School Leaders and Technology

Results from 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 Education Week 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

In February 2018, the Education Week Research Center fielded an online survey to a representative sample of more than 500 school leaders, including principals, assistant principals, and deans. The margin of error is plus or minus 4 percent.

The topic of the survey was technology. Specifically, the questionnaire focused on screen-time, personalized learning, social media, cyber-bullying, media literacy, sexting, and the Computer Science for All movement.

Highlights of the survey findings include:

- Most leaders say that students spend the right amount of screen time in school. However, 95 percent are concerned that students get too much screen time at home.
- The majority of leaders (57 percent) report that digital technologies are an important supplemental resource used to personalize the learning experience based on each student's strengths, weaknesses, and preferences. Relatively few (16 percent) say such technologies are central to their mission or that they do not use them at all (3 percent).
- More than half of school leaders (55 percent) are extremely concerned about student social media use outside of school.
- Just under half of leaders (45 percent) are extremely concerned about cyber-bullying.
- Forty-three percent of leaders are very concerned about students' inability to gauge the reliability of online news.
- Compared to their elementary and high school peers, middle school leaders are most concerned about student sexting.
- Just 7 percent of leaders say that teaching computer science or data science is central to the mission of their operation.

Overall, findings suggest that school-based leaders face multiple challenges as they educate children in an increasingly technology-focused world.

Introduction

Technology is pervasive in today's world. Smart phones are ubiquitous. Schools increasingly use technology to personalize learning. Both inside and outside school, students encounter social media, cyber-bullying, "fake news," and sexting. The Computer Science for All movement encourages everyone to learn to code. School-based leaders face myriad challenges as they help their students conquer and navigate technology. The goal of this report is to gain a better understanding of how these leaders perceive these and other rapidly-changing technology-related challenges and trends.

SURVEY AREAS

SCREEN TIME

PERSONALIZED LEARNING

SOCIAL MEDIA, CYBER-BULLYING, MEDIA LITERACY, AND SEXTING

COMPUTER SCIENCE FOR ALL

Methodology

This nationally-representative, online survey included results from 503 school-based leaders, such as principals, assistant principals, and deans. The survey was administered in February 2018. The margin of error is plus or minus four percent.

Survey Details

Survey Administered: February 2018

Sample: Nationally-representative

Professional Roles of Respondents: School-based leaders, such as principals, assistant principals, and deans

Total Respondents: 503

Screen Time

Screen Time in School

On average, most school leaders (64 percent) say that students are spending the right amount of time using screens in schools.

Which of the following best describes your beliefs about how much time K-12 students spend using screens in school?

- Too much
- The right amount
- Too little

17%
19%
64%
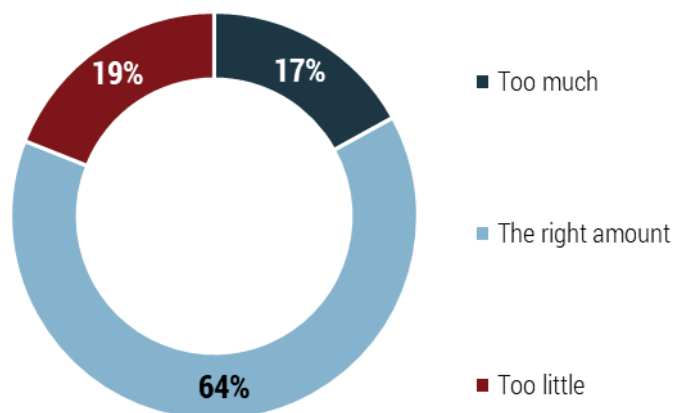
Screen Time and Poverty

Leaders at schools with poverty rates above 50 percent are more likely than their peers at lower-poverty schools to report that students are getting too little screen time at school. This may be because higher-poverty schools are less likely to afford devices like computers and tablets.

Which of the following best describes your beliefs about how much time K-12 students spend using screens in school?

Too much
19%
13%

The right amount
66%
61%

Too little
14%
26%

■ 50% or less low-income
■ More than 50% low-income
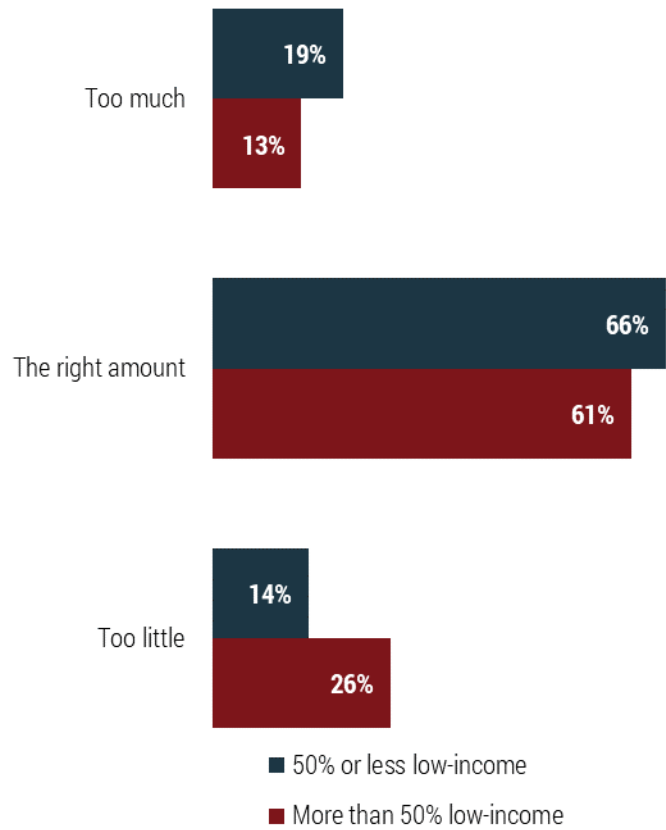
Pressure from Parents

Middle and high school parents are more likely than their elementary counterparts to exert pressure to limit the amount of time students spend using screens in school.

How much pressure do you feel from parents to limit or increase the amount of time students in your school spend using screens?

