to let the students keep the phones as long as they're only used for instructional purposes.

Which of the following best describes your school's approach to student smartphone use?



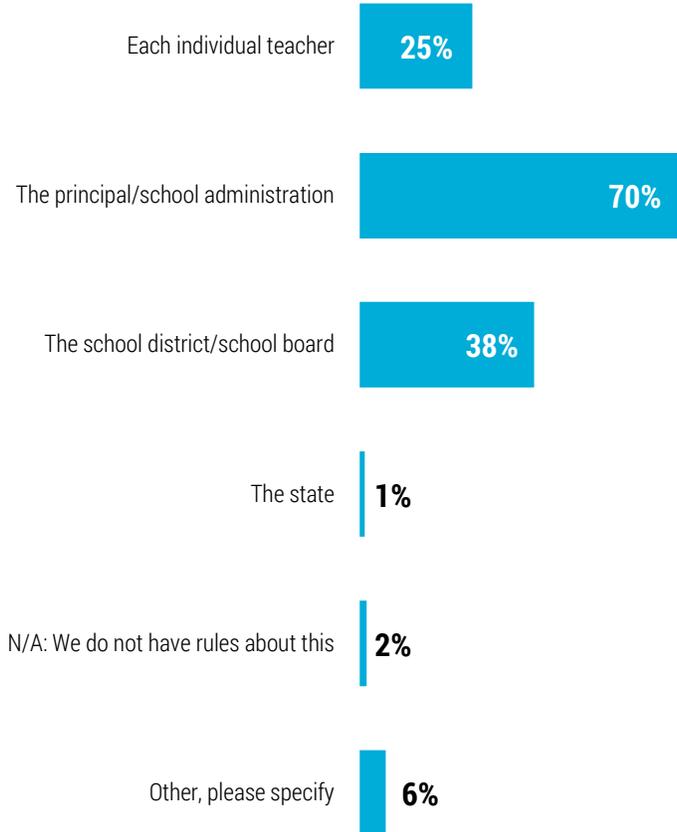
Rule Makers

Seventy percent of educators say that principals and other school-level administrators make the rules about cell phone use. However, district-level leaders, including board members do have a say, according to 38 percent of survey respondents.

District/board-level involvement is significantly more common in:

- Elementary and middle schools (44 percent) than high schools (32 percent)
- Large districts with 10,000 or more students (48 percent) versus districts with enrollments under 2,500 (31 percent)

Who, if anyone, makes rules about when and where students are permitted to use smartphones in your school? Select all that apply.



Challenges

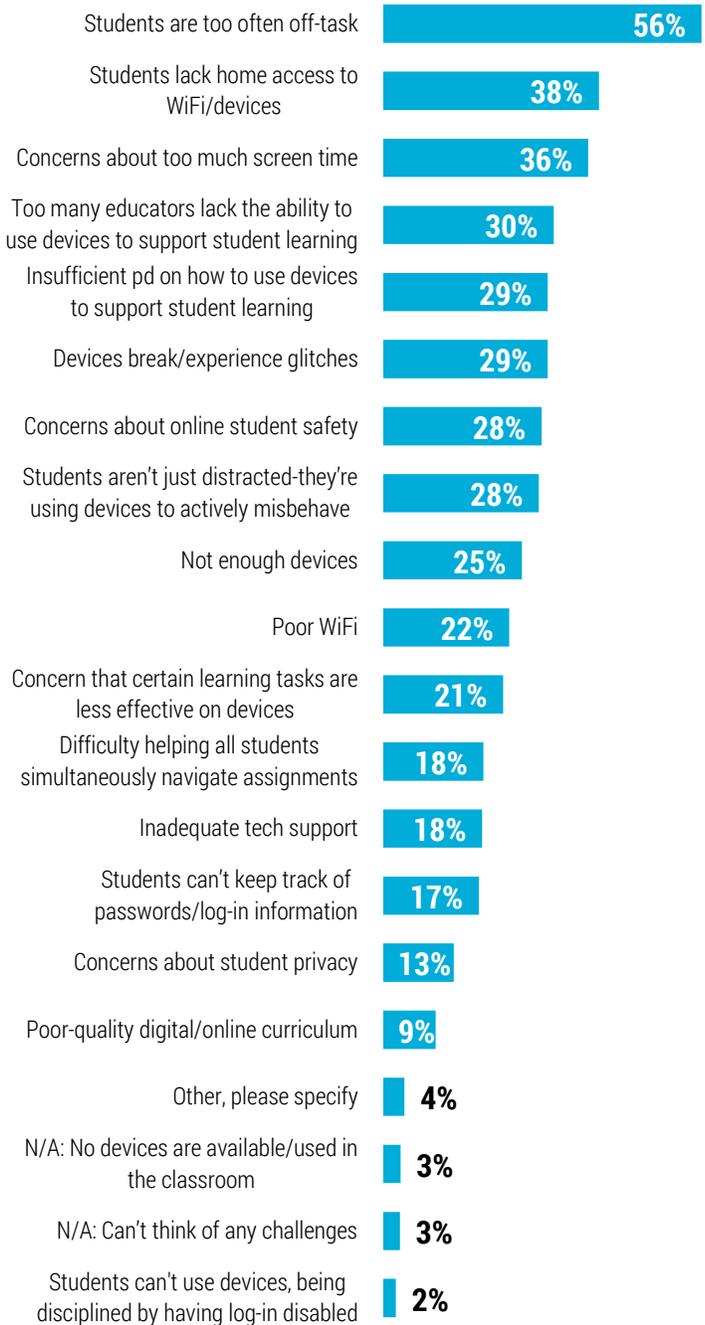
Top Challenges

As devices have proliferated, so too have challenges related to using them for academic purposes in schools.

By far the top challenge, reported by 56 percent of educators, is that students are too often off task, using devices like Chromebooks or smartphones for one thing when they should be using it for another.

Other top challenges include student home access to technology and concerns about too much screen time.

When it comes to the use of smartphones, laptops, tablets, Chromebooks and other devices in the classroom for academic purposes, which of the following is a MAJOR challenge for you or the teachers you supervise? Select all that apply.



Student Behavior & Grade Level

Student off-task behavior is the top device-related challenge for educators at all grade levels. However, it's a more common challenge at the secondary level. Just 38 percent of elementary educators say it's a major challenge as compared to 69 percent of middle school respondents and 74 percent of their high school peers. Secondary educators are also significantly more likely than their elementary peers to say that they are concerned about students who actively misbehave using devices. In addition, student home access is also a more common concern among secondary than among elementary educators.

Compared to secondary school respondents, elementary educators are significantly more likely to be concerned that they don't have enough devices.

The top three challenges by grade level are:

- **Elementary:**

1. Off-task behavior and screen time concerns (tie)
3. Student home access to technology

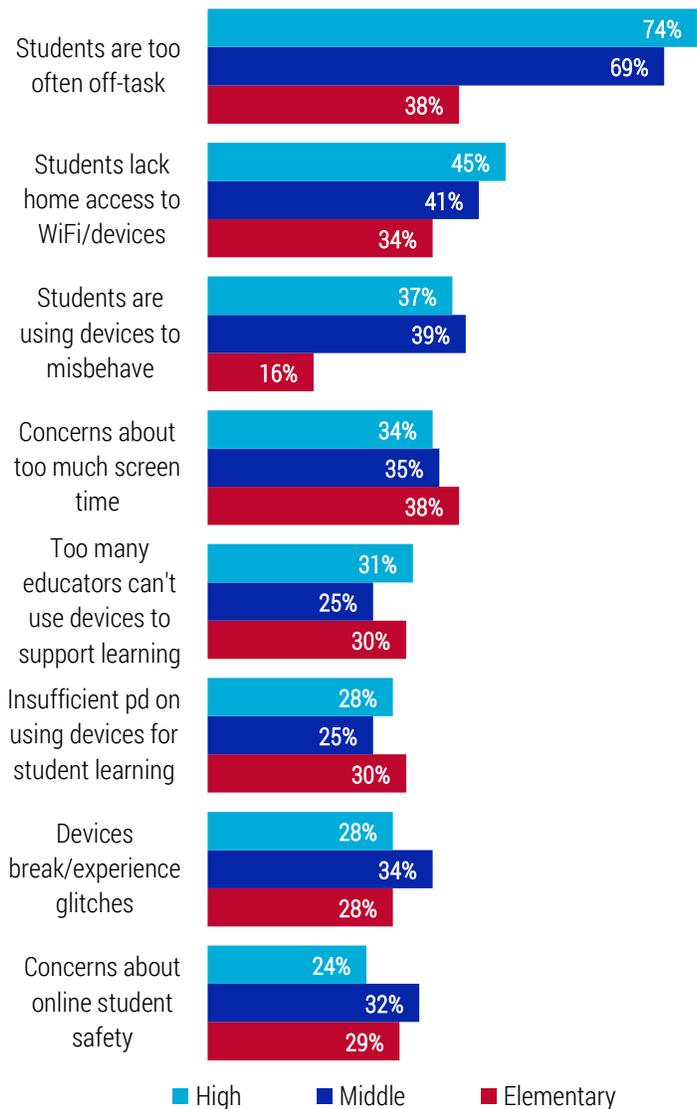
- **Middle school and high school:**

1. Off-task behavior
2. Student home access to technology
3. Students aren't just distracted — they're using devices to actively misbehave

When it comes to the use of smartphones, laptops, tablets, Chromebooks and other devices in the classroom for academic purposes, which of the following is a MAJOR challenge for you or the teachers you supervise? Select all that apply.

Top Challenges

Respondents were asked about 37 potential challenges. The chart highlights the top eight responses for high school respondents.



