CoSN
Leading Education Innovation

2024 STATE OF EDTECH DISTRICT LEADERSHIP

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Contents

Introduction

CoSN conducts its annual survey to gather insights into the changing landscape of EdTech Leaders. As the results of each year's survey have shown, the ground they cover keeps expanding. As districts modernize their infrastructure, more responsibilities such as HVAC, phone systems, and physical security systems come under their purview and run on the school network. EdTech Leaders are also challenged by persistent problems such as hurdles to hiring qualified IT talent, issues of student home internet and device access, funding cliffs as pandemic funds expire, and enormous threats of cybersecurity attacks. This survey—now in its 11th year—provides an opportunity for EdTech Leaders, who are often siloed within their own district, to benchmark their efforts or simply see what others are doing. It also is valuable to superintendents, school boards, and business officers as they determine priorities and budgets to address these challenges. As one survey respondent shared, "This has me thinking and brainstorming on the technology needs and objectives for [my] school district." The survey results also serve as a directional guide to CoSN's resource and program development in fulfilling its mission to "equip current and aspiring K-12 education technology leaders, their teams, and school districts with the community, knowledge, and professional development they need to cultivate engaging learning environments."

Existing CoSN resources include:

- **The Digital Leap Success Matrix —** The practices needed to perform as a successful digital school system. The Matrix forms the body of knowledge for CoSN's Certified Education Technology Leader (CETL®), the only accredited practice-based certification program available to education technology leaders.

- **Peer Reviews** — A rigorous process for assessing a school system's digital readiness, based on CoSN's Digital Leap Success Matrix.

- **Cybersecurity Resources** — A suite of resources for addressing cybersecurity in K-12 organizations around planning, prevention & preparation, implementation, responses and more.

- **Trusted Learning Environment (TLE)** — A program designed to help K-12 schools and districts build strong, effective privacy programs and a culture of trust and transparency with 25 essential privacy practices. Districts can apply for a mini seal in each TLE practice area, a step-by-step approach, or apply for the full TLE at once.

- **Student Data Privacy** — Resources to help you understand student data privacy requirements, and create and improve your student data privacy program while building trust across your community.

- **CoSN Digital Equity Dashboard** – A visualization dashboard that compares various data sets by state, county, zip code, and district boundaries to help districts reduce the Digital Divide between students who have the needed digital resources and those who do not.

- **NEW Gen AI Readiness and Maturity Tool** — To empower school districts to assess their preparedness for responsible integration of Generative AI, CoSN and the Council of Great City Schools (CGCS) collaborated to develop the online K-12 Generative AI Maturity Tool, which expands upon the K-12 Generative AI Readiness Checklist.

- **K-12CVAT** — CoSN K-12 Community Vendor Assessment Tool (K-12CVAT) measures vendor risk for K-12 schools, districts, and education service districts. To ensure that your school system information and constituents' Personal Identifiable Information (PII) are protected, the K-12CVAT should be used as part of procurement processes, including RFP processes and purchase evaluations.

- **Interoperability Toolkit** — Resources to help districts increase the interoperability of their academic and operational systems.

- **Network & Systems Design** — A suite of resources to help schools and districts design and implement resilient technology infrastructure that adapts to shifting and sustainable technologies which support the increasing demands of teaching and learning.

- **EmpowerED Superintendent Resources** — Leadership strategies based on imperatives for technology leadership and action steps for strengthening the technology leadership team (created in partnership with AASA, The Superintendents Association). Resources include One-Pagers on critical focus areas:
    - Self-Assessments for Superintendent, CTO, District Leadership Team
    - Financing Technology Innovations: Strategies and Tools for Determining 1) Total Cost of Ownership and 2) Value of Investments

- **Driving K-12 Innovation** — Annual report on key trends around emerging technologies to transform learning, organized around Hurdles, Accelerators, and Tech Enablers.

In addition to these public resources, CoSN provides members with extensive member-only resources (such the ASBO/CoSN Toolkit for collaboration between the school business official and CTO) as well as a collaborative resource by CASEL/CoSN on technology and social emotional learning (SEL). Plus, CoSN issues Member Exclusive Briefs that provide guidance on key emerging technologies such as the report on generative AI, “ChatGPT—Above the Noise” as well as EdTechNext reports such as “Low-Cost, High-Impact Technologies to Address Digital Equity.”

Key Findings

Artificial Intelligence (AI)

EdTech Leaders recognize that AI has potential risks and benefits. The overwhelming majority (97%) see benefits in how AI can positively impact education and over a third (35%) of districts report having a generative AI initiative. The areas with the greatest potential for positive impact of Gen AI most cited were productivity (43%) and personalized education (30%). New forms of cyberattacks (63%) and cyberbullying (47%) that are enabled by AI were cited as top risks, along with the lack of teacher training for integrating AI into instruction (49%). Most districts (54%) do not have a separate AI use policy but a growing number address AI use within current policies (31%) and only 3% have bans. One-fifth (20%) of respondents work in districts that use tools designed to detect AI-generated answers in student work.

Cybersecurity

Cybersecurity remains the top concern for EdTech Leaders, with 99% of districts taking measures to improve protections. While this is a bleak situation given the challenge, increasingly districts are on a path to implementing many cybersecurity best practices. The use of two-factor authentication has seen the most dramatic increase, with 72% of districts requiring it in 2024 compared to 40% in 2022. More than half of districts (53%) now have incident response plans, compared to a third (34%) two years prior. Yet EdTech leaders' perceptions of risk from cyber threats continue to be relatively (and surprisingly) low; the biggest perceived threat was phishing scams, with only 26% rating them high risk – despite K-12 being the most-targeted sector.[1] Because of cybersecurity attacks, school districts are paying more for cybersecurity insurance with higher deductibles.

Student Well-Being

An overwhelming majority (93%) of districts are using technology solutions designed to address or improve student well-being. Tools for monitoring and

1 https://www.edweek.org/technology/schools-are-a-top-target-of-ransomware-attacks-and-its-getting-worse/2023/08

reporting bullying and self-harm, as well as tracking student behavior, are common and widely implemented. While a curriculum to address cyberbullying/digital citizenship could reduce the behavior that adversely impacts student well-being, only 37% of districts report doing so.

Digital Equity

A growing number of districts no longer provide any services to address student home broadband access—31% this year, compared to 19% just two years ago. One clear example is the decline in the number of districts providing hotspots to unconnected students, which declined from 69% in 2022 to 49% this year. The reduced support is concerning, as 75% of respondents reported having students without home broadband access and another 17% reporting they did not know. Only 24% of districts report all their students have access to devices at home. Access to broadband at home is of equal importance as access to devices; students who have one without the other are at a significant disadvantage in achieving academic outcomes.

Interoperability

Most districts are involved in Interoperability initiatives, with the majority partially implemented or in the planning stage. Single Sign-On (SSO) is the most fully implemented interoperability initiative at 43%. However, full implementation rates for other initiatives lag far behind. Data interoperability, for example, has the next highest implementation rate at just 11%. EdTech leaders cite a lack of awareness/understanding as the primary barrier to improving data interoperability, with “educating administration” identified as the step most are taking to help advance data interoperability in their districts.

Professional learning

EdTech Leaders are interested in a wide variety of professional learning topics. Cybersecurity ranks number one on EdTech Leaders’ lists for professional learning, with 85% of respondents indicating they were extremely or very interested. Second was IT crisis preparedness at 78%, followed by Driving and Sustaining K-12 innovation at 77%. These top 3 areas of interest give insight into EdTech Leaders' desires to be prepared to

address both sides of edtech reality—the need to minimize risks to the current system while optimizing for technological innovations in a time of rapid technology change.

Staffing

EdTech Leaders cite the inability to hire skilled staff as a top challenge, ranked second behind budget constraints. Outsourcing is a strategy that helps address staffing issues. The most common function outsourced by districts (57%) is cybersecurity monitoring, more than double last year's rate of 23%. Districts' best staffing levels are for installing apps, with only 16% understaffed for that function. This contrasts with the functions that have the worst staffing levels, with more than half of districts reporting being understaffed in the areas of providing instructional support around classroom use, providing remote support to students and families, and integrating technology into the classroom. Access to apps without equal access to support for their use raises efficacy questions.

Diversity

EdTech teams, like the ranks of their Leaders, need more diversity. And 64% of districts report taking measures to increase team diversity, with a quarter actively recruiting. However, only a third (34%) of districts report adding underrepresented populations to their technology department team in the last two years. Of those who did hire people from underrepresented populations, Black or African and Hispanic or Latino populations were hired most often and in equal measure, each at 19%. Asian populations had the next highest employment rate with 9%. Males comprise 62% of those in EdTech leadership positions, about the same percentage as in prior years, where the male/female ratio has roughly been 60/40.

Technology Priorities and Challenges

The most noticeable result from a comparison of technology priorities is cybersecurity's consistent positioning as number one. The closely related issue of data privacy and security is now the second-highest priority, moving up from number five in 2022. Determining AI strategy breaks into the top five on its debut in the survey's priority list, highlighting the impact of this new technology and the need for direction that it presents for districts. Also of note is the steady decline in priority of broadband and network capacity. It was ranked third in 2022, and drops to number eight in 2023.

Three-Year Comparison of Top Technology Priorities

Priorities	2024 Rank	2023 Rank	2022 Rank
Cybersecurity	# 1	# 1	# 1
Data Privacy & Security	# 2	# 3	#5
Network Infrastructure	# 3	# 2	# 2
Determining AI Strategy	# 4	*	*
IT Crisis Preparedness	# 5	# 4	#6
Cost-Effective / Smart Budgeting	# 6	# 6-tie	#4
Parent School Communications	# 7	# 5	#10
Broadband & Network Capacity	# 8	# 6-tie	# 3

There is also consistent positioning at the number-one slot for challenges to technology implementation—budget constraints and lack of resources. Likely tied to budget issues is the inability for EdTech Leaders to hire skilled staff, also ranked consistently at number two. Tied with the hiring issue is the problem of district silos, reappearing in the top three list after dropping off in 2022.