	Elementary	Middle	High
Strong pressure to limit	2%	6%	4%
Mild pressure to limit	12%	25%	22%
No pressure	70%	56%	58%
Mild pressure to increase	13%	11%	13%
Strong pressure to increase	2%	3%	2%

■ Elementary ■ Middle ■ High
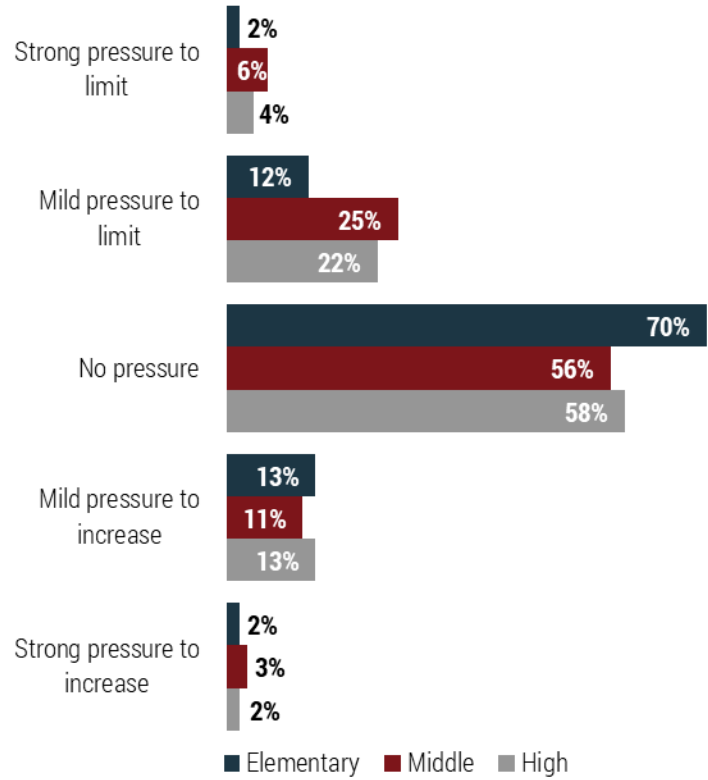
Pressure from Teachers

Middle and high school teachers are more likely than their elementary counterparts to exert pressure to limit the amount of time students spend using screens in school.

How much pressure do you feel from teachers to limit or increase the amount of time students in your school spend using screens?

Strong pressure to limit
- Elementary: 4%
- Middle: 6%
- High: 7%

Mild pressure to limit
- Elementary: 12%
- Middle: 28%
- High: 23%

No pressure
- Elementary: 62%
- Middle: 53%
- High: 50%

Mild pressure to increase
- Elementary: 18%
- Middle: 14%
- High: 16%

Strong pressure to increase
- Elementary: 4%
- Middle: 0%
- High: 4%

■ Elementary ■ Middle ■ High
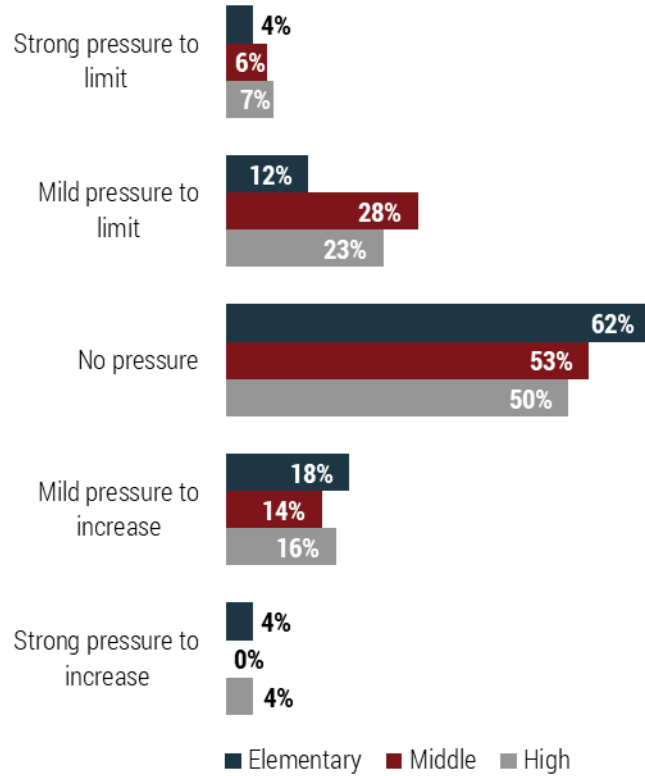
Screen Time at Home

The vast majority of leaders (95 percent) say students get too much screen time at home. This concern about screen time at home is consistent across leaders from schools with higher and lower poverty and also across elementary, middle, and high school.

**Which of the following best describes your beliefs about how much time K-12 students spend using screens at home?**

2% 3%

95%

■ Too much　■ The right amount　■ Too little

Pressure from Stakeholders

Leaders say that technology companies/vendors are more likely than students, district leaders, teachers, or parents to exert pressure to increase the amount of time students at their schools spending using screens. Teachers are most likely to exert pressure to limit screen time.
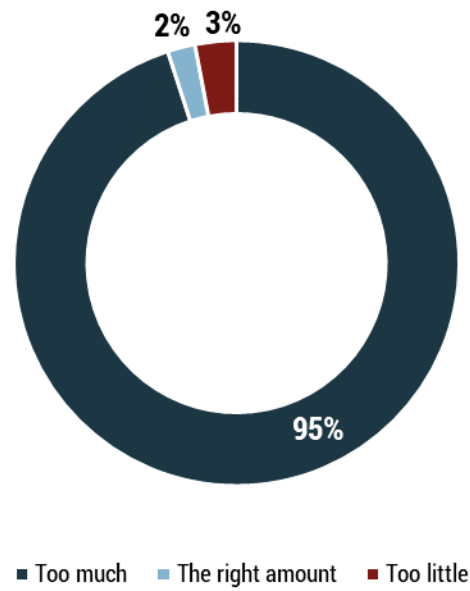
How much pressure do you feel from the following groups to limit or increase the amount of time students in your school spend using screens?