Professional Development

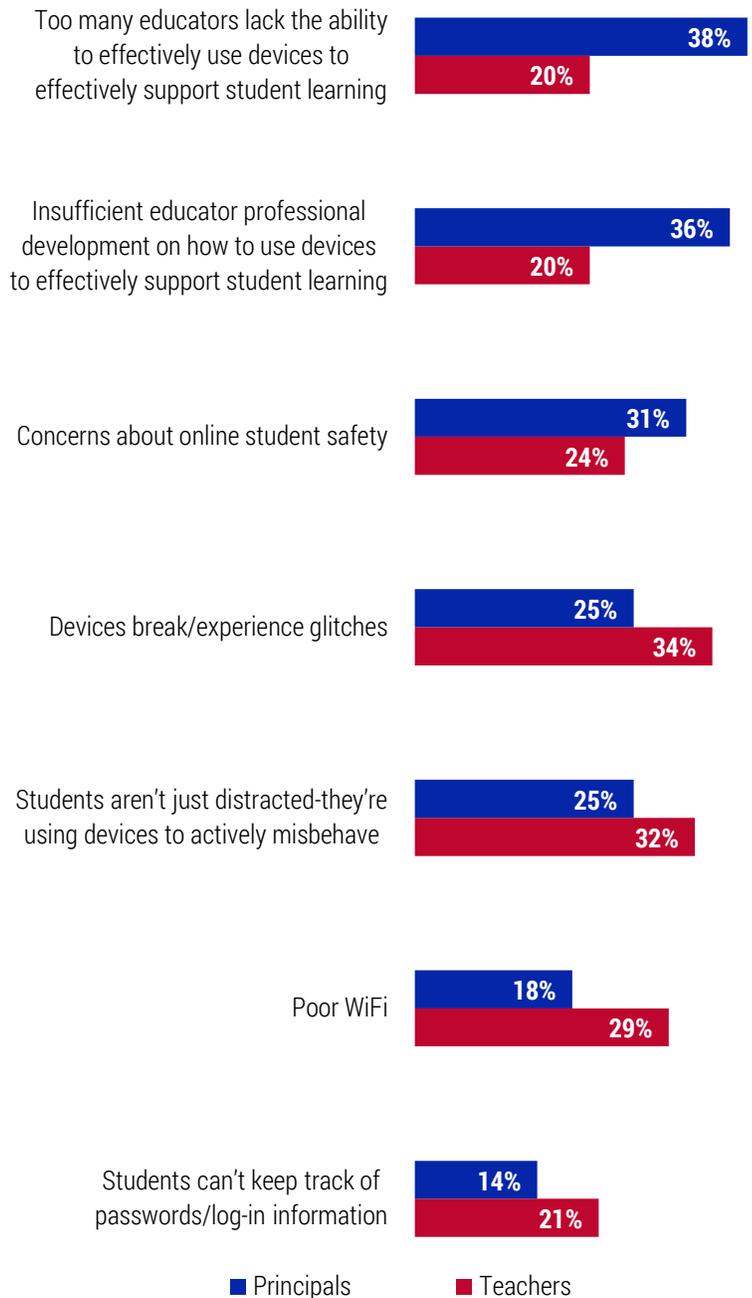
There are several statistically significant differences in the percentage of teachers and principals who view certain problems as major obstacles to using devices in the classroom.

Principals are significantly more likely than teachers to be concerned that educators are unable to effectively use technology in the classroom. They're also significantly more likely to say there's been insufficient professional development on effective device use. In addition, student online safety is a bigger concern among principals than teachers.

Teachers by contrast are significantly more likely than principals to be concerned that students are actively misbehaving using devices. They're also more likely than principals to say students can't keep track of their log-in information. Finally, a higher percentage of teachers than principals say they find it challenging to deal with poor WiFi and/or glitches/breakdowns involving devices.

Teachers and principals agree that student off-task behavior is the top device related challenge, followed by problems related to student home access to technology. However, concerns about screen time are teachers' third most commonly-reported challenge. For principals, the third most common challenge is that too many educators lack the ability to effectively use devices to support student learning.

When it comes to the use of smartphones, laptops, tablets, Chromebooks and other devices in the classroom for academic purposes, which of the following is a MAJOR challenge for you or the teachers you supervise? Select all that apply.



The Digital Divide

Overall, student home access to technology is the second most commonly-reported challenge related to the use of digital devices in schools: 38 percent of survey respondents say a major obstacle to using devices in the classroom is that students lack home access to WiFi/devices and can't continue their learning outside of school.

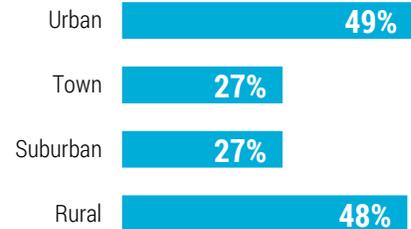
However, the so-called "homework gap" is seen as a significantly more common challenge in some settings than in others.

A major challenge is that students lack home access to WiFi/devices and can't continue their learning outside of school

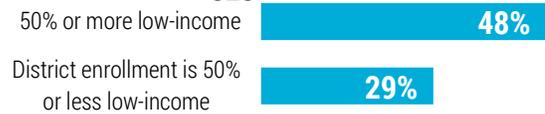
Grade Level



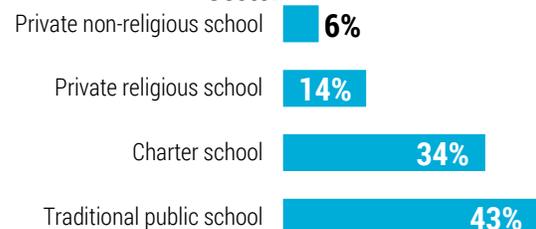
Locale



SES



Sector

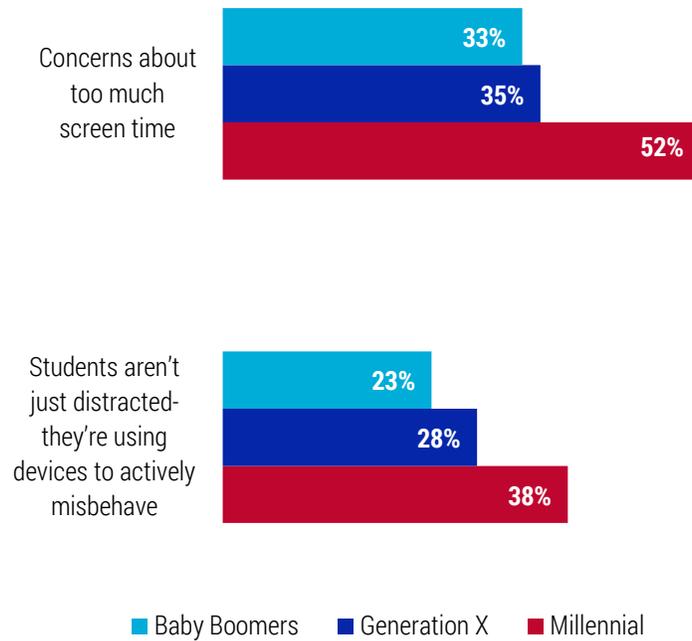


Generational Split: Screen Time, Misbehavior

Much is made of the different ways in which different generations use and perceive technology. When it comes to using devices for academic purposes, two challenges are more frequently perceived by Millennials than by their elders.

Millennials are significantly more likely to say that screen time concerns are a major challenge. They are also significantly more likely to say that students aren't just distracted—they're actively misbehaving.

When it comes to the use of smartphones, laptops, tablets, Chromebooks and other devices in the classroom for academic purposes, which of the following is a MAJOR challenge for you or the teachers you supervise? Select all that apply.



Off-Task Activities

Educators say that off-task behavior is the top challenge related to using devices for teaching and learning. In many ways, this is no surprise. Whether it was a comic book hidden beneath a textbook or a note passed to a neighbor, students have always found ways to distract and entertain themselves in the classroom when they were supposed to be focusing on academics. However, devices opened up a whole new realm of possibilities that likely never occurred to the children of yesteryear. So we asked educators to share the two activities their students are most likely to be doing when off-task in class using devices otherwise meant to further their learning.

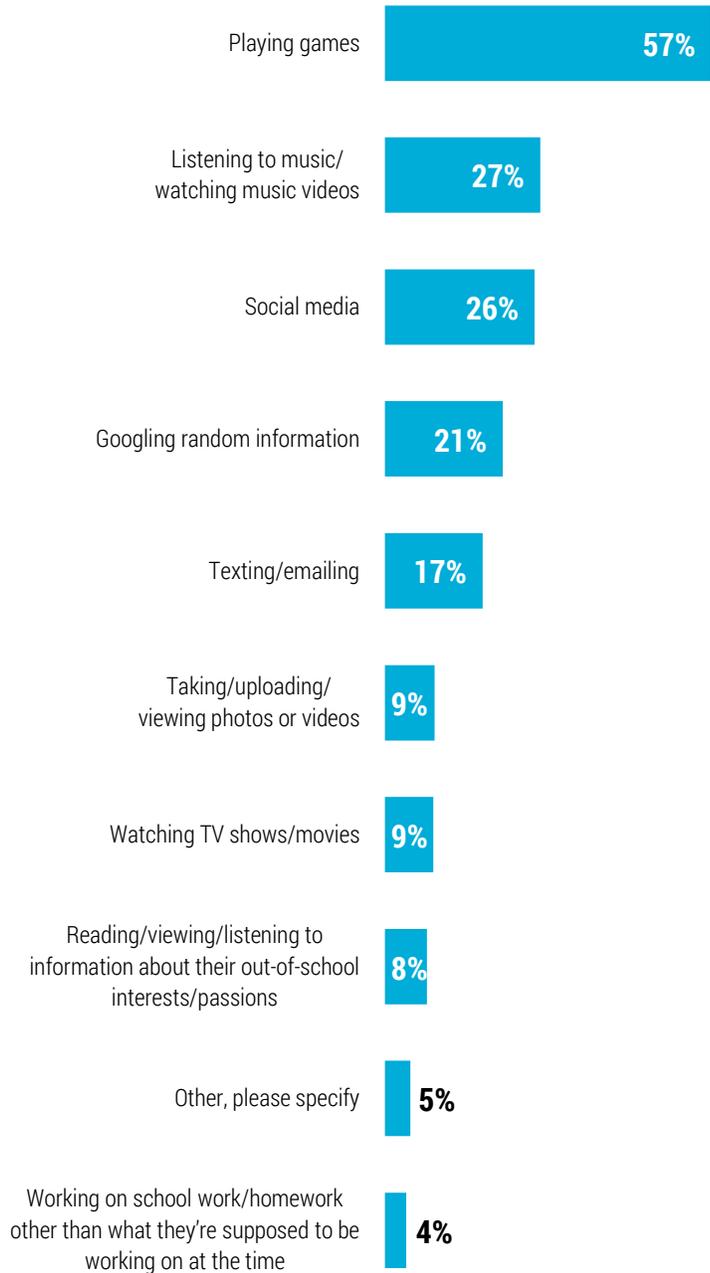
Playing games is by far the most common diversion. Other popular pursuits include music, social media, Googling, and sending emails or texts.

Least popular? Consuming news or information related to school sports or other extracurriculars, learning new skills, shopping and/or consuming or generating memes.

Of course, it is important to remember that this is all from the educators' point of view.

When students are off-task with devices, what are they most often doing? Pick two.

Top 10 Responses



Off-task Behavior Varies by Grade Level

Playing games on classroom devices is by far the top off-task diversion for every grade level. The share of teachers who report this behavior ranges from 62 percent in grades 10, 5, and 1 to 72 percent in grade 6.