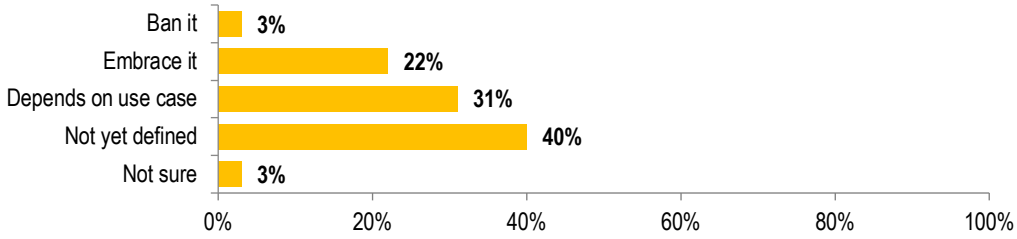
Three-Year Comparison of Top Challenges to Technology Implementation

2023	2024 Rank	2023 Rank	2022 Rank
Budget constraints & lack of resources	# 1	# 1	# 1
Inability to hire skilled staff	# 2-tied	# 2	# 2-tied
Existence of silos in the district which make it difficult to work together on technology planning	# 2-tied	# 4	# 4
Relevant training & PD unavailable	# 4	# 3	# 2-tied

Artificial Intelligence

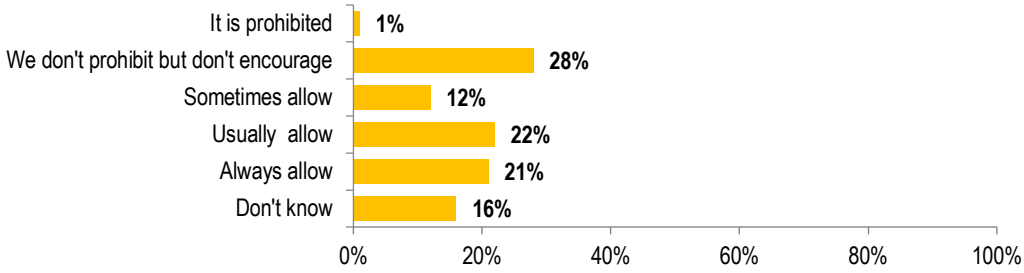
This year's survey had a new section of questions addressing AI. Generative AI has tremendous potential for both teachers and students, but it is not without risks. As Gen AI evolves, likely so will a district's approach to its use. However, 40% of districts do not currently have a defined approach. About a third (31%) define their approach based on the use case, 22% embrace generative AI, and just 3% ban it. Another 3% aren't sure about their district's approach.

Generative AI Usage



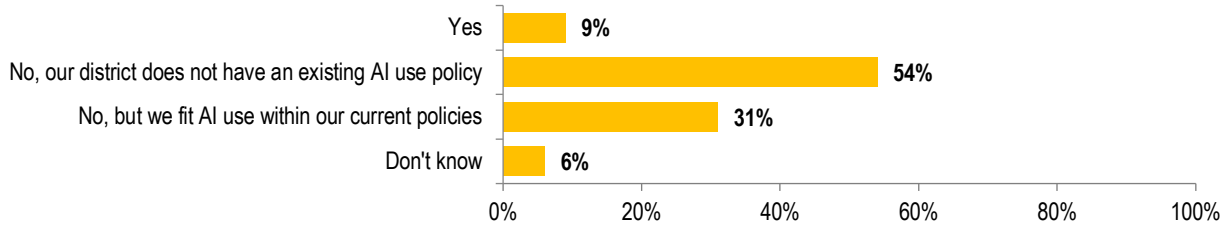
When asked about teachers' use of generative AI to increase productivity for tasks like preparing assessments and developing lesson plans, the category with the most responses (28%) was that districts don't prohibit but don't encourage. The next most common response, with 22%, was districts usually allow, followed by 21% that always allow, and 12% that sometimes allow. Only 1% prohibit and 16% didn't know the district's policy.

Use of Generative AI by Teachers



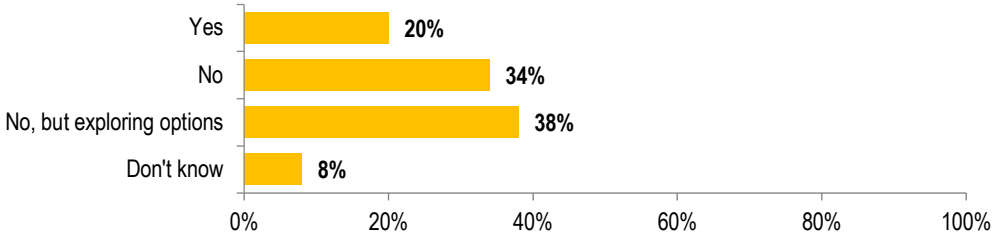
The majority of districts (54%) do not have an existing AI use policy. Almost third (31%) report defining allowable AI use within their current policies. Only 9% have updated their acceptable use policy regarding the use of AI tools and 6% don't know about the status of their district's policy. For more information on possible Gen AI policy and guidance, visit Teach AI.

Updated Acceptable Use Policy to Address AI Tools



A fifth (20%) of districts use tools designed to detect AI-generated answers in student work. Almost twice that percentage (38%) are exploring their options. A third (34%) are not using these tools and 8% don't know.

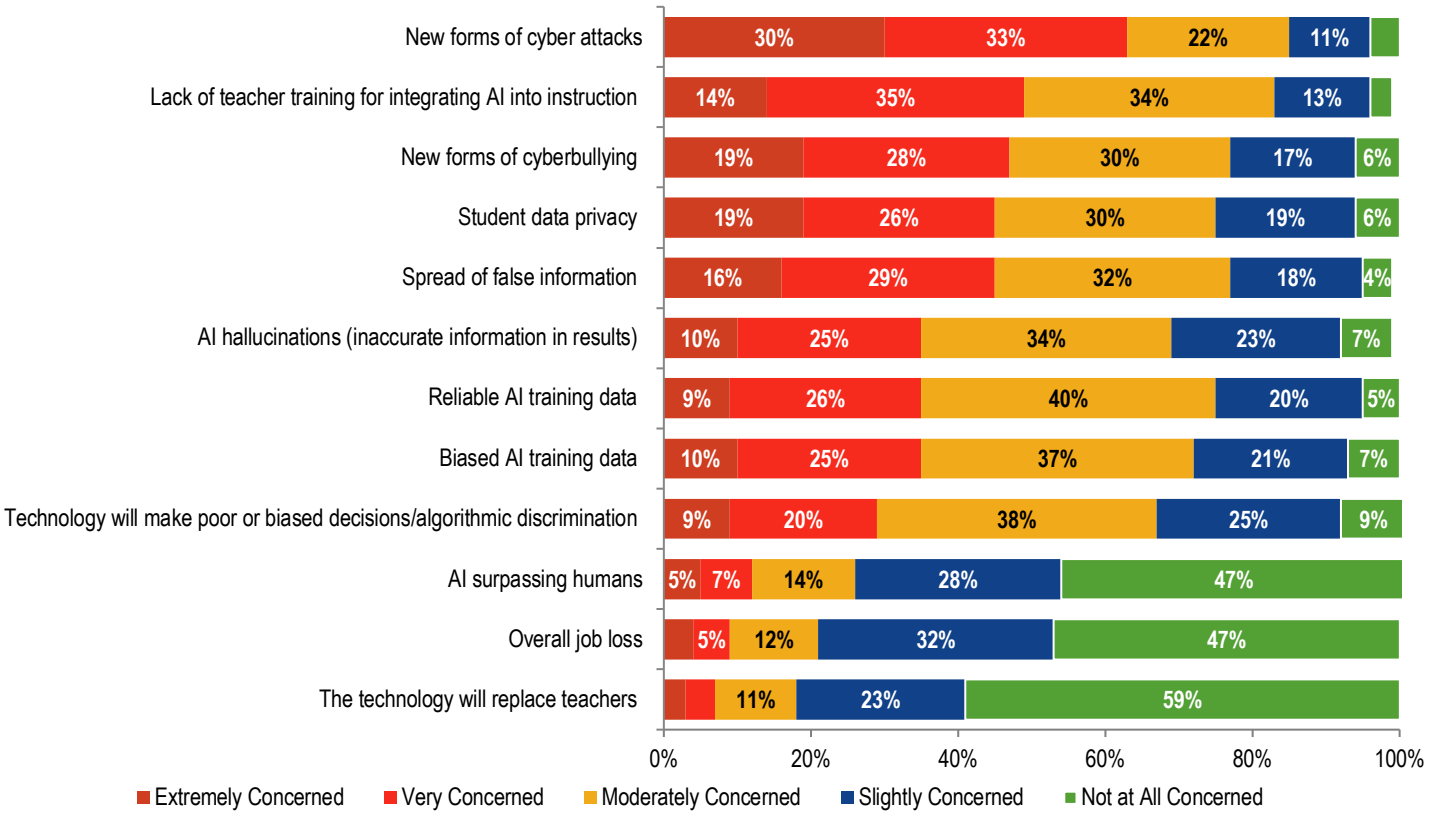
Use of Tools to Detect AI-Generated Answers in Student Work



The biggest concern EdTech Leaders have about AI in education is that it will enable new forms of cyberattacks. Sixty-three percent (63%) of respondents are extremely or very concerned about cyberattacks—AI is increasingly leveraged across all sectors, including cyber crime. Almost half (49%) are concerned about the lack of teacher training for integrating AI into instruction. This concern is well founded, as providing instructional support around classroom use of technology is consistently the worst-staffed IT function. New forms of cyberbullying (47%), the spread of false information (45%), and

threats to student data privacy (45%) round out the top five concerns. At the other end of the spectrum, the majority (59%) of EdTech Leaders are not at all concerned that AI technology will replace teachers. The other areas of least concern are overall job loss and AI surpassing humans, each with 47% of EdTech Leaders responding they are not at all concerned.