Strong pressure to limit
- Parents: 3%
- Teachers: 5%
- District leaders: 1%
- Students: 1%
- Technology companies/vendors: 1%

Mild pressure to limit
- Parents: 18%
- Teachers: 18%
- District leaders: 6%
- Students: 3%
- Technology companies/vendors: 2%

No pressure
- Parents: 64%
- Teachers: 57%
- District leaders: 60%
- Students: 47%
- Technology companies/vendors: 39%

Mild pressure to increase
- Parents: 13%
- Teachers: 18%
- District leaders: 28%
- Students: 34%
- Technology companies/vendors: 28%

Strong pressure to increase
- Parents: 2%
- Teachers: 4%
- District leaders: 6%
- Students: 16%
- Technology companies/vendors: 30%

Legend: ■ Parents ■ Teachers ■ District leaders ■ Students ■ Technology companies/vendors

Screens vs. Paper-and-Pencil

The survey asked leaders whether they preferred students to use devices with screens or paper and pencil for six different types of tasks. They were most likely to prefer paper-and-pencil for learning new math concepts and skills. They were most likely to prefer screens for conducting research. Overall, leaders prefer paper and pencil for improving reading ability, practicing new math concepts and skills, taking notes, and learning new math concepts and skills. They prefer devices with screens for conducting research and taking standardized tests.

For each of the following activities, do you prefer that students in your school use devices with screeens, or paper-and-pencil?

Activity	Devices with screens are better	Paper/pencil is better	No difference
Conduct research	88%		10%
Take standardized tests	51%	31%	18%
Improve reading ability	28%	35%	37%
Practice new math concepts and skills	24%	51%	25%
Take notes	21%	45%	34%
Learn new math concepts and skills	19%	56%	25%

■ Devices with screens are better
■ Paper/pencil is better
■ No difference

Personalized Learning

Views of Personalized Learning

Nearly 1 in 3 leaders view personalized learning as one of many school improvement tools available to them. Just under 1 in 3 leaders view it as a transformational way to improve public education. Very few leaders say personalized learning is either a passing fad or a threat to public education.

Which of the following best describes how you perceive the personalized learning movement?
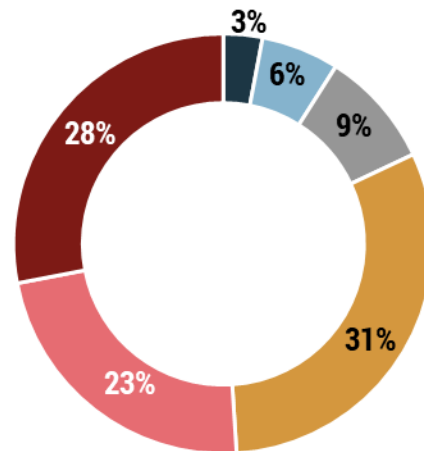
3%
6%
9%
31%
23%
28%

- Threat to public education
- Passing fad
- Not on my radar screen
- One of many school improvement strategies available to me
- Promising idea
- Transformational way to improve public education

Role of Digital Tech

Most leaders (57 percent) say that digital technologies are an important supplemental resource used to personalize the learning experience based on each student's strengths, weaknesses, and preferences. Relatively few (16 percent) say such technologies are central to their mission or that they do not use them at all (3 percent).

To what extent is your school using digital technologies to help personalize the learning experience based one each student's strengths, weaknesses, and preferences?
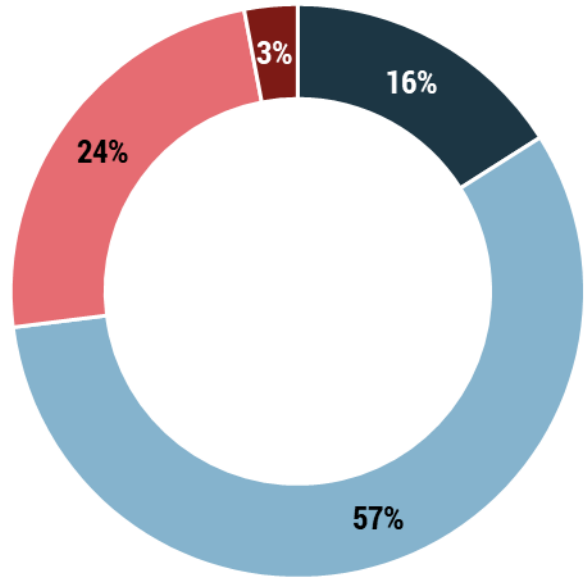
- They are central to our mission and operation
- They are an important supplemental resource
- They are an occasional add-on
- Not at all

Confidence in Digital Tech

The survey asked leaders how much confidence they had that personalized learning could meet a set of seven objectives. Leaders were most confident that personalized learning could customize instruction. They were least confident that it could improve students' social and emotional skills.

How much confidence do you have that digital technologies can help schools realize the following goals associated with personalized learning?