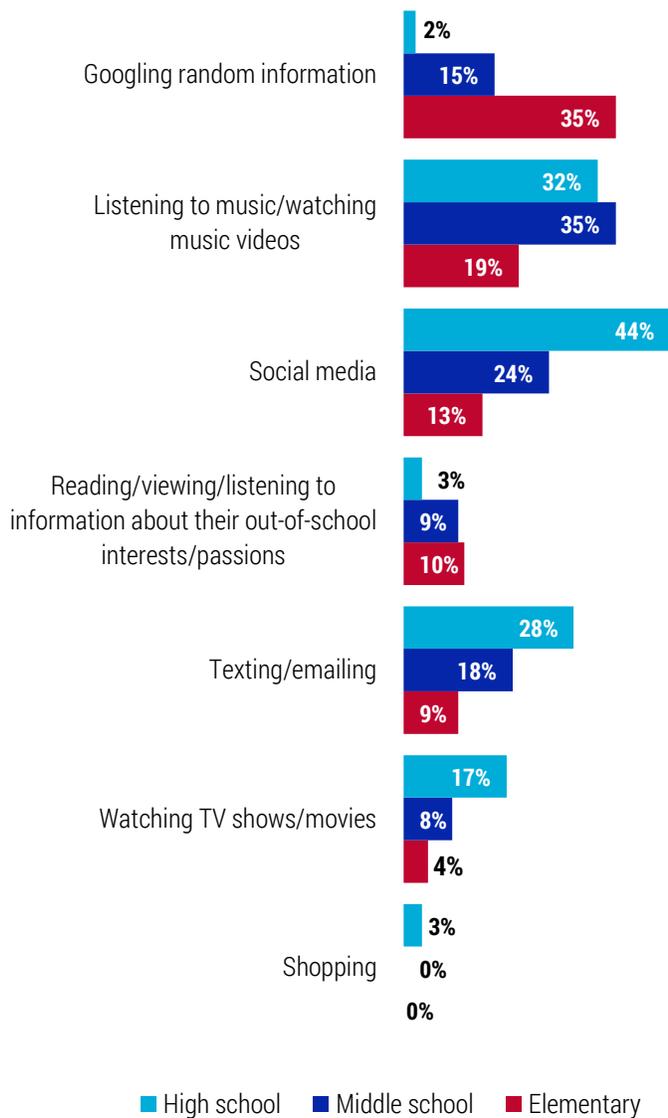
The frequency of other off-task behaviors varies by grade level. In grades 9-12, social media is the second most frequently-reported off-task behavior.

Middle school teachers say that music/music videos are the second most common off-task distraction, followed by social media.

Fourth and fifth-grade teachers report that the top three diversions are games, music/music videos, and Googling random information.

Although social media use is often associated with older students, Kindergarten, first and second-grade teachers alike report that social media is the second most frequent distraction for students who are off task while using classroom devices. Game-playing is the top diversion.

When students are off-task with devices, what are they most often doing? Pick two.



Impact: Parents

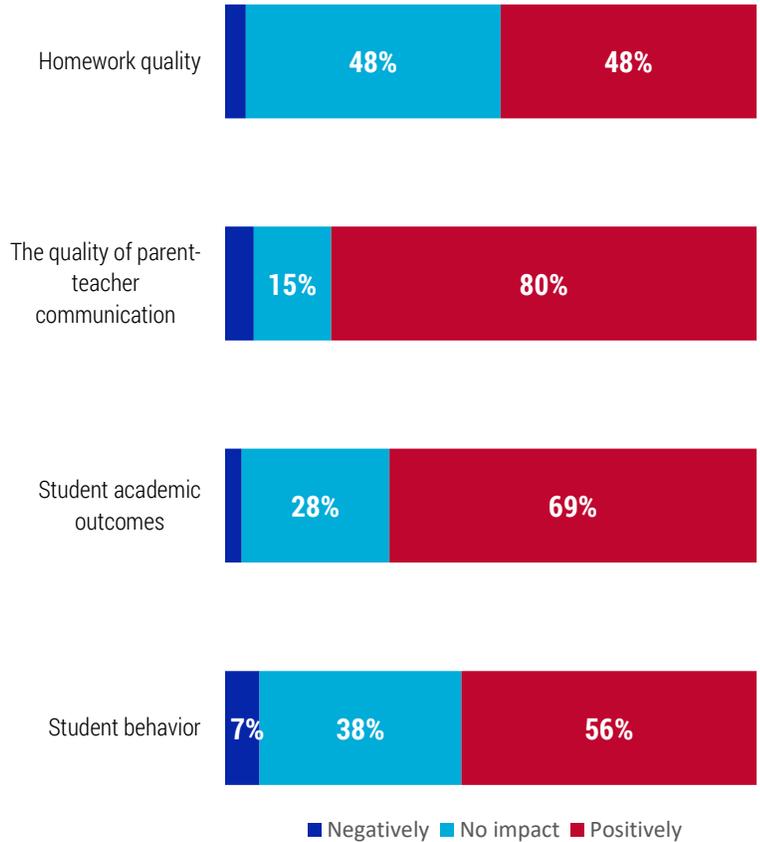
Parent-Teacher Communication

Increasingly, educators are adopting programs like Infinite Campus and PowerSchool that allow parents to check on their children's progress online.

Among educators who said they knew enough about these systems to respond to questions about them, the majority perceive that the programs have a positive effect on the quality of parent-teacher communication, student academic outcomes, and student behavior.

When it comes to homework quality, however, educators are roughly evenly split between those who say the programs have had a positive impact and those who perceive that they have no impact.

In your opinion, how have school apps/programs that allow parents to check up on their children online impacted the following?



Perceptions by Grade Level, Role

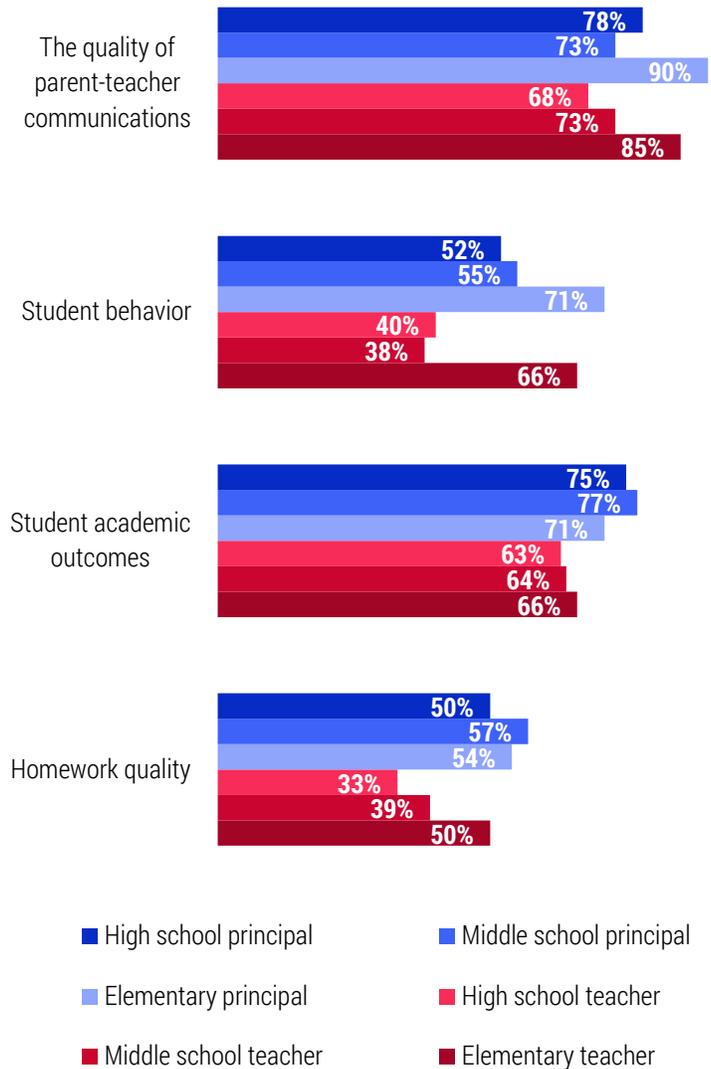
Elementary, middle and high school educators have different perceptions of apps that allow parents to check up on their children's progress in school. So do teachers and principals.

Elementary teachers and principals are significantly more likely than their secondary peers to say that these programs have had a positive impact on the quality of parent-teacher communications and also on student behavior. For example, 90 percent of elementary principals, and nearly as many teachers say these programs have positively impacted parent-teacher communications.

Secondary teachers are particularly skeptical of the programs' impact on student behavior and homework quality: Well under half say the effect has been positive.

Secondary principals are particularly gungho about the programs' impact on student academic outcomes, with more than three-quarters saying the effect has been positive.

In your opinion, how have school apps/programs that allow parents to check up on their children online impacted the following? [Percent who selected "positively"]



Impact: Interactions

Interacting with Students, Teachers

The vast majority of survey respondents say that devices have had at least some impact on the quantity and quality of student in-person interactions at school.

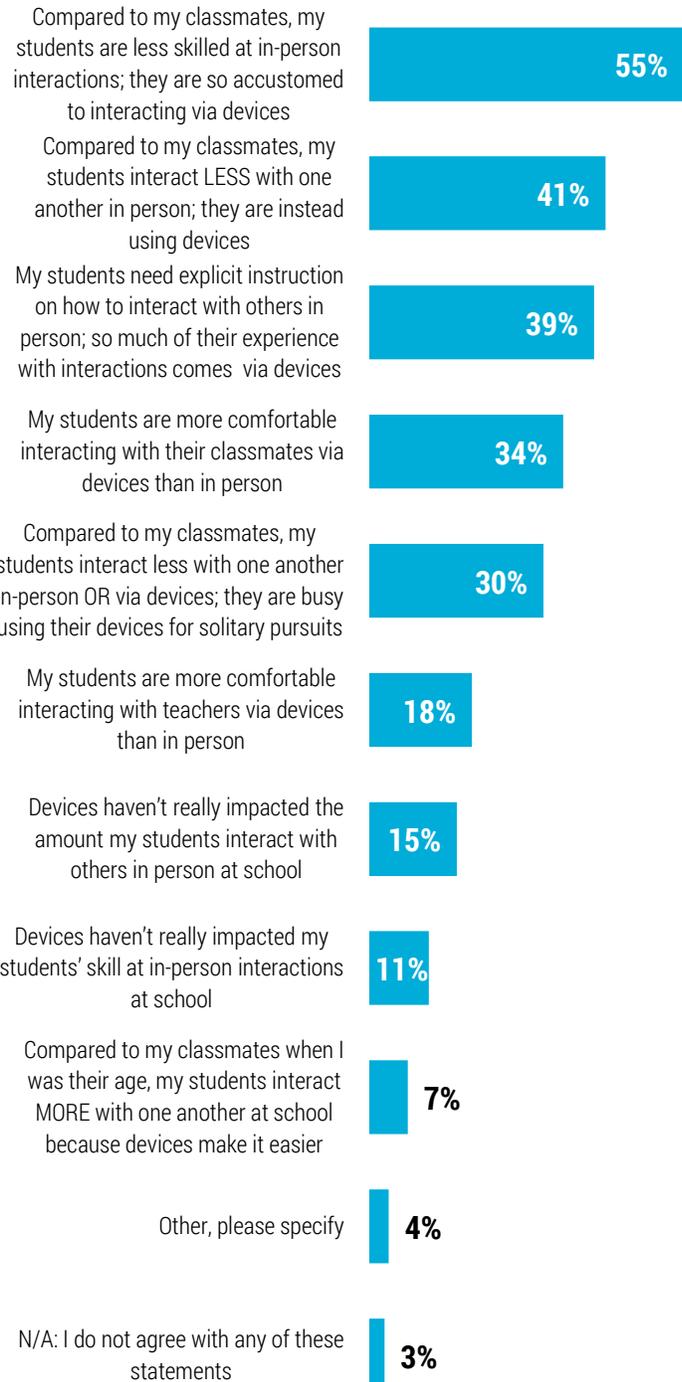
For example, most educators say that their students are less skilled at in-person interactions than they were at the same age. Why? They are more accustomed to interacting with devices. This perception is significantly more common among educators who work in towns (61 percent), suburbs (55 percent) and rural areas (55 percent) as compared to those employed by urban districts or schools (40 percent).