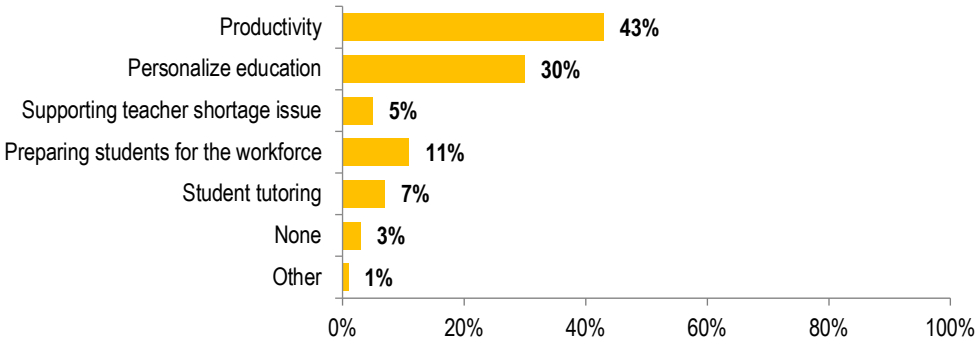
Degree of Concern Regarding the Use of AI in School Districts



Productivity is the area with the greatest potential for positive impact in education, according to 43% of respondents. Personalized education follows with 30%. Expectations for positive impact in other areas are significantly less. Only 11% see AI potential for preparing students for the workforce, 7% for student tutoring, 5% to help with teacher shortages, and 1% for areas not listed in the survey. However, the overwhelming majority (97%) of EdTech

Leaders do see areas where AI has potential (only 3% said they did not see any potential). As AI matures, it is expected a better understanding of its potential in education will grow.

AI Potential for Positive Impact in Education



Cybersecurity

Over three years, the trend of increased implementation of cybersecurity best practices is clear. Since 2022, 12 of the 17 best practices show increases of 10% or more. The use of two-factor authentication had the most dramatic increase, with 72% of districts requiring it in 2024 compared to 40% in 2022. Not only is a "second method to verify your identity" recommended by CISA[2], it is also a common requirement for securing cyber insurance—so it is very likely that the adoption of this practice will only continue to expand. Implementing an incident response plan was the practice that had the next highest increase: more than half (53%) now have a plan compared to a third (34%) in 2022. Having a cybersecurity plan had a double-digit increase; 50% of districts now have them, compared to 37% in 2022. Training remains the most common strategy, with 77% conducting IT staff training and 73% end-user training. The

2 https://www.cisa.gov/MFA

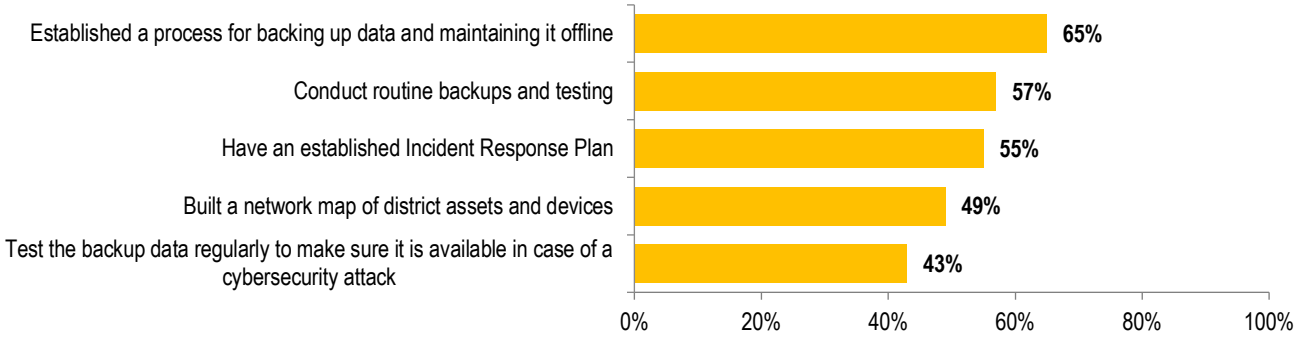
practice of establishing a cybersecurity team was added to this year's survey with one quarter (25%) indicating they have put one in place.

3-year Comparison of Cybersecurity Practices

Practices to improve Cybersecurity	2024	2023	2022
▲ IT staff training	77%	76%	65%
▲ End-user training	73%	74%	63%
▲ Requiring two-factor authentication for district accounts	72%	61%	40%
▲ Backing up all information and storing it off site in case of an attack	65%	65%	55%
▲ Encouraging staff to upgrade passwords	65%	64%	54%
▲ Purchasing specific cybersecurity products and services	58%	58%	47%
▲ Real-time monitoring for network intrusions	55%	46%	42%
▲ Implementing an incident response plan	53%	41%	34%
▲ Implementing a cybersecurity plan	50%	42%	37%
▲ Increasing use of encryption for data in transit	39%	38%	32%
▲ Having cybersecurity practices audited by an outside group	31%	30%	22%
▲ Adding security safeguards to vendor negotiations	30%	28%	26%
▲ Increasing use of encryption for data at rest	29%	25%	19%
Establishing a Cybersecurity Team	25%	*	*
▲ Conducting an incident response tabletop training exercise	21%	14%	8%
▲ Using more complex encryption	19%	20%	15%
▲ Creating a line item in school district budget for cybersecurity	18%	12%	10%
▼ My district has not undertaken steps to improve cybersecurity	1%	2%	3%
■ Other	2%	2%	2%

Of districts taking steps towards building a district incident response plan, the majority (65%) have established a process for backing-up data and maintaining it offline. A smaller majority (57%) conduct routine backups and testing. Almost half (49%) have built a network map of district assets and devices, and 43% test their backup data regularly to ensure its availability in case of a cyberattack.

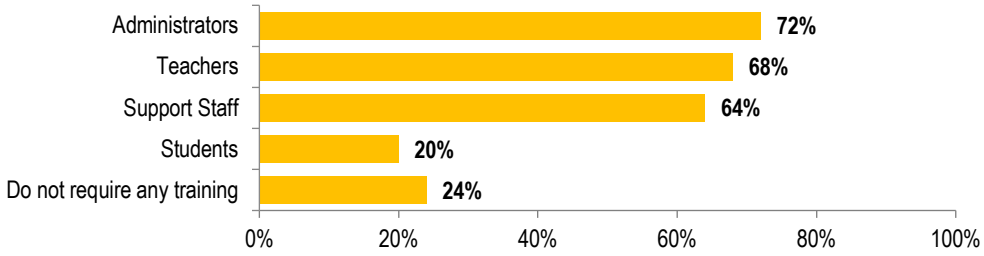
District Cybersecurity Incident Response Strategies



As 74% of all breaches are either through "Error, Privilege Misuse, Use of stolen credentials or Social Engineering,"[3] all users on a district's network need training in keeping systems secure. So, while the majority of districts require staff training to develop good cybersecurity practices, the goal should be 100%. Seventy-two percent (72%) of districts require administrator training, 68% require teacher training, and 64% require support staff training. Only 20% require student training.

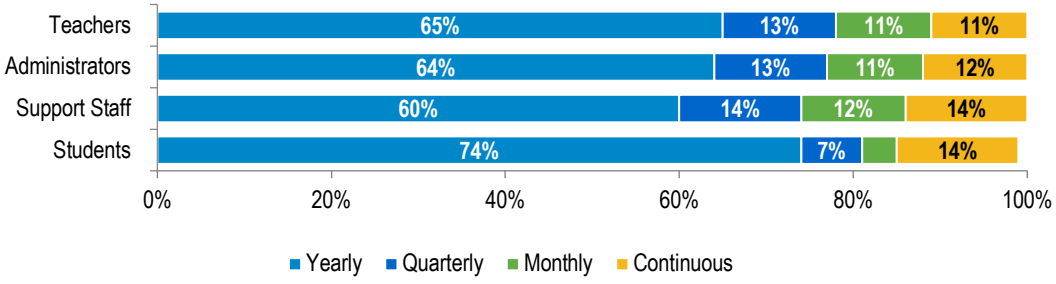
[3] https://www.verizon.com/business/resources/reports/dbir/

Mandatory Cybersecurity Training by Stakeholder Type



An annual requirement is the most predominant for districts requiring cybersecurity training: teachers at 65%, administrators 64%, and support staff 60%. Three-quarters (75%) of districts who conduct training for students do so annually. While this is progress, both ISACA and USENIX recommend training frequency every four to six months, because six months after initial training, employees "start to forget what they have learned."[4] Only 14% of districts use that recommended training schedule for support staff, 13% for teachers and administrators, and 7% for students.

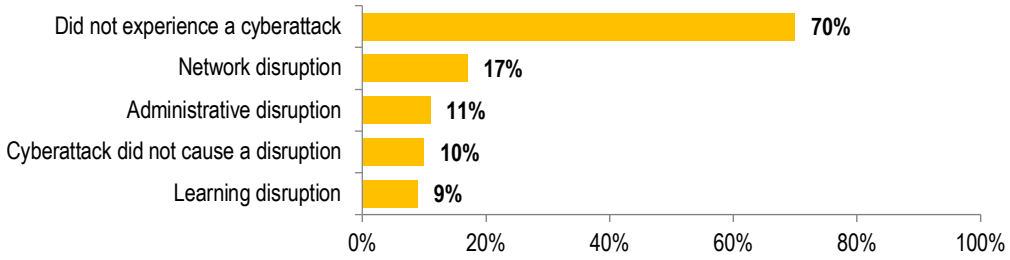
Cybersecurity Training Frequency by Stakeholder Type



[4] https://www.isaca.org/resources/isaca-journal/issues/2023/volume-2/considerations-for-developing-cybersecurity-awareness-training#:~:text=Frequency%20of%20Training,forget%20what%20they%20have%20learned.