	None	Very little	Some	Quite a lot	A great deal
Customize instruction			23%	51%	23%
Improve student engagement		6%	30%	45%	17%
Provide all students with equal opportunities to succeed		6%	40%	37%	14%
Improve student learning			44%	41%	10%
Help educators better understand students	12%		42%	33%	8%
Free teachers to focus on what's important	19%		47%	24%	
Improve students' social emotional skills	29%	44%	21%		
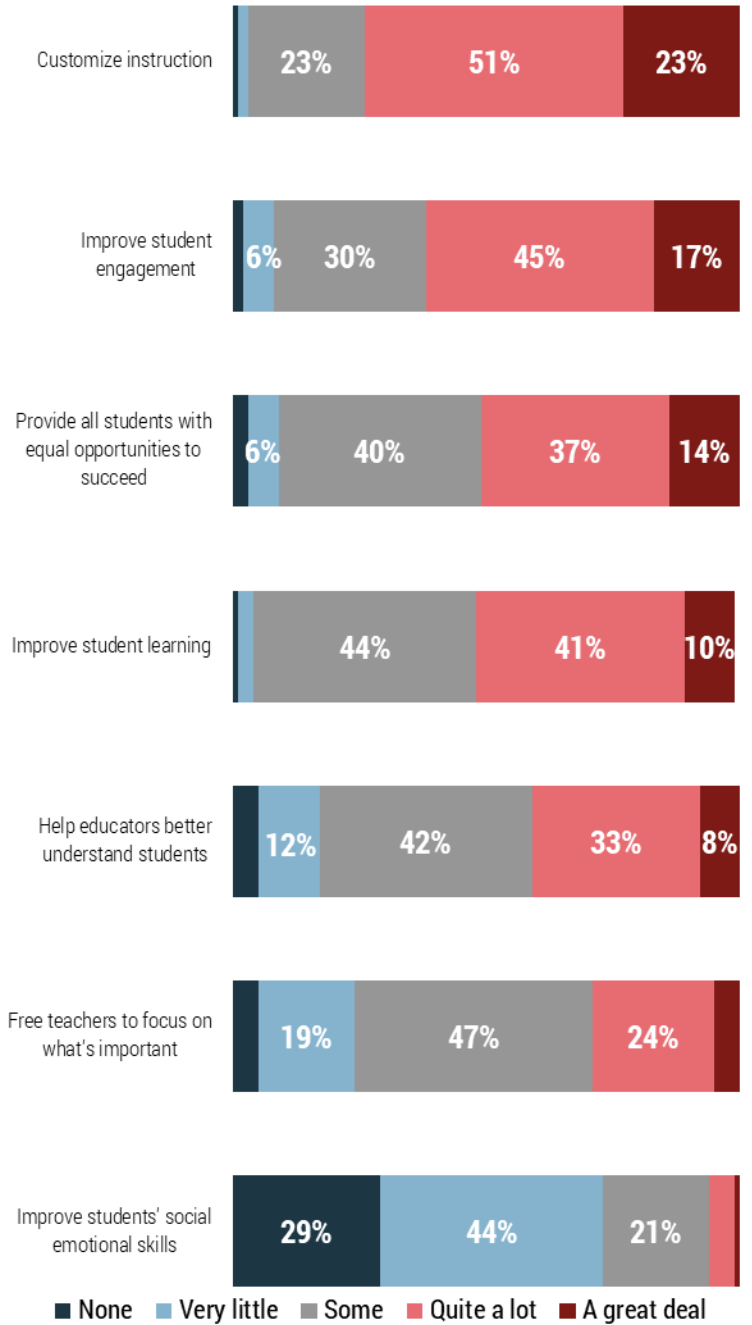
Potential Problems

Leaders were asked how concerned they were about six potential problems with personalized learning. They were most concerned about students spending time on screens. They were least concerned that personalized learning would diminish the role of the teacher.

How much concern do you have that digital technologies used to personalize learning will contribute to the following problems?

	None	Very little	Some	Quite a lot	A great deal
Students spending too much time on screens		12%	36%	31%	18%
The technology industry gaining too much influence over public education	7%	26%	32%	21%	14%
Students working alone too often		20%	39%	24%	14%
Companies collecting too much sensitive student information	6%	22%	36%	25%	11%
Student learning being reduced to the mastery of discrete information and skills	6%	26%	41%	19%	8%
Diminishing the role of the teacher	18%	45%	24%	9%	

■ None ■ Very little ■ Some ■ Quite a lot ■ A great deal

Pressure on Personalized Learning

Technology companies exert the strongest pressure to embrace personalized learning. Teachers are most likely to exert pressure to reject personalized learning, though most (67 percent) put no pressure at all on their leaders to do so.

How much pressure do you feel from the following groups to embrace or reject personalized learning?

Group	Strong pressure to reject	Mild pressure to reject	No pressure	Mild pressure to embrace	Strong pressure to embrace
Technology companies/vendors			45%	31%	24%
District leaders			52%	32%	14%
Students			67%	23%	8%
Parents			67%	23%	
Teachers		12%	67%	18%	

Legend:
- Strong pressure to reject
- Mild pressure to reject
- No pressure
- Mild pressure to embrace
- Strong pressure to embrace
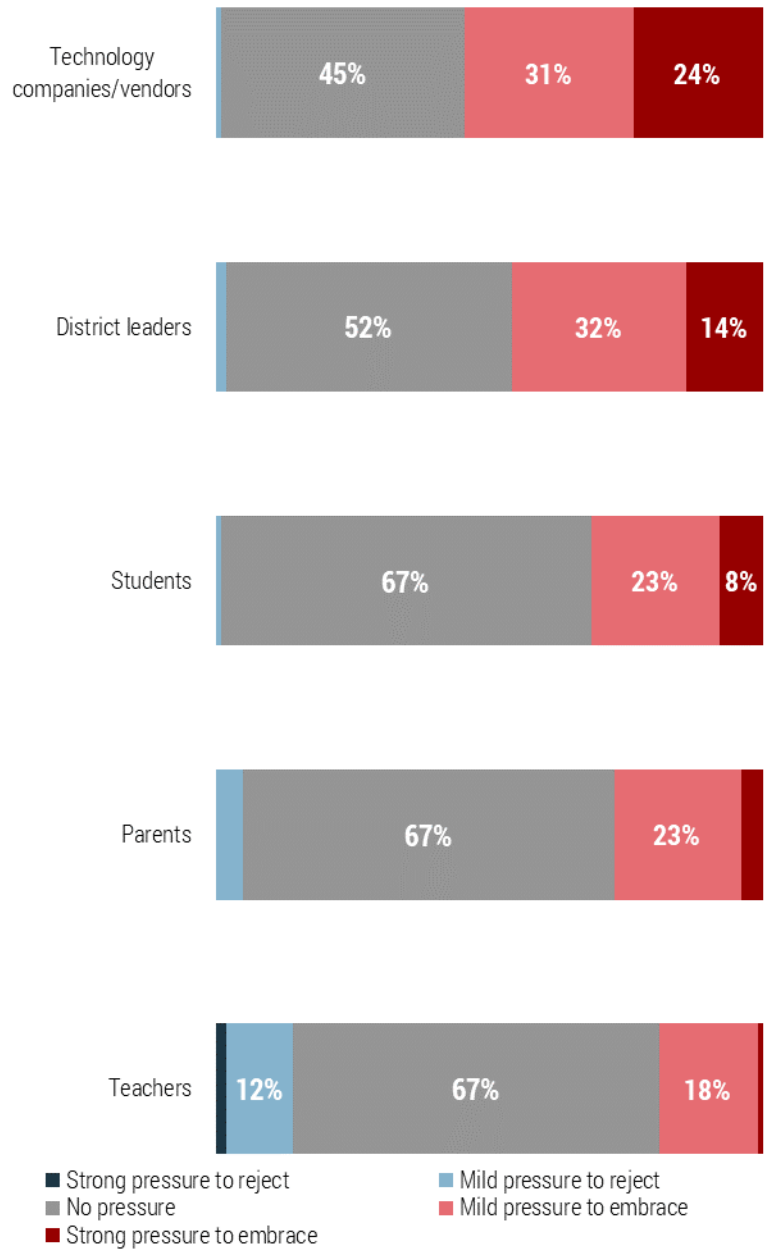
Social Media, Cyber-Bullying, Media Literacy, and Sexting