That said, the news is not all dire for those who value in-person interactions. Only a minority of educators say their students are more comfortable interacting with their classmates via devices than in person. Northeastern educators are particularly unlikely to say that this is the case. The perception is also significantly less common among teachers (27 percent) than among principals (39 percent).

A minority of educators also say that, compared to their own classmates when they were that age, their students interact less with one another period, because they are so busy using their devices for solitary pursuits. Southerners are especially unlikely to say this is the case.

Finally, fewer than 1 in 5 educators say students are more comfortable interacting with teachers via devices than in person. Here, generational differences exist: Thirty-nine percent of educators with less than five years experience perceive that students are more comfortable interacting via devices as compared to 12 percent of those with more than 30 years in the field.

Which of the following statements do you AGREE with? Select all that apply.



In-Person Interactions & Grade Level

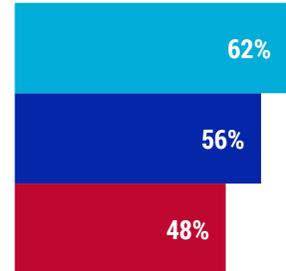
Older students are more likely to own smartphones. So it comes as no surprise that secondary school educators are significantly more likely than their elementary peers to perceive that devices have impacted the quality and quantity of their students' in-person interactions.

For example, more than half of high school educators but only 31 percent of their elementary colleagues say that, compared to their own classmates in school, students interact less with one another in person at school because they are instead using devices.

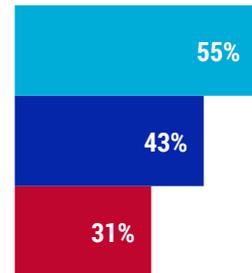
Similarly, more than half of secondary educators say their students are less skilled at in-person interactions than they were when they were that age. By contrast, less than half of elementary educators say that this is the case.

Which of the following statements do you AGREE with? Select all that apply.

Compared to my classmates when I was their age, my students are less skilled at in-person interactions at school because they are so accustomed to interacting via devices



Compared to my classmates when I was their age, my students interact LESS with one another in person at school because they are instead using devices to interact



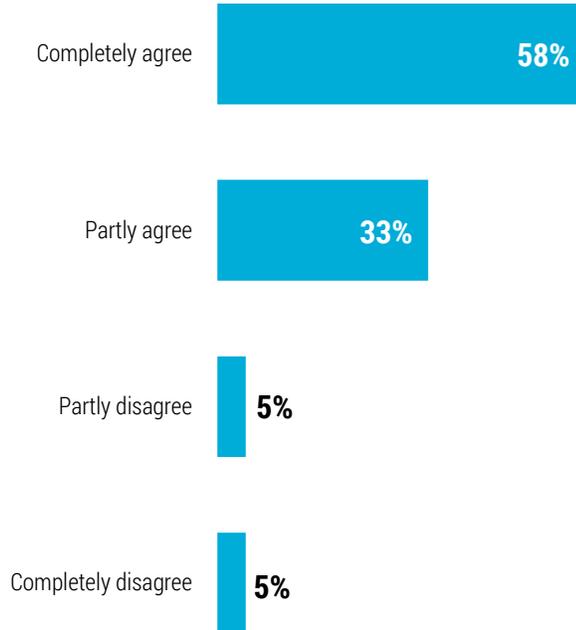
■ High school ■ Midde school ■ Elementary

Impact: Attention Spans & Distraction

Attention Spans

More than 90 percent of educators say today's students have shorter attention spans than they did at the same age as a direct result of the amount of time spent on devices. This perception does not vary by generation: Millennials, GenXers, and Baby Boomers are all roughly equally likely to say that devices have shortened children's attention spans.

To what extent do you agree or disagree with the following statement? As a direct result of the amount of time they spend on devices, students today have shorter attention spans than my classmates when I was in school.



Distraction

More than 80 percent of educators say that students are more distracted than they once were due to classroom use of devices for learning purposes.

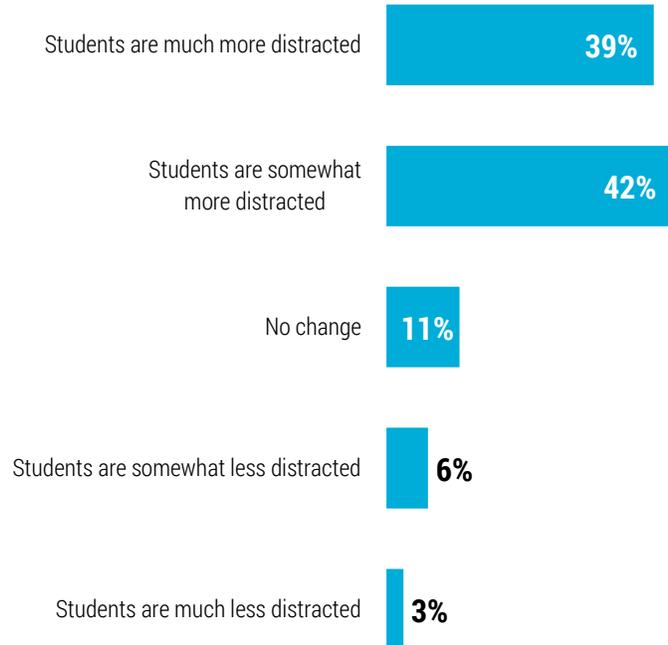
Teachers are more likely than principals to perceive that students are more distracted as a result of using devices for learning (84 percent versus 78 percent).

Perhaps due to the greater prevalence of devices in the upper grades, high school educators are most likely to say devices have increased levels of distraction (89 percent versus 81 percent of middle school educators and 73 percent of their elementary peers). Ninety-two percent of high school teachers and 86 percent of high school principals say distraction levels have increased as compared to 79 percent of elementary teachers and 68 percent of elementary principals.

Educators at lower-poverty schools are more likely to say distraction levels have risen when compared to those at schools in which the majority of students come from low-income families (85 percent versus 76 percent).

The perception that devices have increased distraction is also more common among Midwesterners (85 percent) than among Northeasterners (75 percent), Westerners (77 percent) or Southerners (81 percent).

How, if at all, do you think that the level of student distraction/off-task behavior has changed due to classroom use of smartphones, laptops, tablets, Chromebooks, and other devices for learning purposes?



Impact: Misbehavior

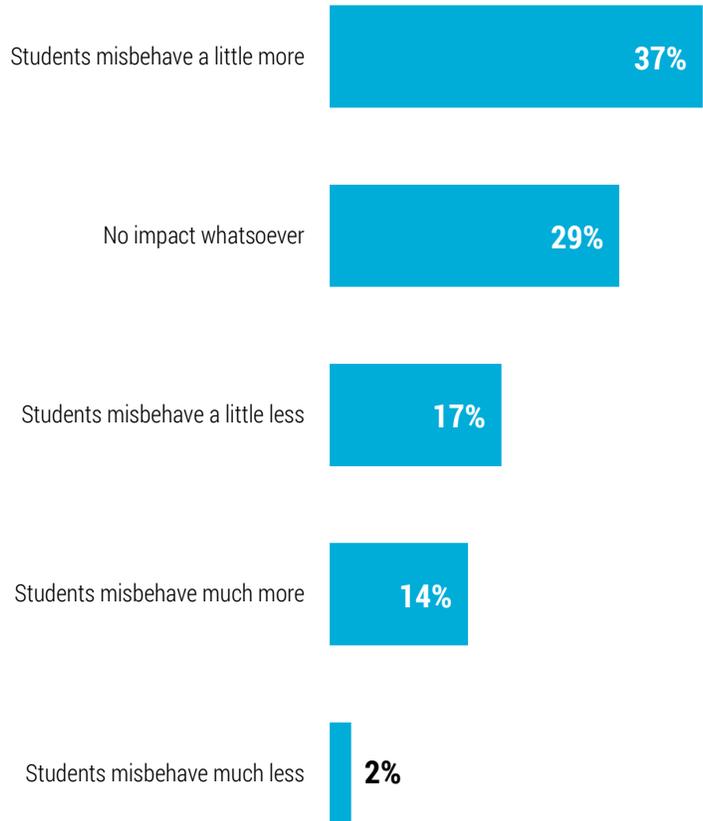
Student Behavior, Discipline

Most educators say students misbehave more when they use devices in the classroom.

However, perceptions vary significantly by grade level and by role. Less than half of elementary educators (40 percent) say students misbehave more as compared to 62 percent of middle school educators and 60 percent of their high school colleagues. Elementary principals are least likely to say devices worsen student behavior (35 percent). High school teachers are most likely (64 percent). Overall, 56 percent of teachers and 48 percent of principals say devices have worsened student behavior.

Educators at lower-poverty schools are more likely to say devices have led to discipline problems when compared to those at schools in which the majority of students come from low-income families (53 percent versus 49 percent).

How, if at all, has classroom use of devices like smartphones, laptops, tablets, and Chromebooks impacted student discipline/behavior?



Plagiarism, Cheating, Slacking Off, and Disrupting Class

Most educators say that devices have made it easier for students to plagiarize, cheat on tests and slack off in class.