One third (30%) of respondents report their district was the subject of a cyberattack and 9% experienced a learning distruption. For a fortunate 10%, the cyberattack did not cause a disruption. Seventeen percent (17%) experienced a network disruption, and 11% an administrative disruption.

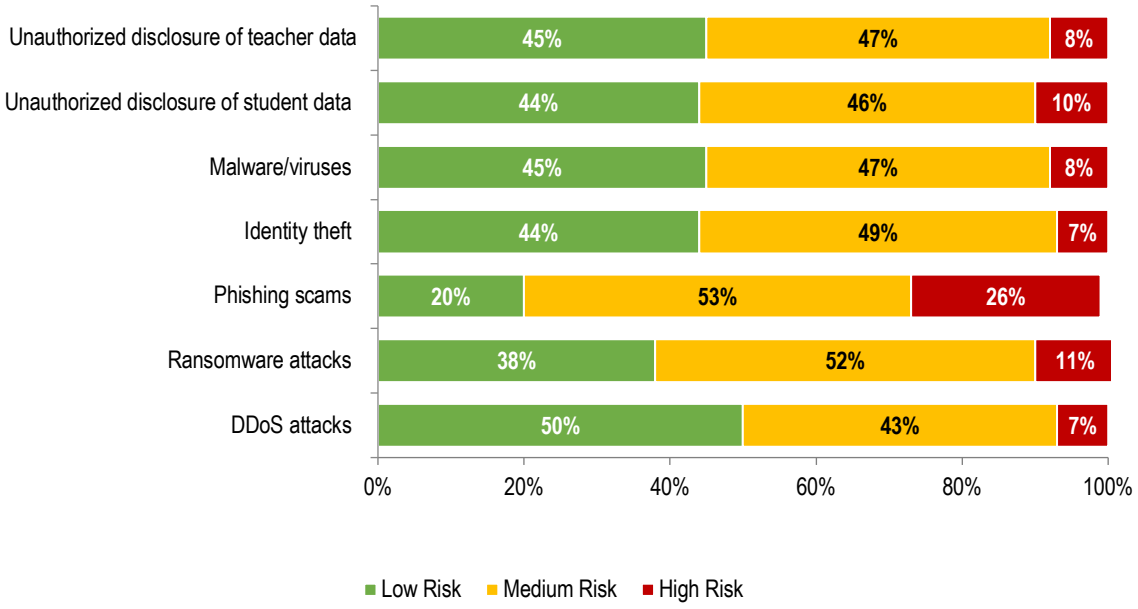
Disruptions Caused by Cyberattacks



Most respondents do not perceive their district to be at high risk for any of the cyber threats listed on the survey. Phishing scams are seen as the biggest threat, though only 26% rate them high risk and 20% give them a low-risk rating. Overall, the perceptions of low risk were surprisingly prevalent across all threat types, including ransomware attacks—which recent research shows is the top action type in security breaches.[5] Shockingly, thirty-eight percent (38%) of districts consider themselves at low risk for this type of attack. Identity theft and unauthorized disclosure of student data are considered low risk in equal measure at 44%. The risk of unauthorized disclosure of teacher data and malware/viruses are each considered low risk by 45%. Half (50%) of respondents also perceive their district to be at low risk for DDoS attacks.

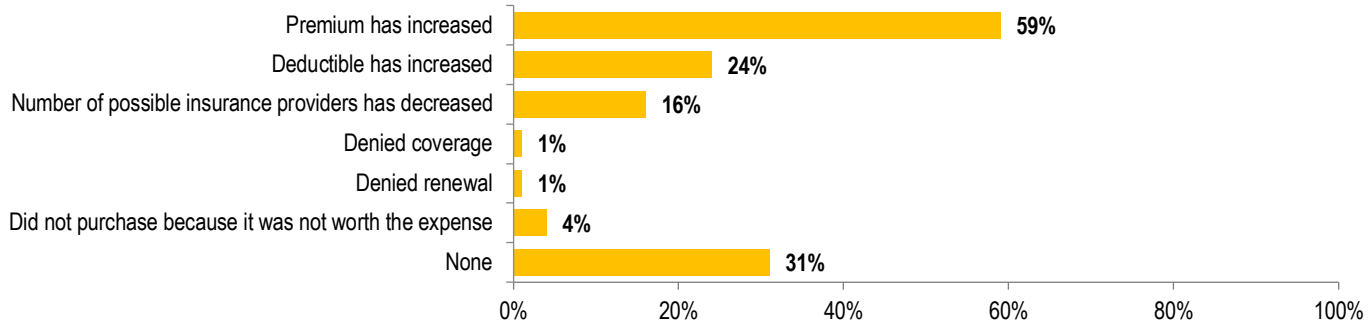
5 https://www.verizon.com/business/resources/reports/dbir/

Perceived network security risks



Because of cybersecurity incidents, 59% of districts are paying increased premium costs for their cyber insurance. Nearly a quarter (24%) have policies with an increased deductible. Only 4% of respondents report not purchasing because it was deemed not worth the expense. A very small percentage report being denied coverage (1%) and another 1% were denied renewal. Sixteen percent (16%) of districts have seen the number of possible insurers decrease. Contraction in the marketplace typically leads to higher costs for customers—so it is likely the trend of higher premium costs and higher deductibles will continue. And it is possible that those denied coverage or renewal may not be able find another insurance company willing to sell them a policy.

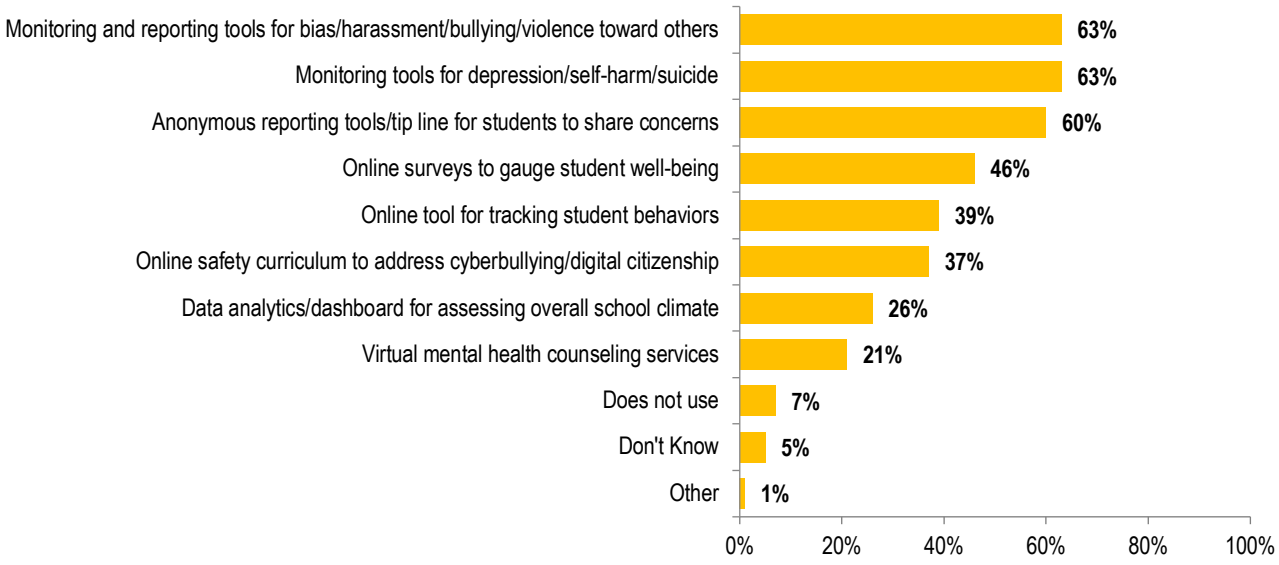
Changes to Cyber Insurance Policy



Student Well-Being

An overwhelming majority (93%) of districts are using technology solutions designed to address or improve student well-being. The majority (63%) have tools for monitoring and reporting tools for bias/harassment/bullying/violence toward others, and 63% use monitoring tools for depression/self-harm/suicide. Anonymous reporting tools for students to share concerns are available in 60% of districts, 46% gauge student well-being with online surveys, and 39% use online tools for tracking student behavior. While a curriculum to address cyberbullying/digital citizenship could reduce the behavior that adversely impacts student well-being, only 37% of districts report doing so. More than a quarter (26%) use data analytics for assessing overall school climate. The least-employed technology, at 21%, is virtual mental health counseling services. Hopefully, a much higher percentage of districts are able to provide in-person mental health counseling.