Concern About Issues

Social media use, cyber-bullying, media literacy, and sexting are all potentially thorny areas for school leaders. When it comes to these four issues leaders are most concerned about student social media use outside of school. They are least concerned about student social media use during the school day.
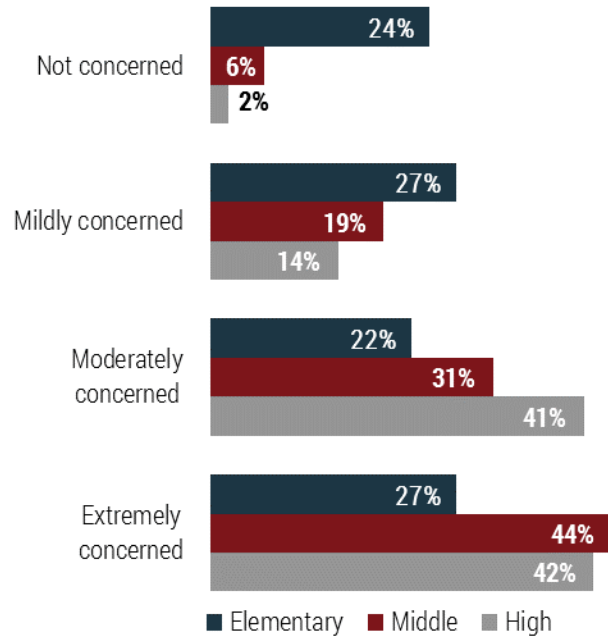
How concerned are you about each of the following issues at your school?

Legend:
- Not concerned
- Mildly concerned
- Moderately concerned
- Extremely concerned
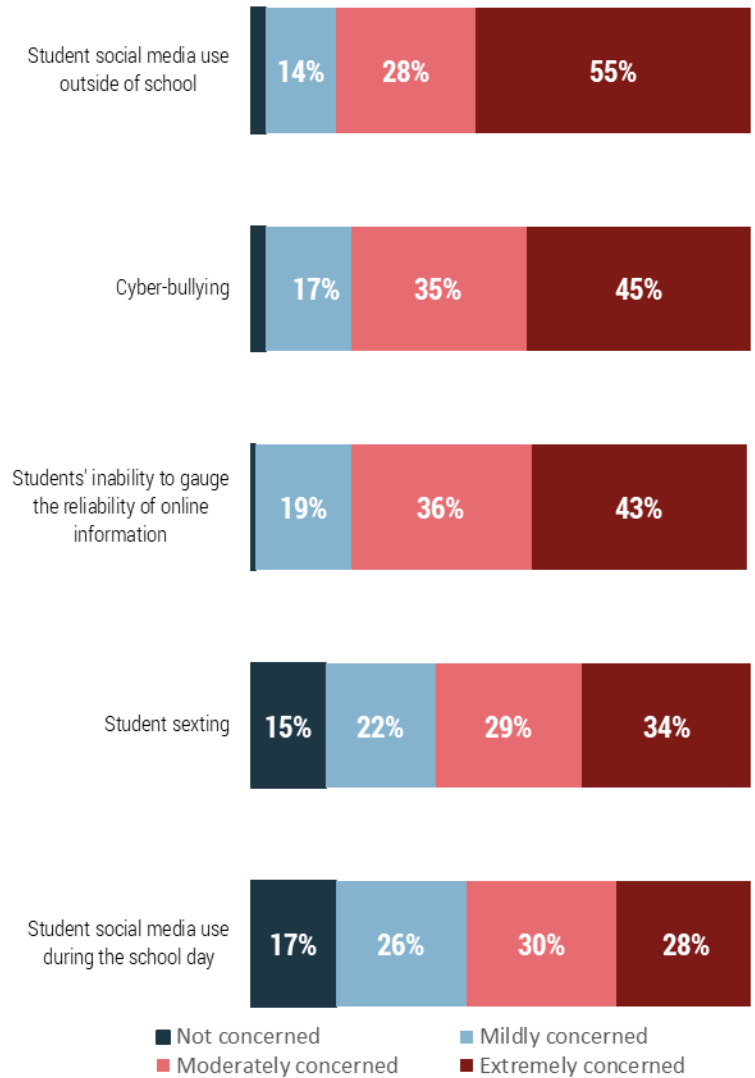
Concern About Sexting by Grade

Not surprisingly, student sexting is a bigger concern for high school and middle school leaders. Twenty-seven percent of elementary leaders are extremely concerned about student sexting as compared to 44 percent for middle school and 42 percent for high school.

How concerned are you about student sexting?

Concern Level	Elementary	Middle	High
Not concerned	24%	6%	2%
Mildly concerned	27%	19%	14%
Moderately concerned	22%	31%	41%
Extremely concerned	27%	44%	42%

■ Elementary ■ Middle ■ High

Social Media Use Outside of School

Compared to their elementary peers, middle and high school leaders are more concerned about student social media. Middle school leaders are especially concerned about social media use outside of school. Seventy-eight percent of middle school leaders are extremely concerned as compared to 59 percent in high school and 48 percent in elementary school.