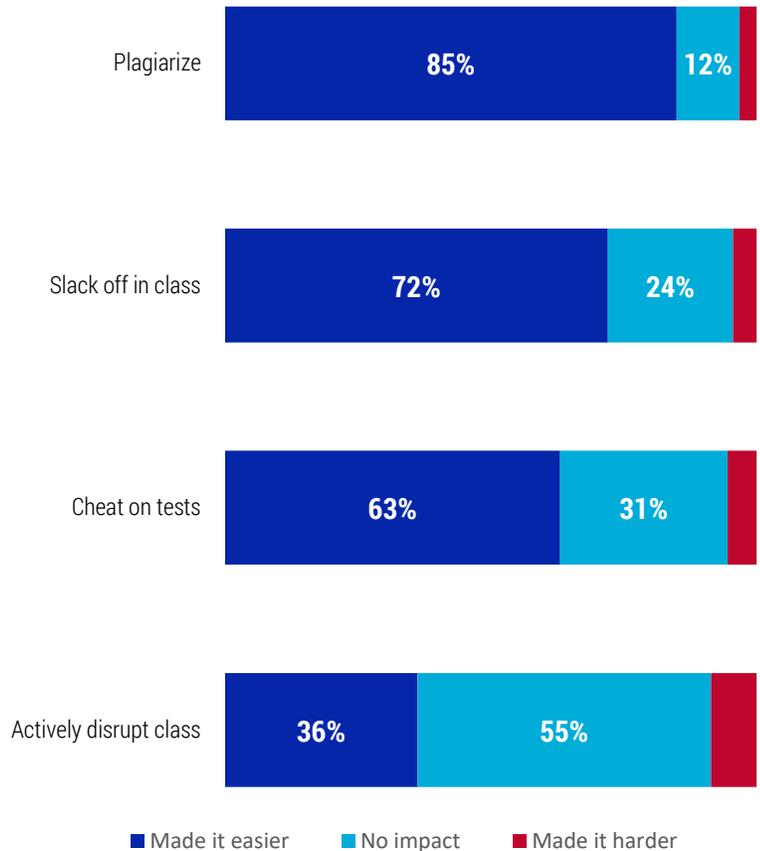
Younger educators are significantly more likely than their older peers to say that devices have made it easier to cheat on tests. Three-quarters of Millennials perceive that devices make cheating easier versus 64 percent of GenXers and 56 percent of Boomers. It's unclear whether Millennials are more aware of ways devices ease cheating or less informed about old-fashioned paper-and-pencil methods.

Southerners are also more likely to say that devices make cheating easier (69 percent) when compared to Northeasterners (56 percent); Midwesterners (58 percent); and Westerners (62 percent).

Educators at lower-poverty schools are more likely to say devices have made it easier to plagiarize when compared to those at schools in which the majority of students come from low-income families (88 percent versus 82 percent)

Only a minority of educators perceive that devices have made it easier to actively disrupt class. Most say they have had no impact on this type of misbehavior.

In your opinion, how, if at all, have devices impacted students' ability to do the following?



Misbehavior, Devices, Grade Level, and Role

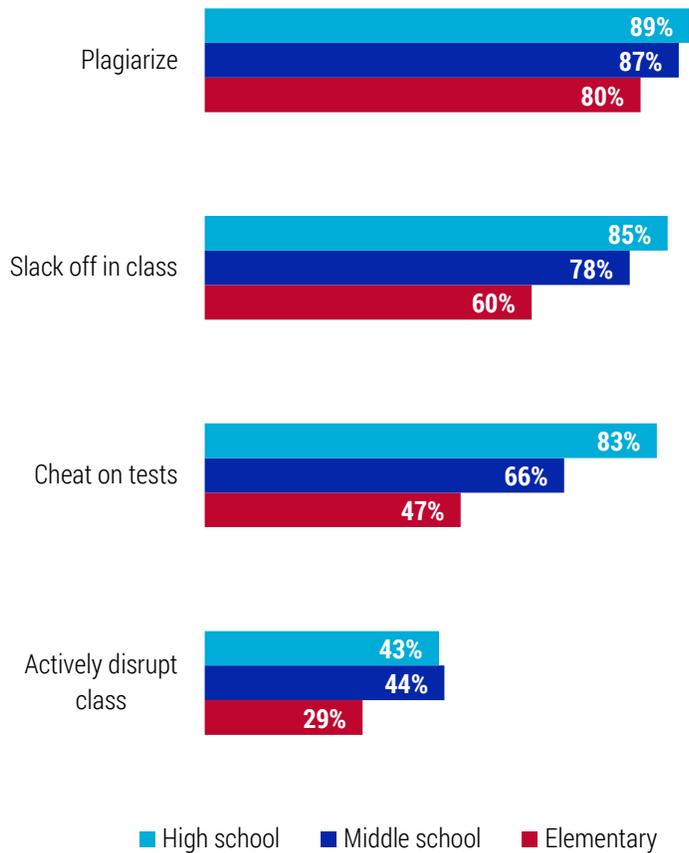
Perceptions of the connection between discipline problems and devices vary significantly by grade level. Secondary educators are significantly more likely than their elementary peers to say devices have made it easier for students to plagiarize, cheat on tests, slack off in class, and actively disrupt instruction.

Teachers and principals at different grade levels also fail to see eye-to-eye on some types of misbehavior.

The biggest differences involve high school teachers and elementary principals.

For example, 46 percent of high school teachers, but only 22 percent of elementary principals, say devices have made it easier to actively disrupt class. Similarly, 90 percent of high school teachers and 55 percent of elementary principals perceive that devices have made it easier to slack off in class. And 84 percent of high school teachers and 44 percent of elementary principals say devices have made it easier to cheat on tests.

Percent who say devices have made it easier to:



Impact: Teaching & Learning

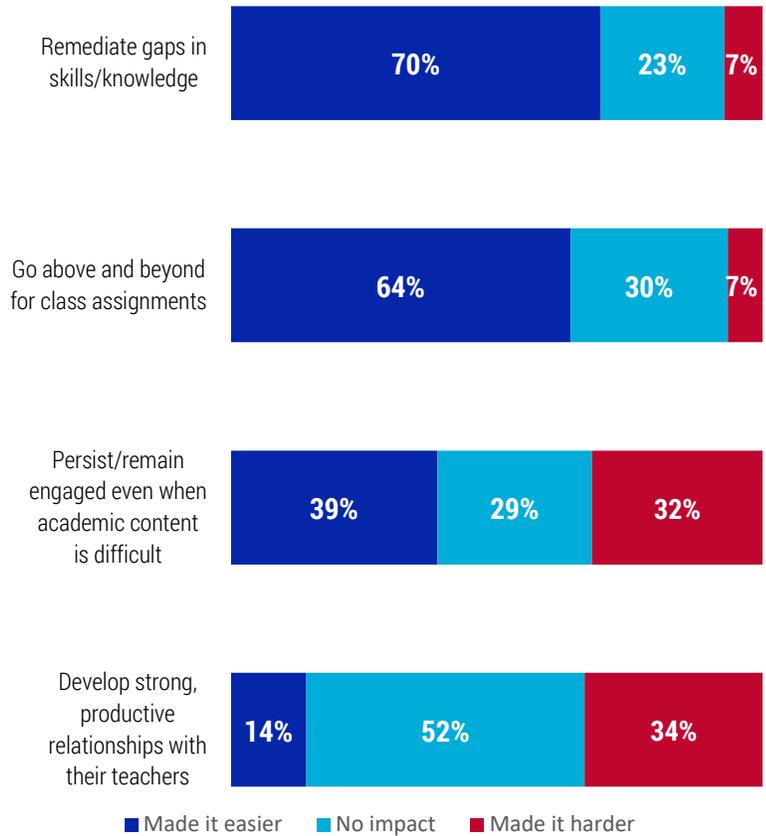
Remediation, Excellence, Persistence & Teacher-Student Relationships

Most educators say that devices have made it easier for students to remediate gaps in skills or knowledge and also to go above and beyond for class. However, when it comes to remediation, perceptions vary by years of experience. Less than half of educators with less than five years of experience (44 percent) say devices make remediation more difficult as compared to 68 percent of those with more than 30 years in the field.

Most educators say electronics have had no impact on the development of strong, productive teacher-student relationships. However, they are more than twice as likely to perceive that devices have made it harder to nurture strong relationships than to say they electronics have made it easier. Rural (36 percent), suburban (34 percent), and town-dwelling (39 percent) respondents are significantly more likely than their urban peers (92 percent) to say devices have made it harder to develop strong, productive relationships.

Educators are split into three roughly equal groups when it comes to the question of whether devices make it easier for students to persist when academic content is difficult. Roughly 1 in 3 say devices make it easier, 1 in 3 say it's harder, and the remainder perceive no impact at all. The least experienced educators (those with five years or less in K-12) are significantly more likely to say devices have made engaged persistence harder (50 percent). By contrast, just 20 percent of educators with more than 30 years in the classroom say devices have made this aspect of learning more difficult.

In your opinion, how, if at all, have devices impacted students' ability to do the following?

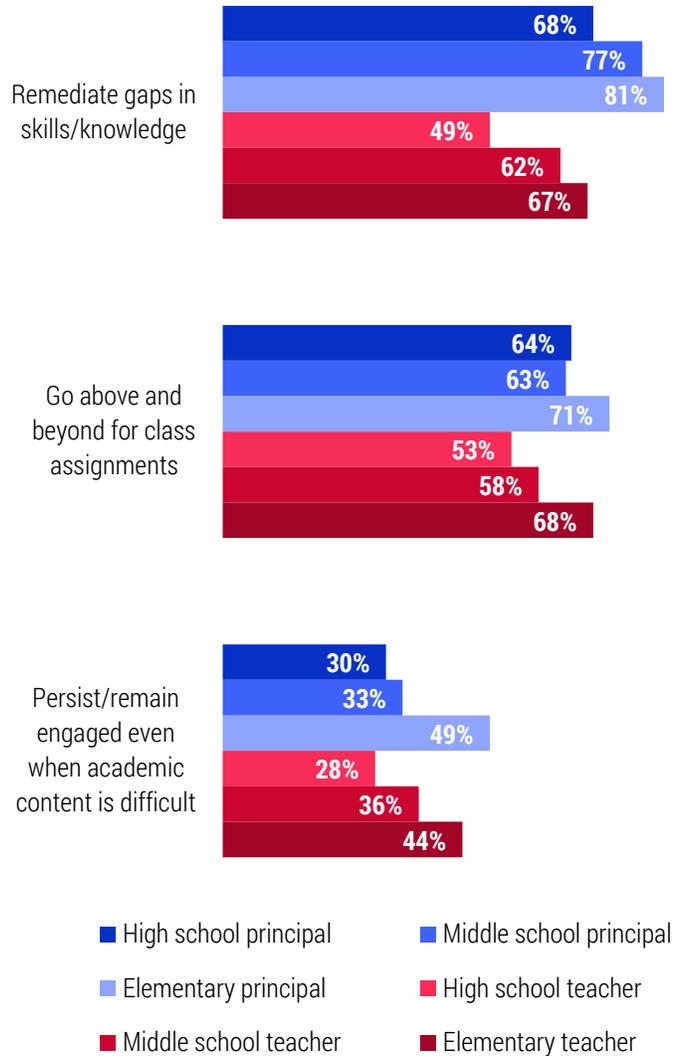


Perceptions by Grade Level & Role: Persistence, Remediation, Excellence

Principals and teachers are not necessarily on the same page when it comes to perceptions of devices' impact on remediation, persistence, and the ability to go above and beyond for class assignments. Neither are elementary, middle, and high school educators.