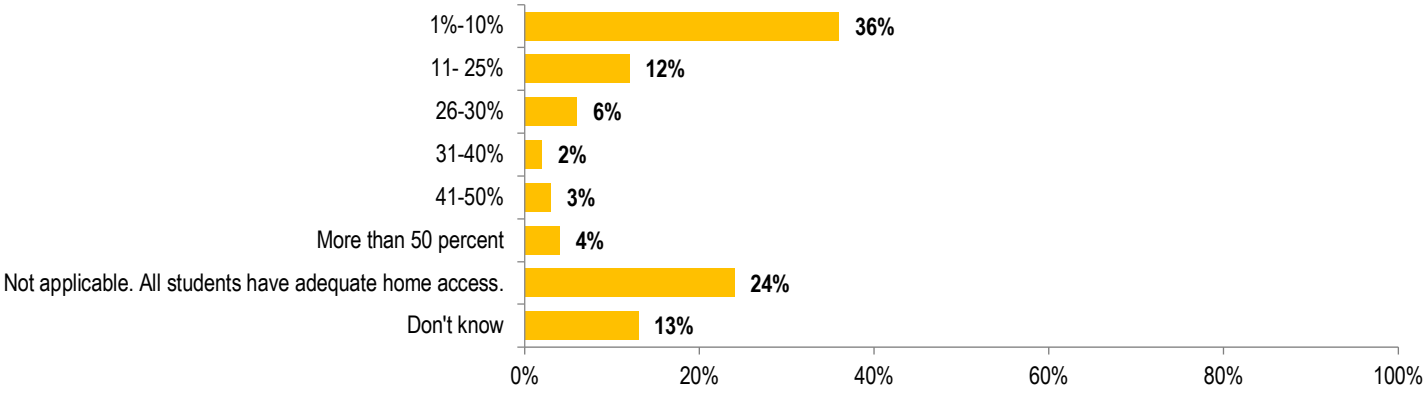
Technology Solutions Designed to Address Student Well-Being



Digital Equity

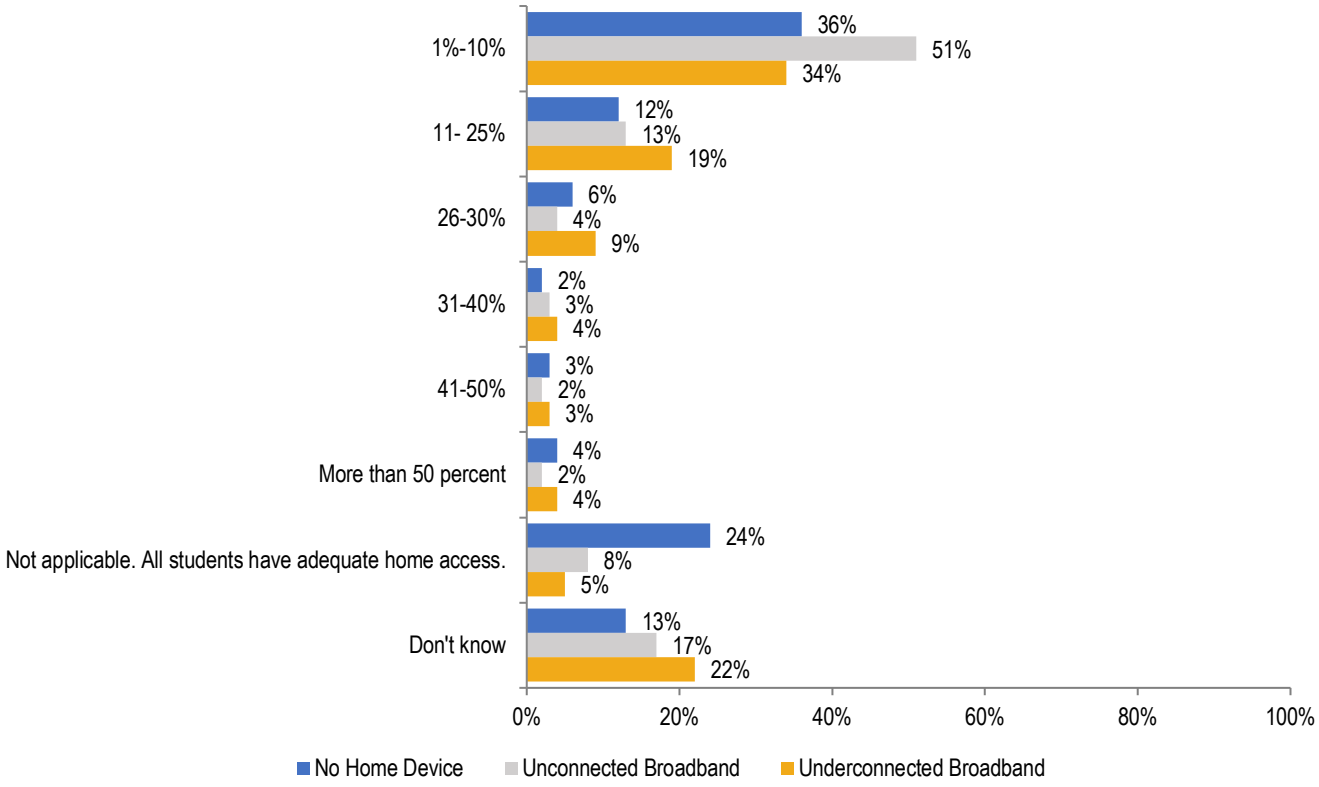
Only 24% of districts report all their students have access to devices at home. However, the majority of respondents (59%) work in districts where 50% or fewer of students lack devices—including 36% in districts where 10% or less of students don't have access to devices. Only 4% of respondents report that more than half of their students do not have access to devices at home, and 13% do not know.

Percentage of Students without Access to Devices at Home



Though nearly a quarter (24%) of respondents work in districts where all their students have access to devices at home, only 8% report all their students have home broadband, and fewer (5%) report that the home broadband is sufficient to deliver standard video conferencing. Thirty-six percent (36%) of districts report that students without devices account for a relatively small percentage of their student population (10% or less), and 34% report that a tenth or less of their students have insufficient broadband (are underconnected). Fifty-one percent (51%) districts report that 10% or less of their students don't have home broadband. While "10% or less" is comparatively small, the percenages represent thousands of students without adequate home access.

Percentage of Students Without Adequate Home Access



Though “students living in areas with above-average socioeconomic status do not automatically have access to adequate home internet,”[6] the lack of home connectivity disproportionally impacts learners in low-income families. Unfortunately, a growing percentage of districts no longer provide services to address student home broadband access—31% this year, compared to 19% just two years ago. Less than half (49%) provide district-owned hot spots for students, reflecting a steady downward trend from 67% in 2022. Less than half of districts providing fee/subsidized home internet access for low-income families in 2022 still do so in 2024, a decrease from 19% to 7%. Those providing Wi-Fi on school buses decreased from 14% to 9% over the same time span. Two support categories have remained relatively stable—no changes year-over-year and shifting only 2% since 2022—but they are among the least-employed strategies: Providing free/subsidized district-sponsored wireless access to the community has stayed within 12-10%, and partnering with a library to provide loaner hotspots in the 8-10% range. The only strategies showing a trend in increases (albeit modest) were promoting federal broadband benefit programs for low-income families, from 33% in 2002 to 36% this year, and promoting/participating in provider-sponsored services up from 23% to 27%. It is noticeable that the two strategies that don’t require allocation of district funds are the only two that are not decreasing. With ESSER funding ending soon, funds drying up for the Affordable Connectivity Program, and districts allocating more of their limited budgets to cybersecurity, financial support for off-campus broadband strategies is likely to continue decreasing. Overall, these trend results suggest low-income students increasingly will need to rely on federal programs and services of other providers, rather than their district.

3-year Comparison of Strategies Employed to Increase Off-Campus Broadband Access

6 https://www.cosn.org/wp-content/uploads/2023/07/Home-Connectivity-Study-Report-5.5.21.pdf

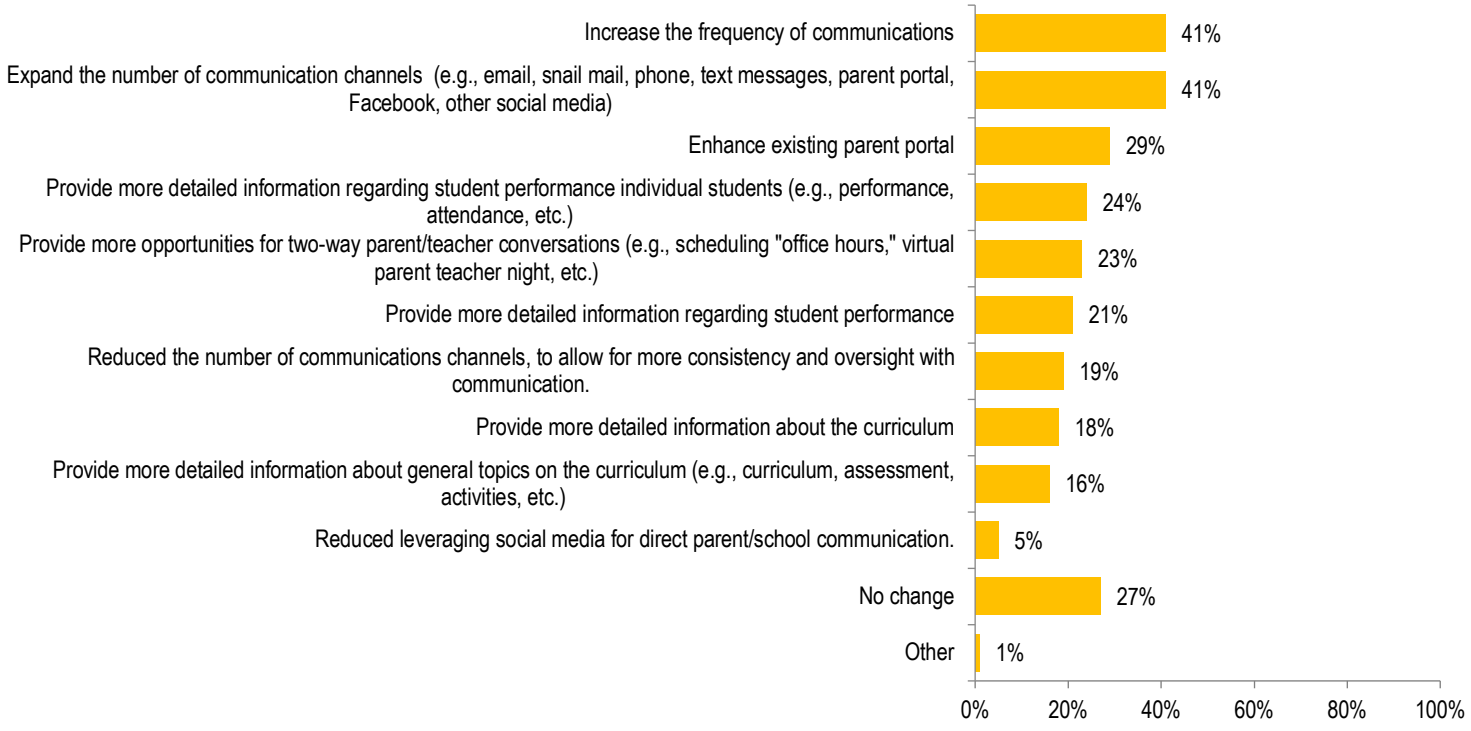
Off-campus strategies for increasing broadband access	2024	2023	2022
Provide district-owned hot spots for students ▼	49%	58%	67%
Promote federal broadband benefit programs for ▲	36%	35%	33%
Do not provide any off-campus services ▲	31%	26%	19%
Promote or participate in provider-sponsored services ▲	27%	25%	23%
Provide free/subsidized home Internet access for ▼	7%	15%	19%
Provide Wi-Fi on school buses ▼	9%	13%	14%
Provide free/subsidized district sponsored wireless ■	10%	10%	12%
Partner with library providing loaner hotspots ■	8%	8%	10%
Other ■	4%	4%	8%