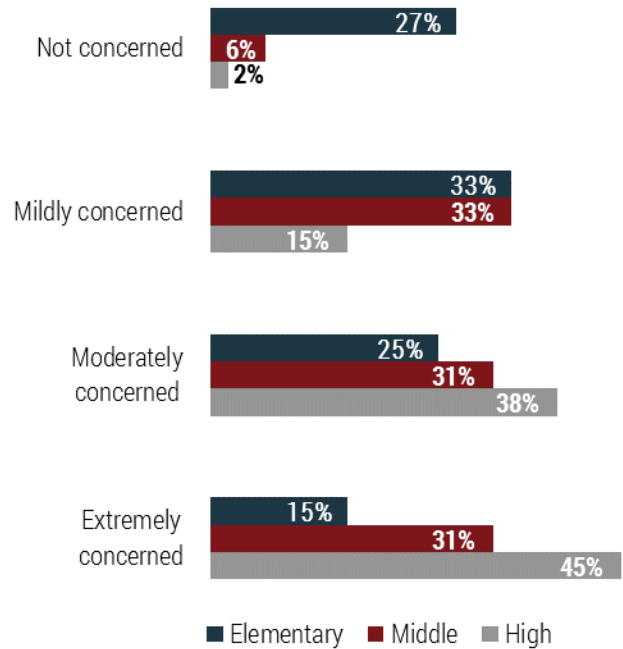**How concerned are you about student social media use outside of school?**

Not concerned
- 4%
- 0%
- 2%

Mildly concerned
- 18%
- 0%
- 12%

Moderately concerned
- 31%
- 22%
- 26%

Extremely concerned
- 48%
- 78%
- 59%

■ Elementary ■ Middle ■ High
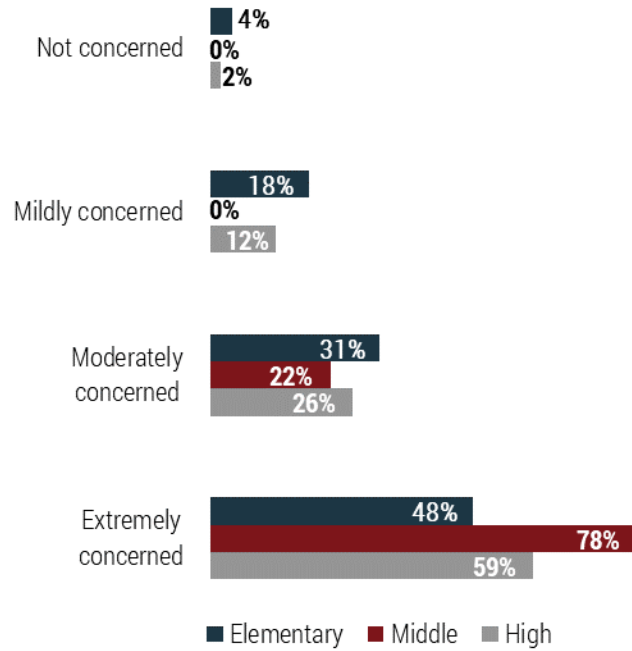
Social Media Use During School Day

High school leaders are particularly concerned about social media use during the school day. Forty-five percent are extremely concerned as compared to 31 percent for middle school and 15 percent for elementary.

How concerned are you about student social media use during the school day?

Not concerned
- Elementary: 27%
- Middle: 6%
- High: 2%

Mildly concerned
- Elementary: 33%
- Middle: 33%
- High: 15%

Moderately concerned
- Elementary: 25%
- Middle: 31%
- High: 38%

Extremely concerned
- Elementary: 15%
- Middle: 31%
- High: 45%

■ Elementary ■ Middle ■ High

Responsible Social Media Use

School leaders face challenges when it comes to addressing problems related to social media. Just 14 percent say they are very prepared to evaluate, implement, or identify strategies to use social media responsibly. Leaders with more experience in education are more likely to report that they are very prepared to evaluate, implement, and identify responsible social media use strategies.

How prepared do you feel to take the following steps to help students use social media responsibly?

Step	Not at all prepared	A little prepared	Somewhat prepared	Very prepared
Evaluate strategies to help students use social media responsibly	9%	33%	45%	14%
Implement strategies to help students use social media responsibly	10%	32%	45%	14%
Identify strategies for helping students use social media responsibly	6%	32%	49%	14%

Legend: ■ Not at all prepared ■ A little prepared ■ Somewhat prepared ■ Very prepared
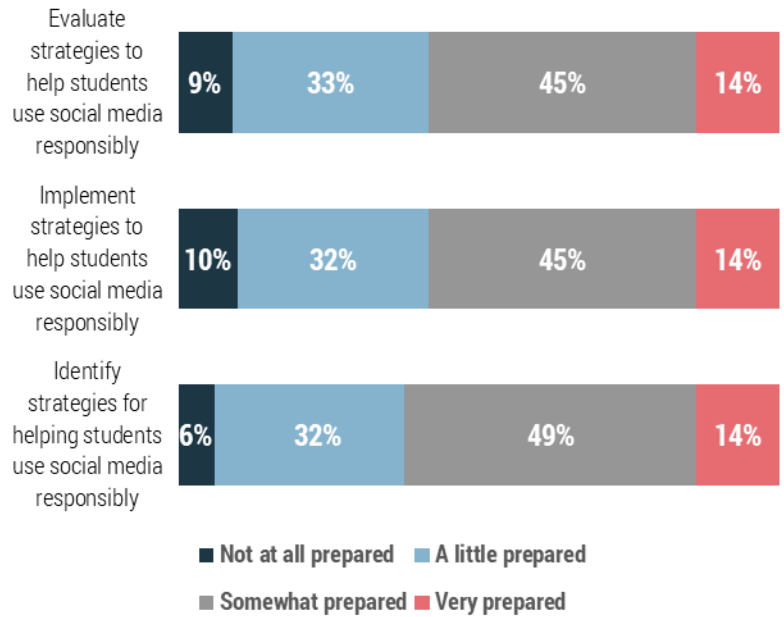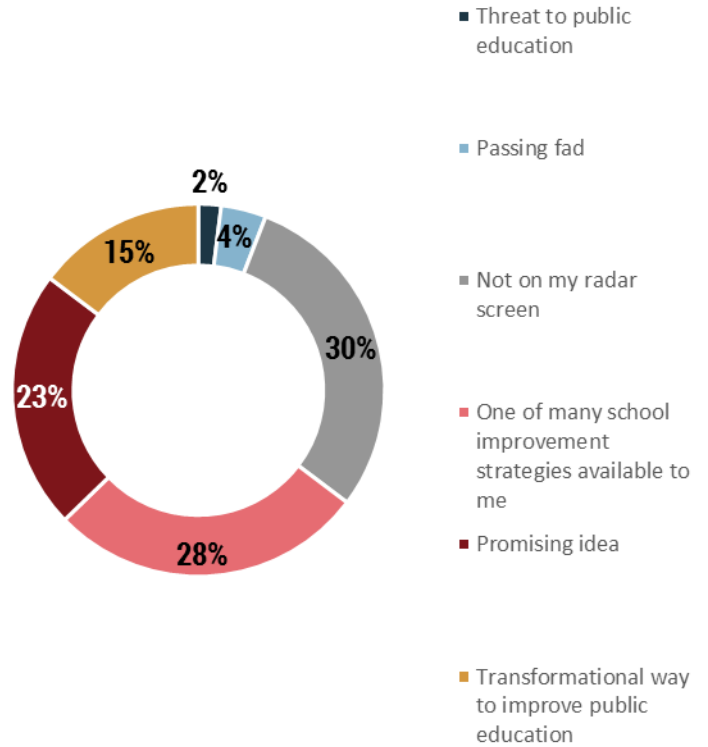
Computer Science for All