Principals and elementary educators have the rosiest view points. For example, 81 percent of elementary principals but less than half of high school teachers say devices have made it easier to remediate gaps in skills and knowledge. Nearly three-quarters of elementary principals but just over half of high school teachers perceive that devices make it easier for students to go above and beyond for class assignments. And close to half of elementary principals, but less than 1 in 3 high school teachers, say devices make it easier for students to persist and remain engaged as they tackle difficult content.

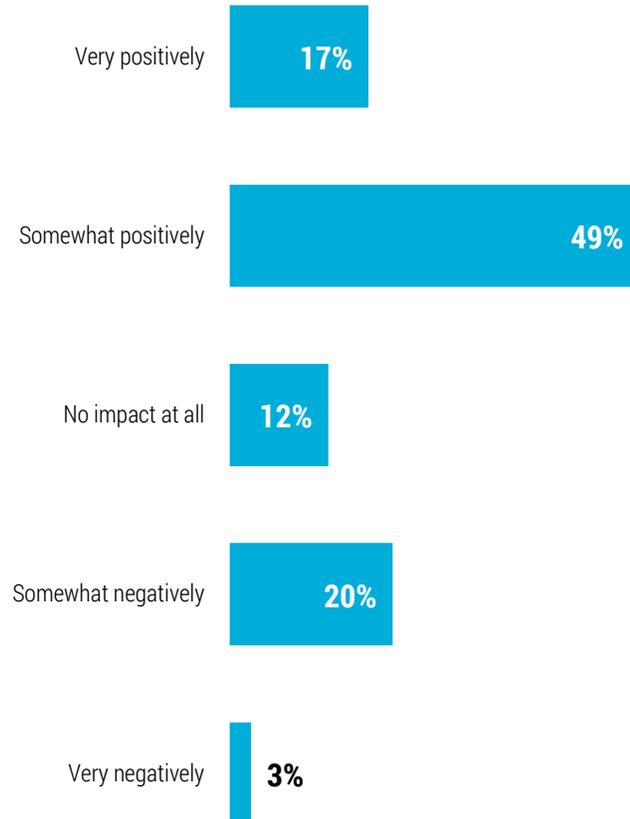
Percent who say devices have made it easier to:



Impact of Devices on Teaching

Nearly two-thirds of educators say devices have had a positive impact on their teaching or — if they are principals — on the instruction of the teachers they supervise. However, just 17 percent say the impact has been very positive.

How, if at all, has the number or type of devices available in the classroom today affected your teaching or the teaching of the educators you supervise?



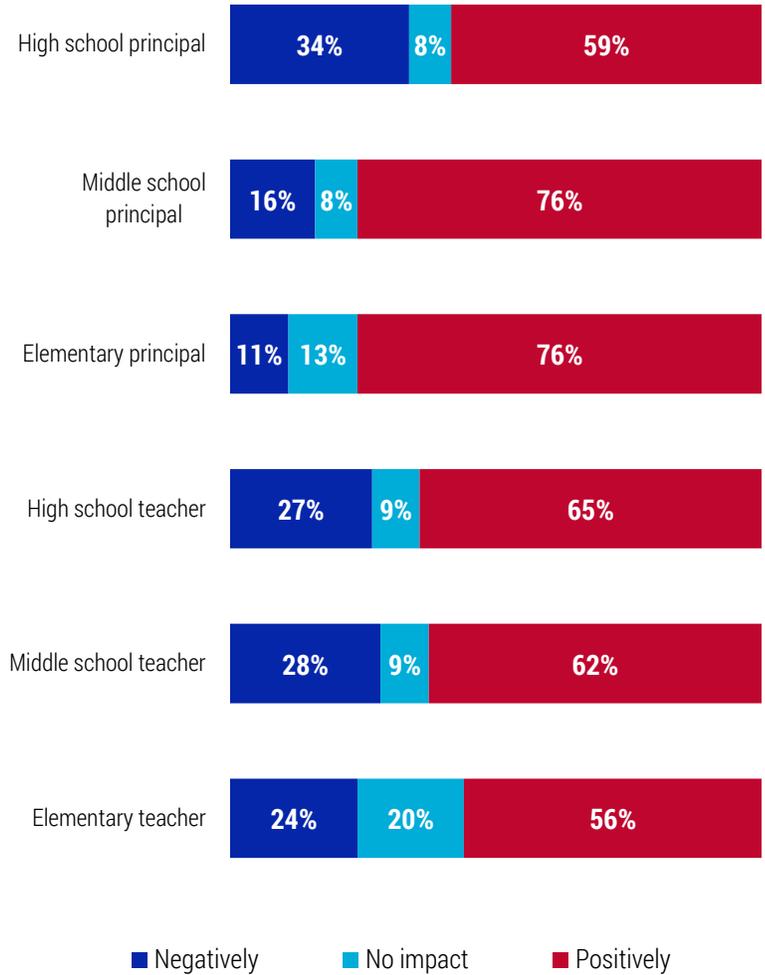
Teaching & Devices: Perceptions by Grade Level, Role

Elementary and middle school principals are significantly more likely than their peers to perceive that the number and type of devices available in their classrooms has had a positive impact on teaching.

High school principals are most skeptical — with more than 1 in 3 reporting the impact has been negative.

Among teachers, elementary educators are least likely to have a positive outlook. But they're also less likely than secondary teachers to say the impact has been negative. That's because they're more than twice as likely as teachers of older students to perceive that devices have had no impact. That's likely in part because devices are simply less prevalent in elementary schools — especially at the lower grade levels.

How, if at all, has the number or type of devices available in the classroom today affected your teaching or the teaching of the educators you supervise?



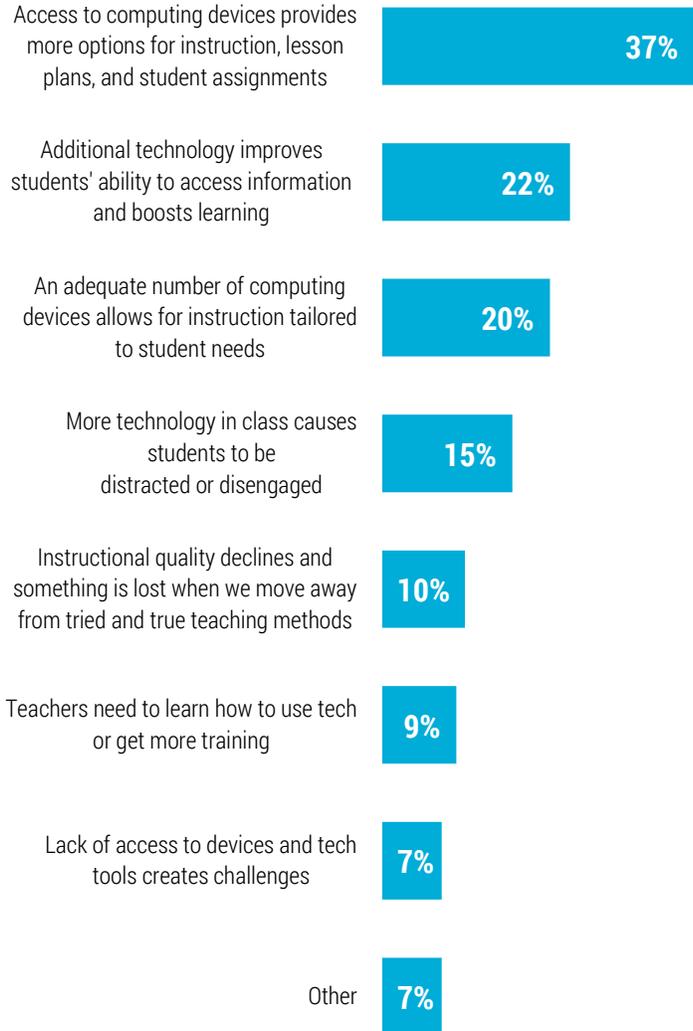
How Devices Have Changed Teaching

In an open-ended question, teachers and principals were asked to explain how their teaching, or the teaching of the educators they supervise, has changed as a result of the number or type of devices available in the classroom today.

Respondents most commonly say that access to computing devices provides more options for instruction, lesson plans, and student assignments. More than one-fifth of respondents indicate that additional technology improves students' ability to access information and boosts learning.

But not all respondents believe that devices have a positive impact on instruction. Fifteen percent report that more technology in class causes students to be distracted or disengaged. One in ten respondents find that instructional quality declines and something is lost when we move away from tried and true teaching methods.

Explain how your teaching, or the teaching of the educators you supervise, has changed as a result of the number or type of devices available in the classroom today.

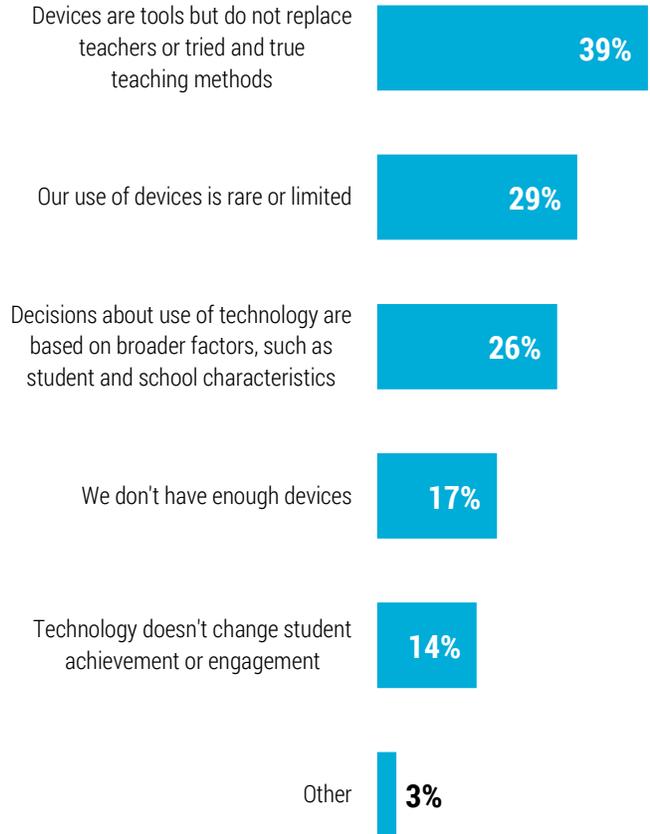


Why Devices Have Not Changed Teaching

Twelve percent of teachers and principals report that the number and type of devices available in the classroom today have not affected their teaching or the teaching of the educators they supervise. In an open-ended follow-up question, those survey respondents were asked to explain why they think there hasn't been any impact.

Respondents most commonly indicate that devices are tools but do not replace teachers or tried and true teaching methods.