** This answer option was not included on the 2021 survey.*

Parental Engagement

Parental engagement is recognized as an important factor for student achievement and can contribute to "whole child" understanding of students. Over the past two years, 73% of districts made changes to their parental engagement practices. At the equal rate of 41%, districts have both increased the frequency of communications and expanded the number of communication channels they use. Twenty-nine percent (29%) of districts enhanced their existing parent portal; nearly a quarter (24%) provide more detailed information regarding student performance; 23% provide more opportunities for two-way parent/teacher conversations; and 21% provide more detailed information regarding student performance. The less-popular changes—those employed by less than a fifth of districts—are reducing the number of communications (19%), providing more detailed information about the curriculum (18%), providing more detailed information about general topics on the curriculum (16%), reduced leveraging of social media for direct parent/school communication (5%), and 1% making changes not listed on the survey.

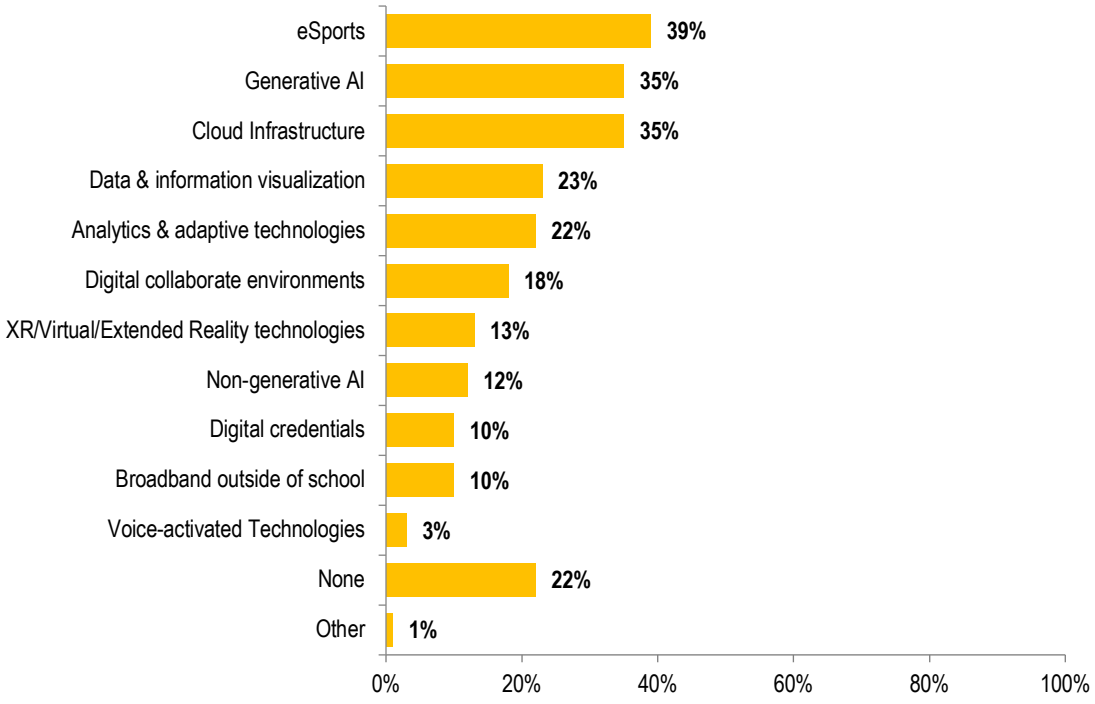
District Changes to Parental Engagement Over the Past 2 Years



Other Initiatives

The vast majority (88%) of districts are engaged in some type of EdTech initiative. eSports was the initiative that is most commonly offered, at 39%. However, generative AI at 35% was the second most popular initiative and new to the list this year. As the understanding for the potential of Gen AI grows and language models grow and become more diverse, this is likely a future top initiative. Cloud infrastructure, also at 35%, is another initiative that will continue to grow, as in general our society has become increasingly cloud-based. Less than a quarter of respondents cited data and information visualization (23%) or analytics and adaptive technologies (22%) as their district's initiatives—yet the 2024 Driving K-12 Innovation report identified Analytics & Adaptive Technologies as a top Tech Enabler. Digital collaborative environments are being established by 18%, 13% are exploring XR/virtual/extended reality technologies, and 12% have a non-generative AI initiative. Only 10% of districts have initiatives for digital credentials or off-campus broadband. One percent (1%) are engaged in initiatives not cited on the survey.

District Initiatives



EdTech Leader Profiles

The female/male ratio of EdTech Leadership has been consistent since the 2016 survey, when CoSN first asked respondents to indicate if they were male or female. The majority (62%) of EdTech Leaders are male. Women comprise 37%[7], and 1% of respondents preferred not to answer the question.

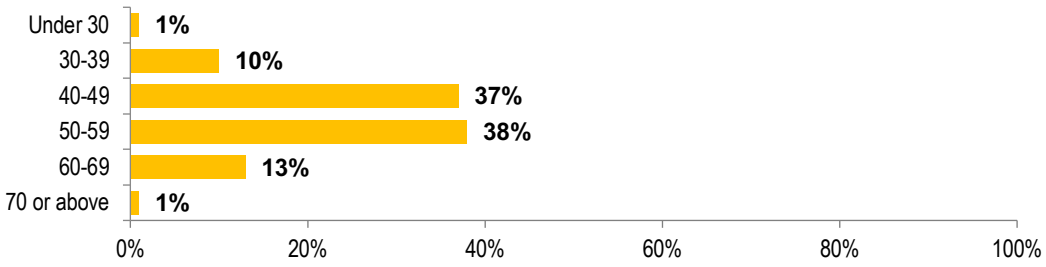
Comparison of Female/Male Ratio of EdTech Leadership

2024	EdTech Leadership	2016
37%	Female	36%
62%	Male	64%
1%	Prefer Not to Answer	*
0%	Prefer to Self-Identify	*

** This answer option was not included on the 2016 survey.*

Not surprisingly, the majority of EdTech Leaders are mid-career, with respondents in their 40s and 50s comprising 75%. Forty-year-olds account for 37%, with virtually the same percentage (38%) in their 50s. Those closer to retirement (age 60 and above) account for 14%, including the 1% who are 70 and above. At the other end of the spectrum, the percentages are similar. Only 1% of EdTech Leaders are under 30, with 10% in the 30-39 age bracket.

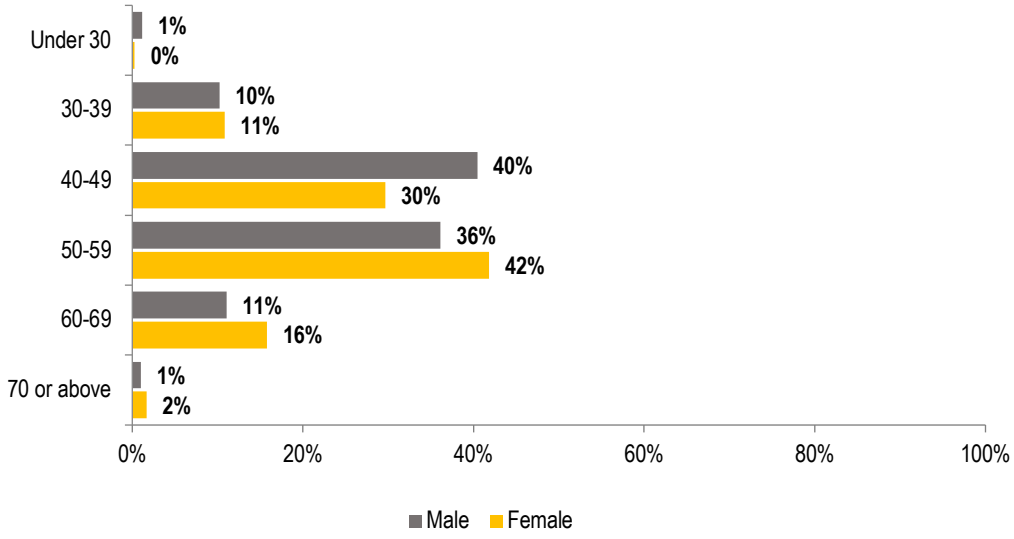
EdTech Leadership Segmented by Age



7 Note: In the public sector, 20% of companies report having a female CTO, according to the research conducted by AnitaB.org, an organization focus on increasing diversity in tech fields https://anitab.org/wp-content/uploads/2023/09/TCReport2023_Final_Web.pdf

A comparison of the ages of male and female EdTech Leaders reveals an apparent age gap. Women who hold the position tend to be older than their male counterparts. Sixty percent (60%) of female EdTech Leaders are age 50 or above, while only 48% of males fall into this age group. The most populous age group for men is in their forties, at 40%, while for women it is their fifties at 42%.

Age Segmented by Male/Female



Despite common awareness of the need to increase diversity, the vast majority of EdTech Leadership remains white. Over the past nine years there has only been a statistically insignificant shift—from 88% white in 2015 to 87% this year.