Views of Computer Science for All

The Computer Science for All movement aims to prepare every student for a technology-focused future by offering computer science education to everyone. Nearly 1 in 3 leaders say that this movement, encouraged by the White House, and backed by large technology companies such as Apple, Facebook, and Google, is not on their radar screen. An additional 28 percent view it as one of many school improvement strategies available to them.
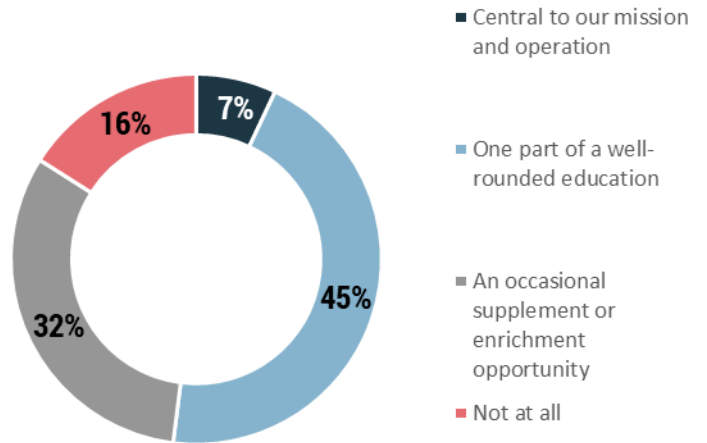
Which of the following best describes how you perceive the Computer Science for All movement?

Legend:
- Threat to public education
- Passing fad
- Not on my radar screen
- One of many school improvement strategies available to me
- Promising idea
- Transformational way to improve public education

Values: 2%, 4%, 30%, 28%, 23%, 15%

Focus on Computer Science

Sixteen percent of leaders report that their school is not at all focused on teaching students computer or data science. Overall, 45 percent of all leaders perceive computer/data science as one part of a well-rounded education.
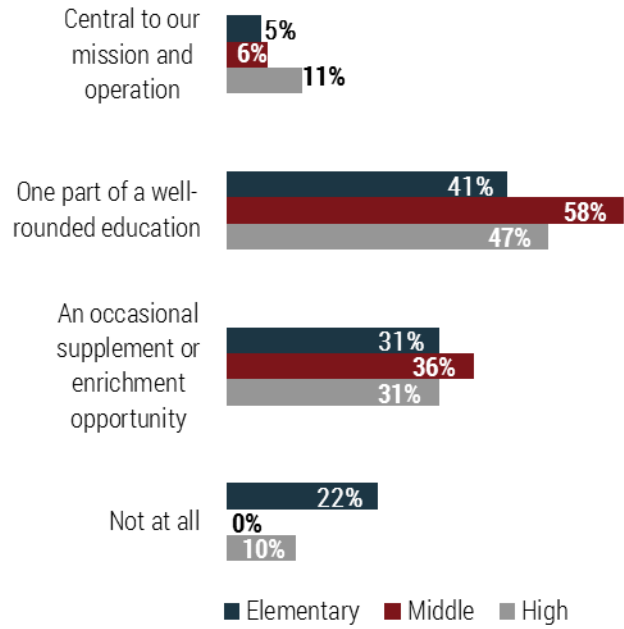
To what extent is your school focused on teaching students computer science/data science?

- Central to our mission and operation
- One part of a well-rounded education
- An occasional supplement or enrichment opportunity
- Not at all

7%
45%
32%
16%

Focus on Computer Science by Grade

Compared to their middle and high school peers, elementary leaders are most likely to say their school is not at all focused on computer science.
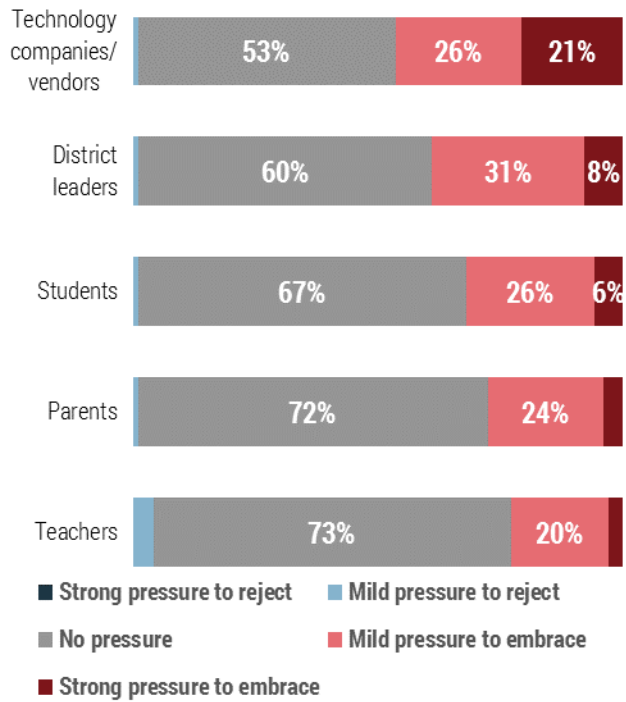
To what extent is your school focused on teaching students computer science/data science?