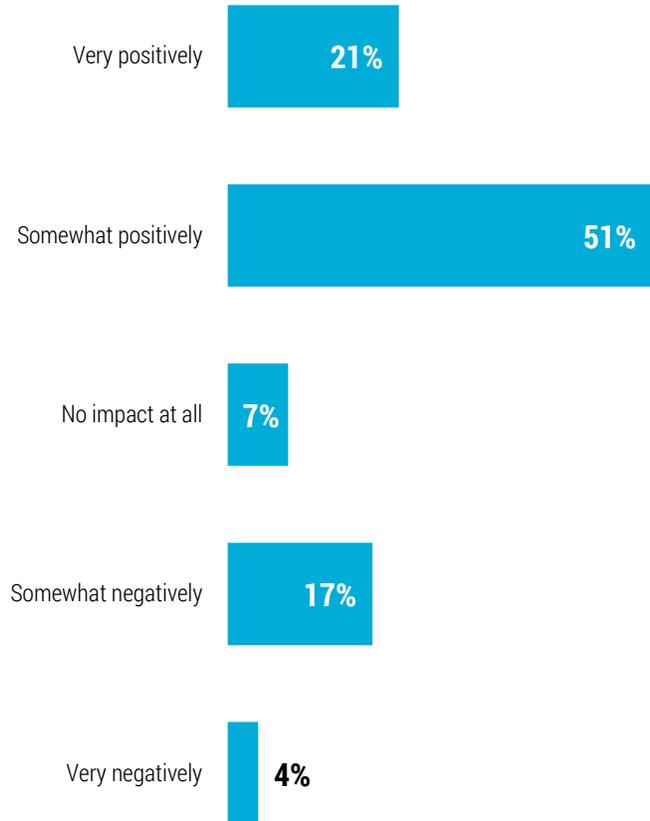
Why do you think the number/type of devices available in the classroom today has not affected your teaching or the teaching of the educators you supervise?



Future Outlook

Nearly three-quarters of educators (72 percent) expect devices to have a positive impact on teaching in the next five years. That means their future outlook is even rosier than their current view. Sixty-six percent say devices currently have a positive impact. Twenty-one percent predict the impact will be very positive while only 4 percent say it will be very negative.

How, if at all, do you expect the number or type of devices available in the classroom will affect your teaching or the teaching of the educators you supervise in the next five years?



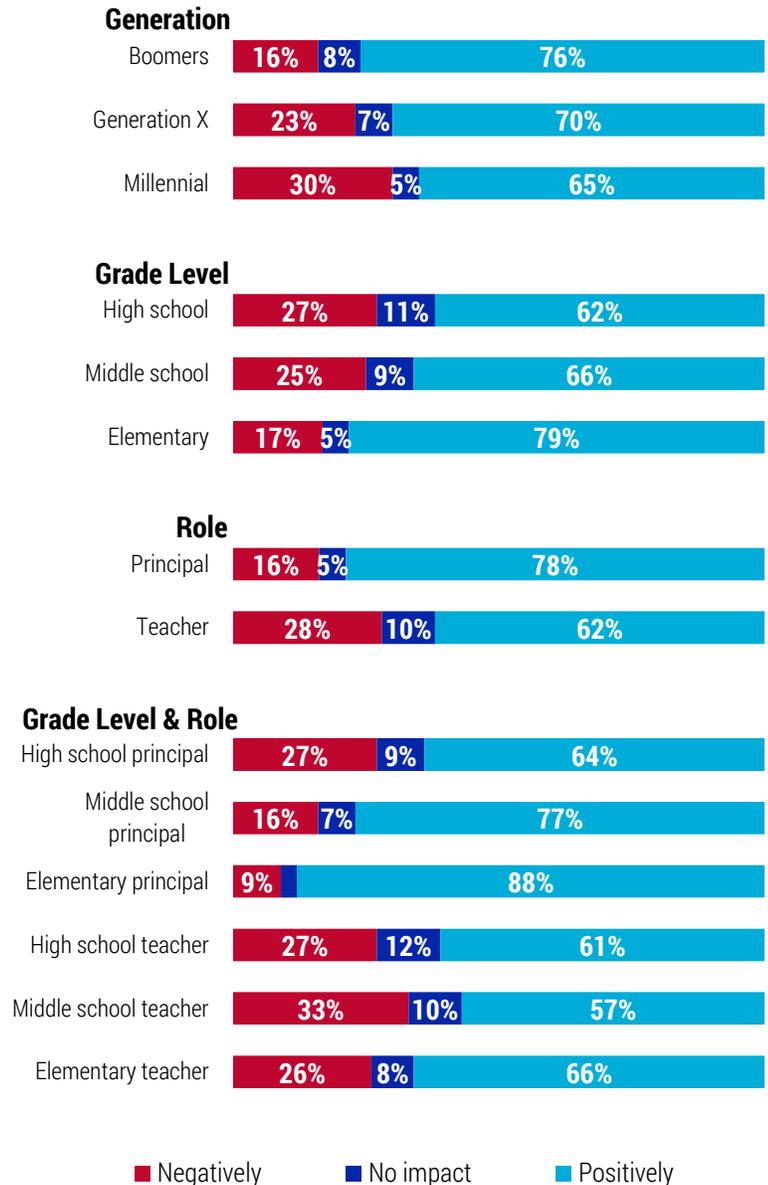
Future Outlook by Grade Level, Generation, & Role

Younger teachers have a significantly more skeptical outlook than their older peers when it comes to the predicted impact of the number and type of devices in schools over the next half decade. Nearly twice as many Millennials as Boomers predict that impact will be negative.

High school educators are also significantly more negative than their elementary peers. And teachers are significantly more skeptical than principals.

Elementary principals are most optimistic, with 88 predicting a positive effect and nine percent expecting negative repercussions. By contrast, middle school teachers are most skeptical. Just over half (57 percent) predict a positive impact. A third expect the effect will be negative.

How, if at all, do you expect the number or type of devices available in the classroom will affect your teaching or the teaching of the educators you supervise in the next five years?



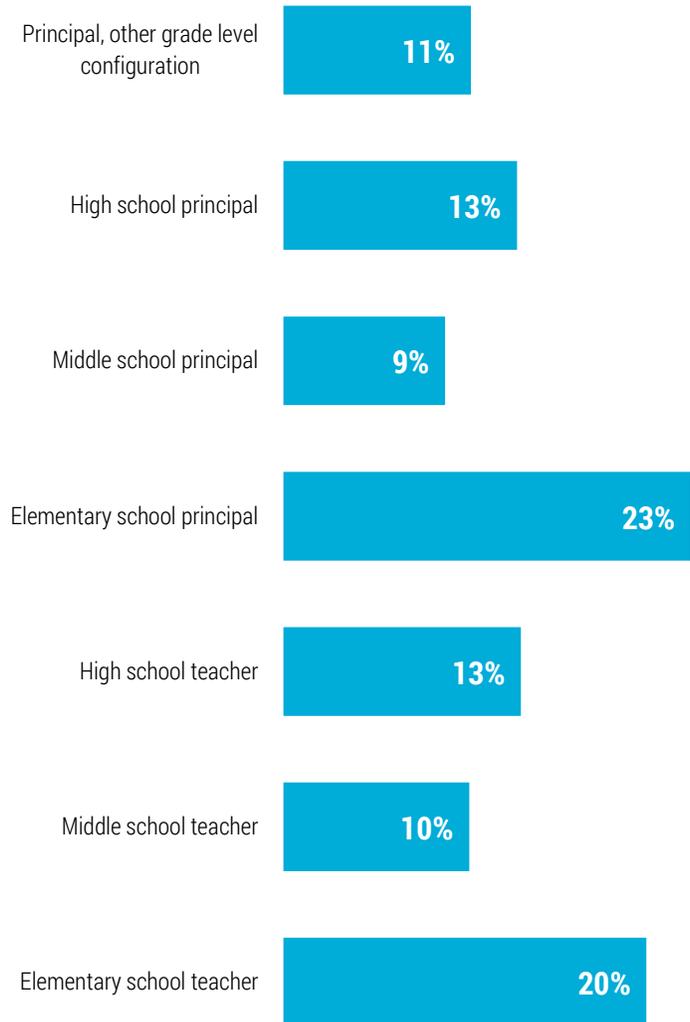
Demographics

Grade level and role

Most survey respondents (57 percent) are principals and the remainder (43 percent) are teachers.

Forty-three percent of survey respondents work at the elementary level. Twenty-six percent are high school educators. And 19 percent work with middle schoolers. The remainder have jobs that span multiple grade level configurations.

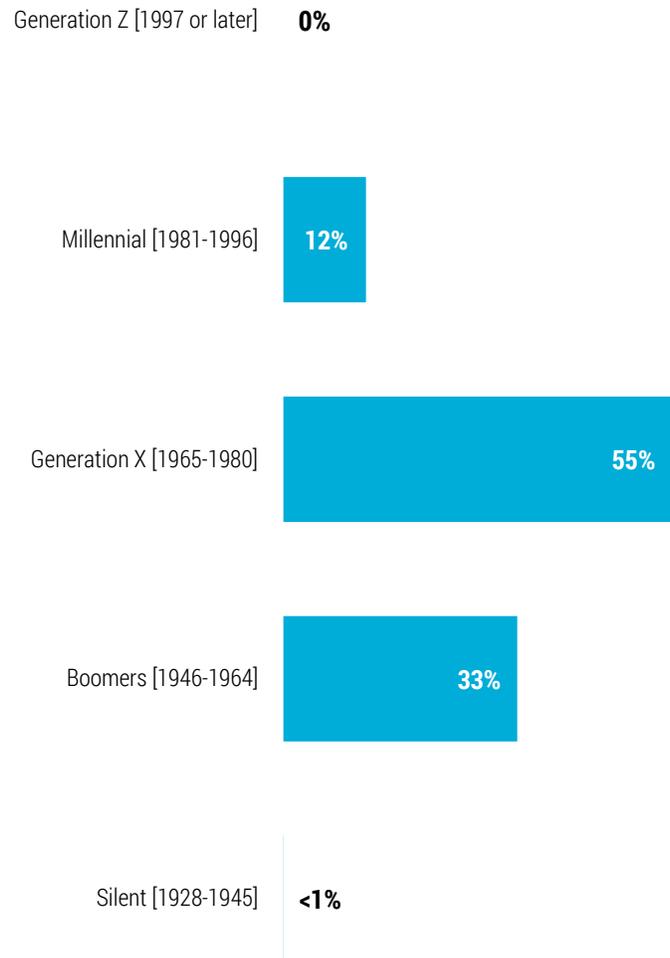
Which of the following best describes your job?



Age

Most survey respondents (55 percent) belong to Generation X because they were born between 1965 and 1980. Baby boomers (1946-1964) comprise about a third of the sample. The remainder are Millennials born between 1981 and 1996.

When were you born?