Comparison of Racial Make-up of EdTech Leadership

2024	EdTech Leadership	2015
87%	White, Caucasian, or European	88%

Hispanic/Latino/Latina/Latinx account for the next-largest category of respondents at 4%. Those identifying as Black, African American, or Sub-Saharan African account for 3%. The remaining three categories—American Indian or Alaska Native, Asian, and Multiracial/Multiple races—each account for 2% of respondents. Three percent (3%) chose not to answer the question.

EdTech Leadership by Race & Ethnicity

Race & Ethnicity	Percentage
White, Caucasian, or European	87%
Hispanic/Latino/Latina/Latinx	4%
Black, African American, or Sub-Saharan African	3%
Asian (East, Central, South)	2%
American Indian or Alaska Native	2%
Multiracial/Multiple races	1%
Other	1%
Prefer not to answer	3%

The sum may exceed 100% since participants could select more than one answer.

It is not surprising that when race and ethnicity are segmented by metro status, cities tend to have the greatest diversity and rural districts the least. However, there was one population category where this was not the case. None of the respondents from cities identified as American Indian or Alaska Native.

EdTech Leadership Racial Make-up Segmented by Metro Status

Racial Make-up	Rural	Town	Suburb	City
White, Caucasian, or European	91%	87%	87%	78%
Hispanic/Latino/Latina/Latinx	3%	4%	4%	8%
Black, African American, or Sub-Saharan African	2%	3%	4%	6%
Asian (East, Central, South)	1%	1%	2%	7%
American Indian or Alaska Native	2%	3%	1%	0%
Multiracial/Multiple races	0%	1%	1%	3%
Other	1%	0%	1%	1%
Prefer not to answer	3%	6%	1%	5%

The sum may exceed 100% since participants could select more than one answer

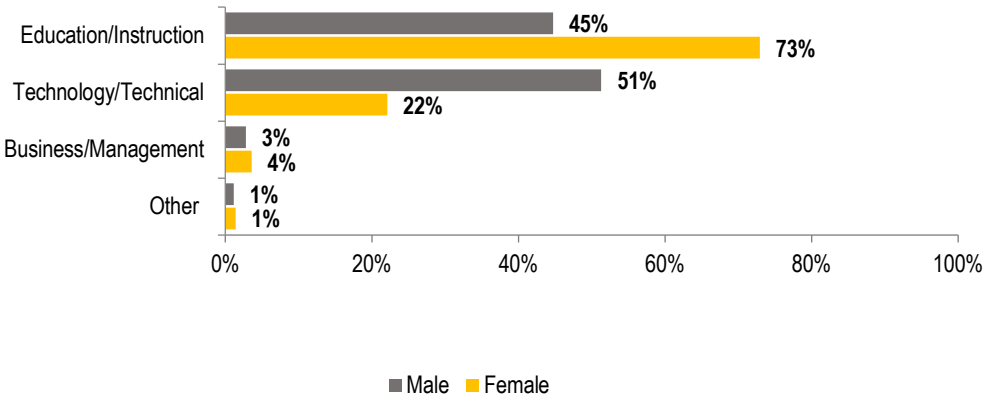
There were also no significant shifts in in the makeup of EdTech Leaders' backgrounds in the year-over-year results. Professional backgrounds in education/instruction typifies the majority (55%), mirroring the results of the prior year. EdTech Leaders bringing a technology/technical background to their roles account for 41%—a slight 1% decrease from 2023. Respondents with a business/management background slightly increased from 2% to 3% over the same year. Other backgrounds account for 1% of the balance, in both years.

Comparison of EdTech Leadership by Professional Background

2024	Primary Professional Background	2023
55%	Education / Instruction	55%
41%	Technology / Technical	42%
3%	Business / Management	2%
1%	Other	1%

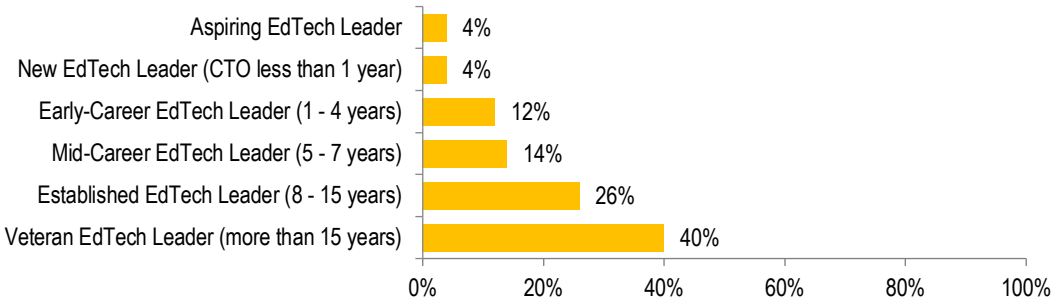
The majority (73%) of women EdTech Leaders come to their positions from an Education/Instruction background, while men tend to have a more even distribution between Education/Instruction (45%) and Technology (51%) pathways to leadership. The percentages of women and men entering EdTech Leadership positions from business/management backgrounds are about the same, 4% and 3% respectively.

Primary Professional Background Segmented by Male/Female



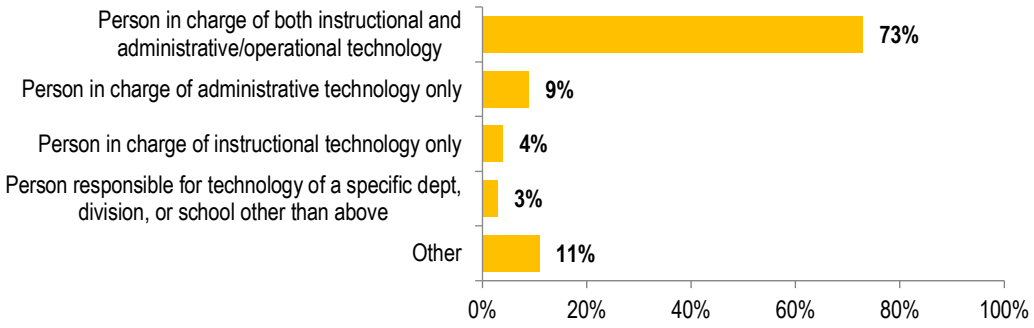
Two-thirds (66%) of respondents have significant experience in their EdTech Leadership roles, with 40% identifying as veteran leaders (more than 15 years of experience) and 26% with 8-15 years of experience. Mid-career EdTech Leaders (5-7years) account for 14%, followed by Early-career with 12%. EdTech Leaders with less than a year's experience and those aspiring to become EdTech Leaders each represented 4% of respondents.

Career Stages of EdTech Leaders



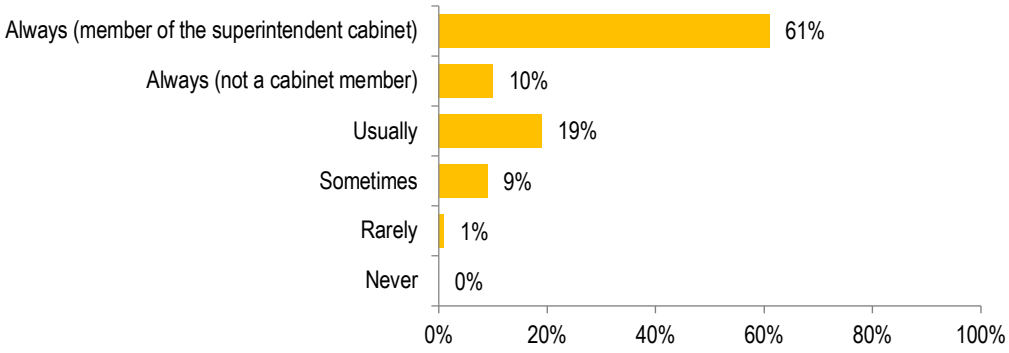
Nearly three-fourths (73%) of respondents oversee both instructional and administrative technology in their districts. This is a sign of healthy organizational structures, as a modernized K-12 infrastructure requires that the needs of both aspects of EdTech are understood and interoperate as necessary. Less than a tenth (9%) are responsible for administrative technology only, with 4% responsible for only instructional technology. Three percent (3%) report responsibilities that are not district-wide and 11% report responsibilities not outlined as a survey response options.

EdTech Leaders' Primary Job Responsiblities



Another indicator of good practices in districts is the large percentage (71%) of districts who include their EdTech Leader in all district-level decisions. EdTech Leaders who are members of their superintendent's cabinet account for 61% of those. As technology increasingly is infused into all aspects of K-12 operations, the "always" consulted percentage should also increase further. An additional 19% report they are usually consulted on district-level decisions, 9% are sometimes consulted, and 1% only rarely.