	Elementary	Middle	High
Central to our mission and operation	5%	6%	11%
One part of a well-rounded education	41%	58%	47%
An occasional supplement or enrichment opportunity	31%	36%	31%
Not at all	22%	0%	10%

■ Elementary ■ Middle ■ High

Pressure on Computer Science

As with personalized learning, technology companies and vendors exert more pressure to embrace computer science education than do district leaders, students, parents, or teachers. Leaders did not feel strong pressure to reject computer science from any of these five groups.

How much pressure do you feel from the following groups to reject or embrace computer science education?

Group	No pressure	Mild pressure to embrace	Strong pressure to embrace
Technology companies/vendors	53%	26%	21%
District leaders	60%	31%	8%
Students	67%	26%	6%
Parents	72%	24%	
Teachers	73%	20%	

■ Strong pressure to reject   ■ Mild pressure to reject

■ No pressure   ■ Mild pressure to embrace

■ Strong pressure to embrace

Respondent Background

Grade Level

The school leaders who responded to the survey hailed from every state in the U.S. except for Alaska, the District of Columbia, Hawaii, Montana, and Oregon. More than half work in elementary schools.
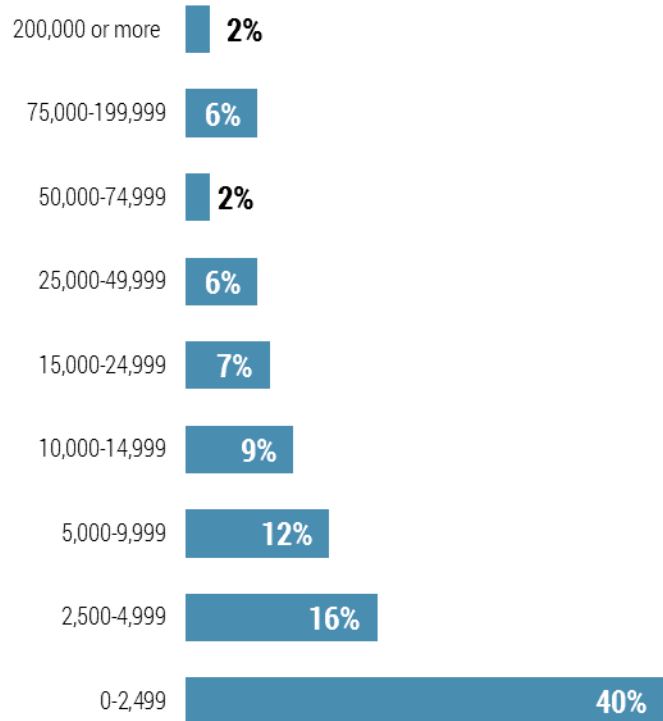
Which of the following best describes the school where you work?

- ■ Elementary school
- ■ Middle school
- ■ High school
- ■ Other
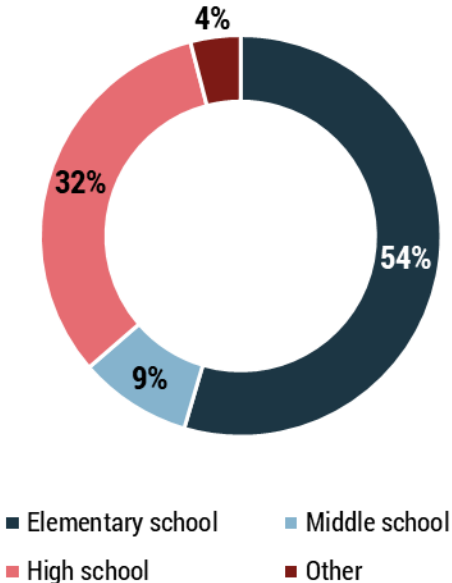
District Enrollment

Close to half (40 percent) of survey respondents work in districts with fewer than 2,500 students.

**How many students does your school district serve?**

District Size	Percentage
200,000 or more	2%
75,000-199,999	6%
50,000-74,999	2%
25,000-49,999	6%
15,000-24,999	7%
10,000-14,999	9%
5,000-9,999	12%
2,500-4,999	16%
0-2,499	40%

Locale

Forty percent of survey respondents work in rural schools. Thirty-nine percent work in suburban schools, and 22 percent are in urban schools.

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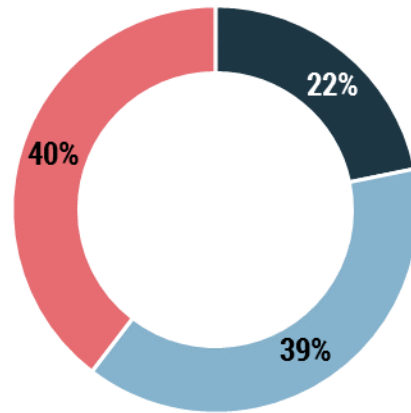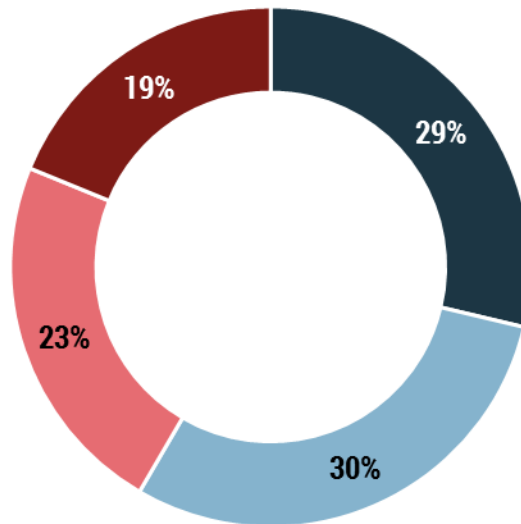

■ Urban   ■ Suburban   ■ Rural/Town

School Poverty

Survey respondents were somewhat more likely to work in lower-poverty schools where less than 25 percent of the students are low-income than in higher-poverty schools where more than 75 percent of the students are low-income.

Which of the following best describes the percentage of low-income students in your school?

■ Less than 25% ■ 25 to 50% ■ 51 to 75% ■ More than 75%

Gender

Fifty-eight percent of respondents were female. The rest were male. On average, respondents had worked in K-12 education for 22 years.

What is your gender?

42%

58%

■ Male   ■ Female