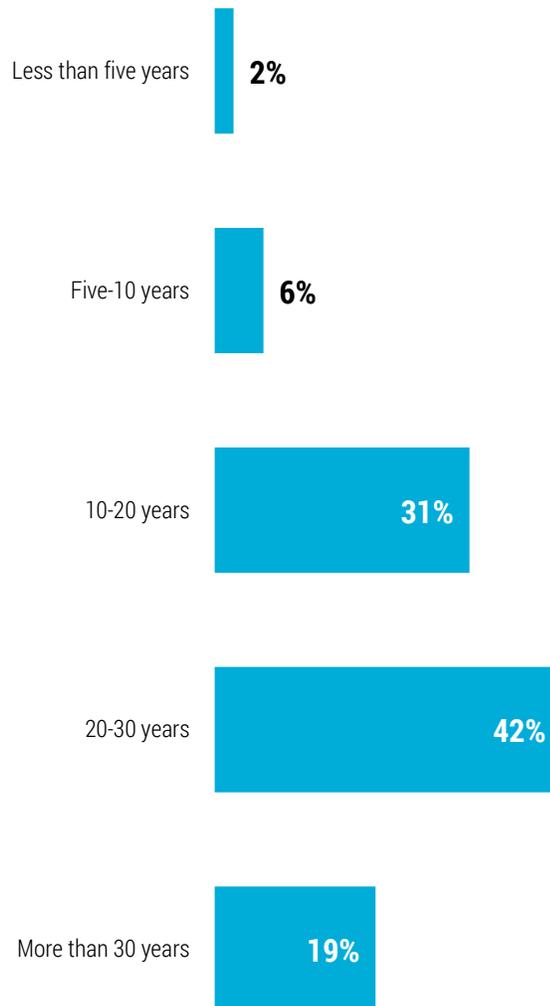


Years of Experience

Most respondents (61 percent) have 20 or more years of experience in K-12 education.

Teachers have fewer years of experience than principals: 52 percent of teachers have 20-plus years in K-12 as compared to 68 percent of principals. All but two of the 22 survey respondents with less than five years of experience are teachers.

How long have you worked in K-12 education?

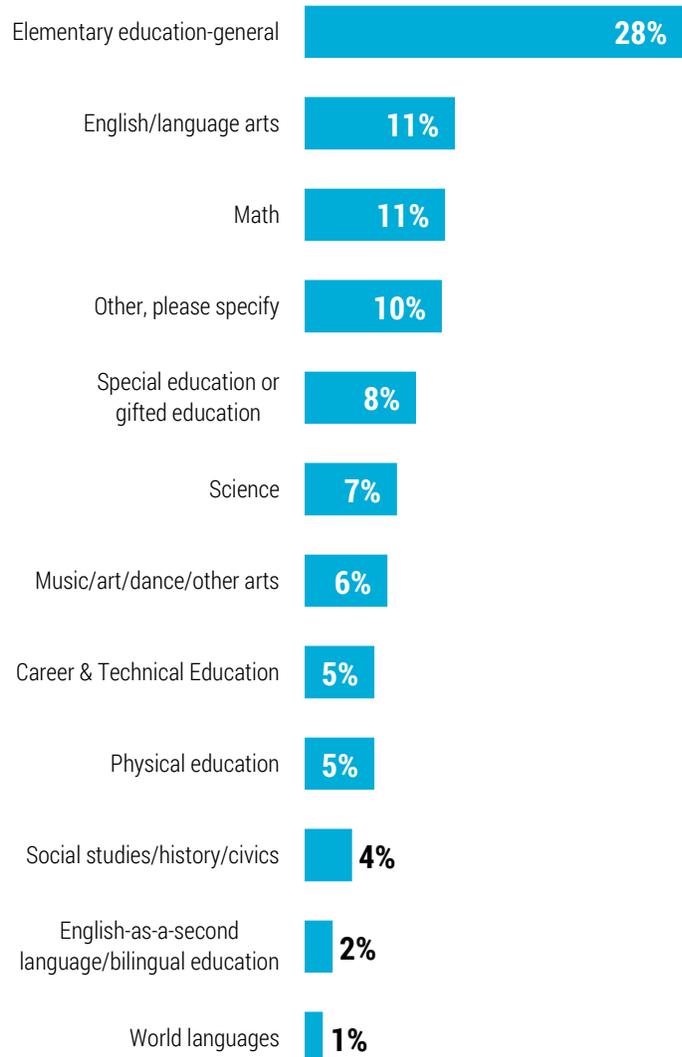


Teachers

Teachers who responded to the survey are most likely to teach grade 11. They are least likely to work with preschoolers.

General elementary education is the most common field, followed by English/language arts and math.

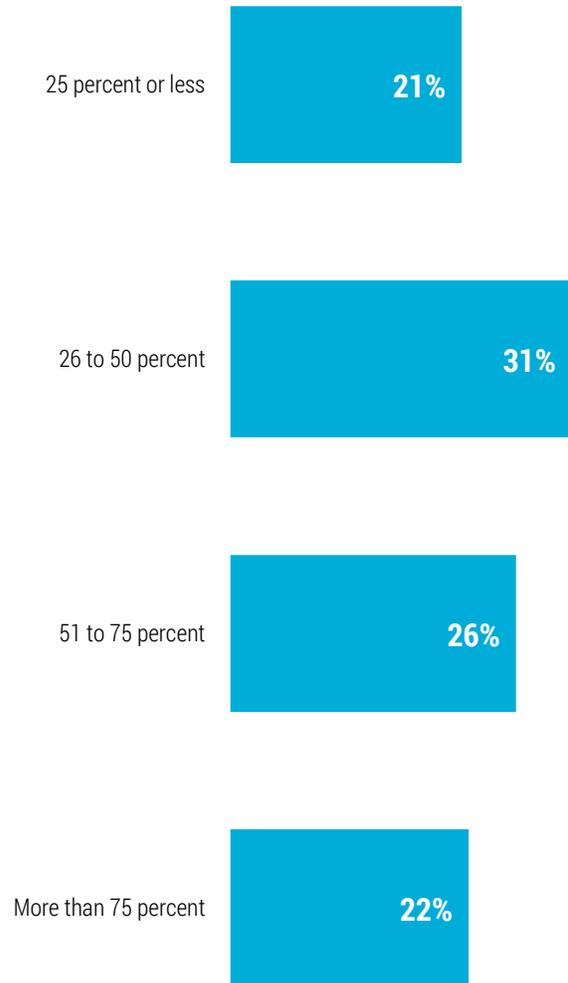
Which of the following best describes the focus of your current teaching job?



School Poverty Rates

Just over half of educators work at schools in which 50 percent or fewer students come from low-income families.

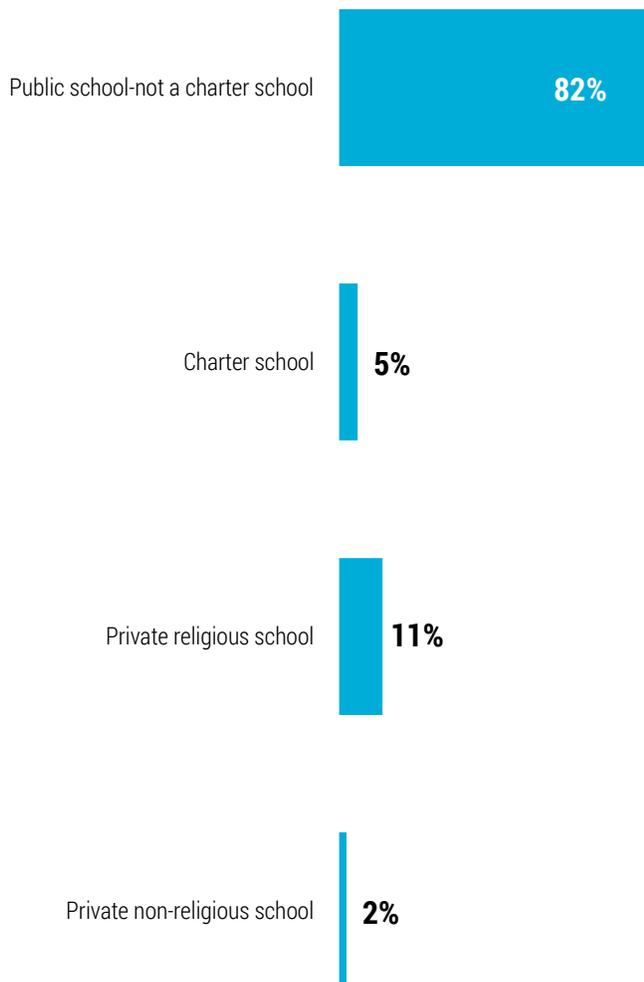
Which of the following best describes your school's percentage of students from low-income families?



School Sector

Most survey respondents (82 percent) work at traditional public schools that are not charters. Nearly all of the private school respondents work at religious schools.

Which of the following best describes your school?



School Locale

Survey respondents are most likely to work at rural schools and least likely to work in urban ones.

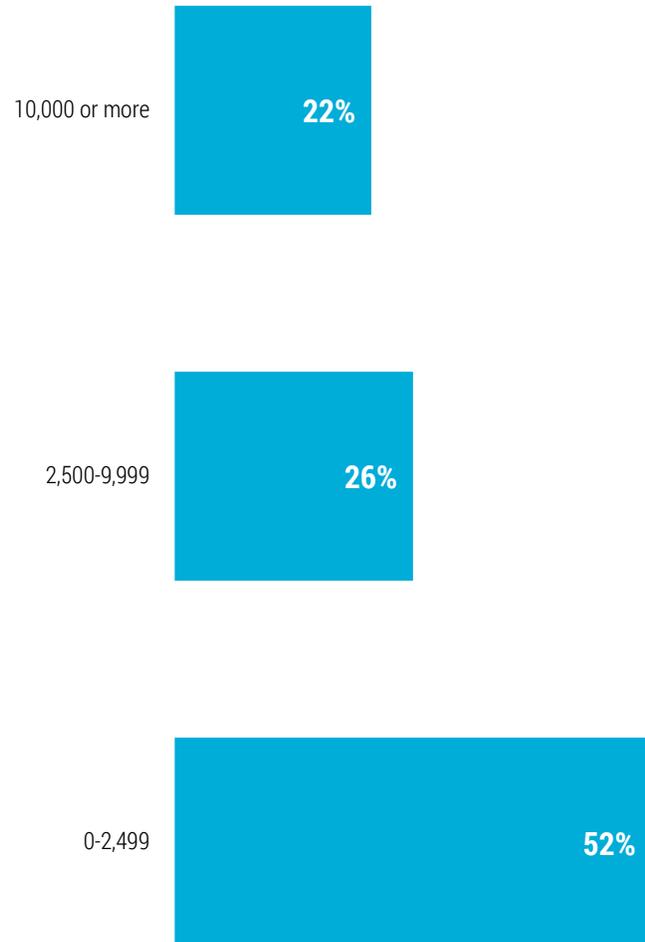
Which of the following best describes your school's location?



District Size

Most survey respondents (52 percent) work in districts with fewer than 2,500 students. This makes sense given that, nationwide, most districts have fewer than 2,500 students.

How many students does your district serve?



Region

With one exception (Rhode Island) survey respondents hail from every state in the nation as well as from the District of Columbia. Like the U.S. population as a whole, they are most likely to live in the South.

Survey respondents' locations