EdTech Leaders' Involvement on District-Level Decisions

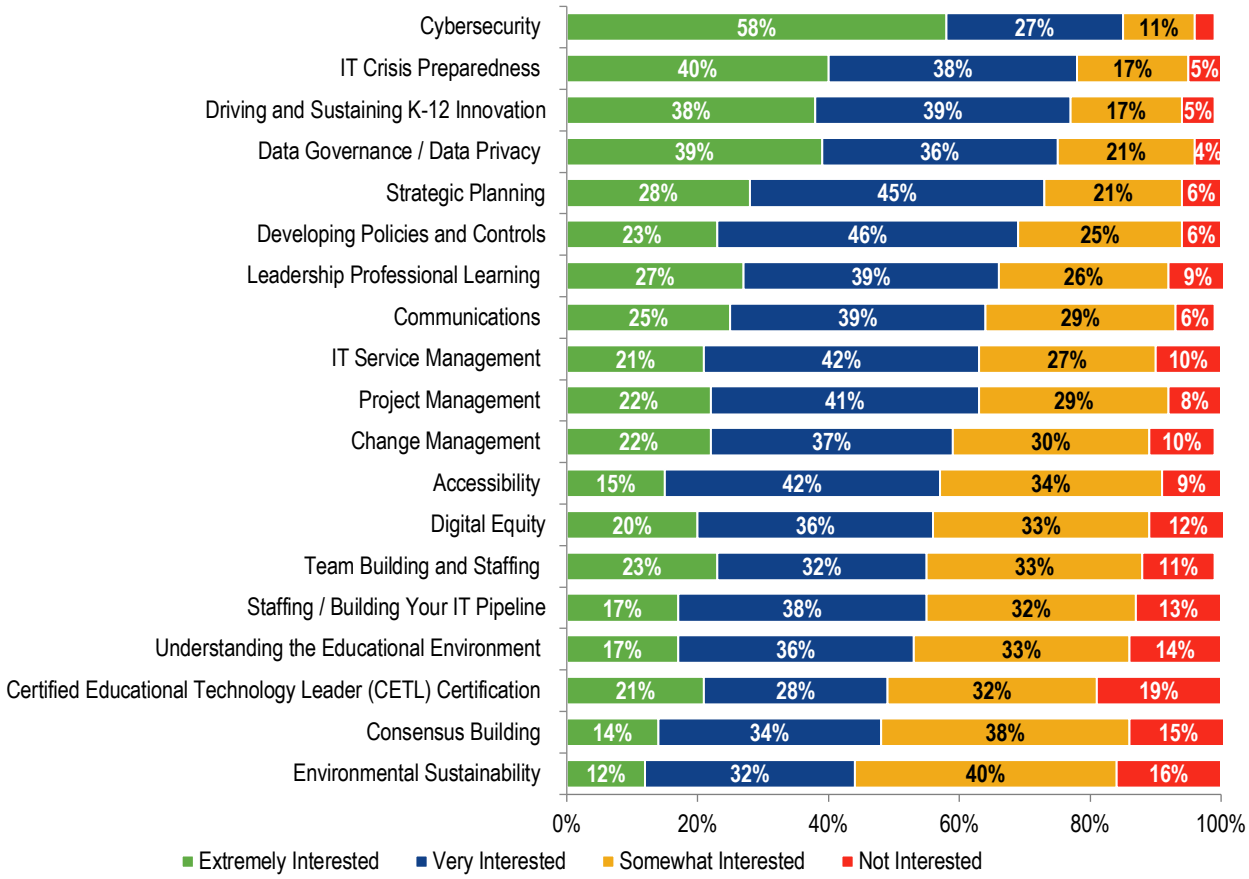


Professional Learning

Professional learning never stops for EdTech Leaders, regardless of years in the position. Emerging technologies and the demands of a modernized infrastructure—in which virtually all aspects involve the technology department—require ongoing professional learning. When asked about the learning opportunities they were interested in, cybersecurity was the top response, with 75% of respondents indicating they were extremely or very interested. This interest level will continue to be high if school systems continue to be cyberattack targets. The topic with the next-highest level of interest was IT Crisis Preparedness, with 78% indicating they were extremely or very interested. As natural and other disasters impact the availability of critical IT infrastructure, this level of interest for professional learning about crisis management planning aligns with need. Rounding out the top three areas of interest was Driving and Sustaining K-12 innovation, with 77% indicating they were extremely or very interested. These top three areas of interest give insight into EdTech Leaders' desire to be prepared to address both sides of edtech reality—the need to minimize risks to the current system while optimizing for technological innovations in a time of rapid technology change. Of the 19 professional learning opportunities listed, 16 received extremely interested or very interested ratings from most respondents. This highlights the extent of professional learning desired by EdTech Leaders. However, despite the high interest level in professional learning topics, there may not be the time to follow through on that interest. As one respondent lamented:

> *"Training time for staff seems be sucked up completely by other state priorities."*

Professional Learning Interest Areas



Staffing

Year over year there has not been improvement in the three IT functions that have the worst staffing levels. The biggest problem continues to be an IT department's inability to provide adequate instructional support around classroom use, with 56% of the 2024 survey respondents struggling in this area. Fifty-four (54%) are not sufficiently staffed to provide remote support to students and families, and more than half (51%) are lacking the staff levels needed to integrate technology into the classroom.

2-Year Comparison of IT Functions with the Worst Staffing Levels

IT Functions with the worst staffing levels	2024	2023
#1 Provide instructional support around classroom use	56%	56%
#2 Provide remote support to students and families	52%	54%
#3 Integrate technology into the classroom	51%	50%

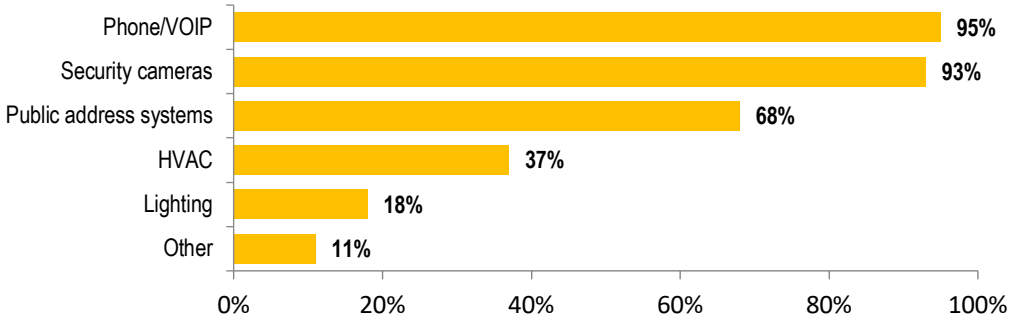
Looking at staffing rates for the other IT functions, a majority (more than 50%) of respondents report adequate staffing for 8 of the 11 IT functions on the survey. Installing Apps is the best-staffed IT function, with 84% indicating adequate staffing. At 79%, Maintaining Applications has the next highest rating for adequate staffing, followed by Meeting Department Objectives (76%), and Maintaining Network Systems (71%). Looking at the top and bottom slots on the staffing list, it is notable that the best staffing levels are for Installing Apps while the worst are for providing instructional support around classroom use. This raises the question about the levels of effective use of those apps that have been installed.

Staffing Levels by IT Function

IT Function	Understaffed	Adequate	Overstaffed
Provide instructional support around classroom use	56%	43%	1%
Provide remote support to students and families	52%	46%	2%
Integrate technology into the classroom	51%	48%	1%
Plan and implement new technology	41%	58%	1%
Support device cleansing protocols	37%	62%	1%
Effectively support the needs of the district/school	32%	67%	1%
Provide remote support to teachers and other educators/administrators	32%	67%	1%
Maintain network systems	28%	71%	1%
Meet department's yearly objectives	24%	76%	0%
Maintain applications	21%	79%	0%
Install applications	16%	84%	1%

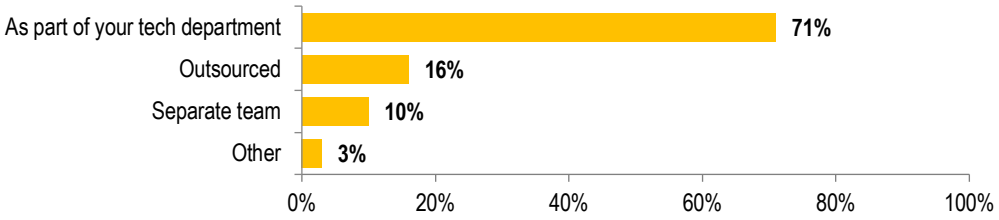
IT departments also provide support for district devices beyond computers and projectors. The overwhelming majority (95%) are responsible for the phone system, especially now that “phones” are increasingly VOIP. Security cameras are also part of their oversight at 93%. More than two-thirds (68%) are responsible for the public address system and more than a third (37%) for the HVAC. Respondents responsible for lighting account for 18%, with another 11% having other responsibilities not outlined on the survey.

Physical Devices Supported beyond Classroom Technology



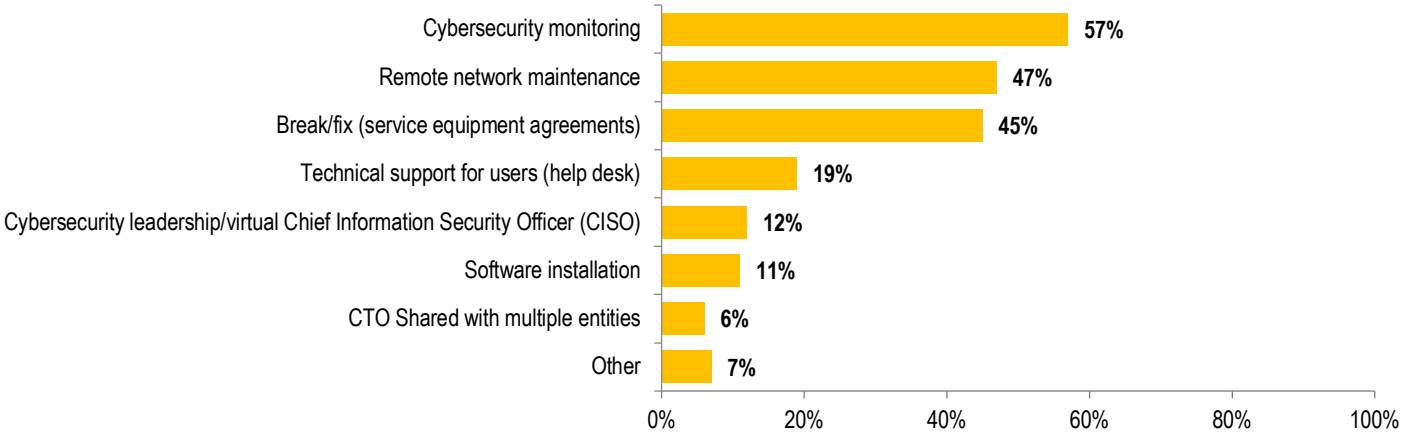
Managing physical security systems on the IT network is typically handled by districts’ tech departments, as indicated by 71% of respondents. Another 16% outsource and a tenth (10%) have a separate team that manages them. Three percent (3%) of respondents use “other” methods, likely a combination of strategies.

Management Strategies for Physical Security Systems



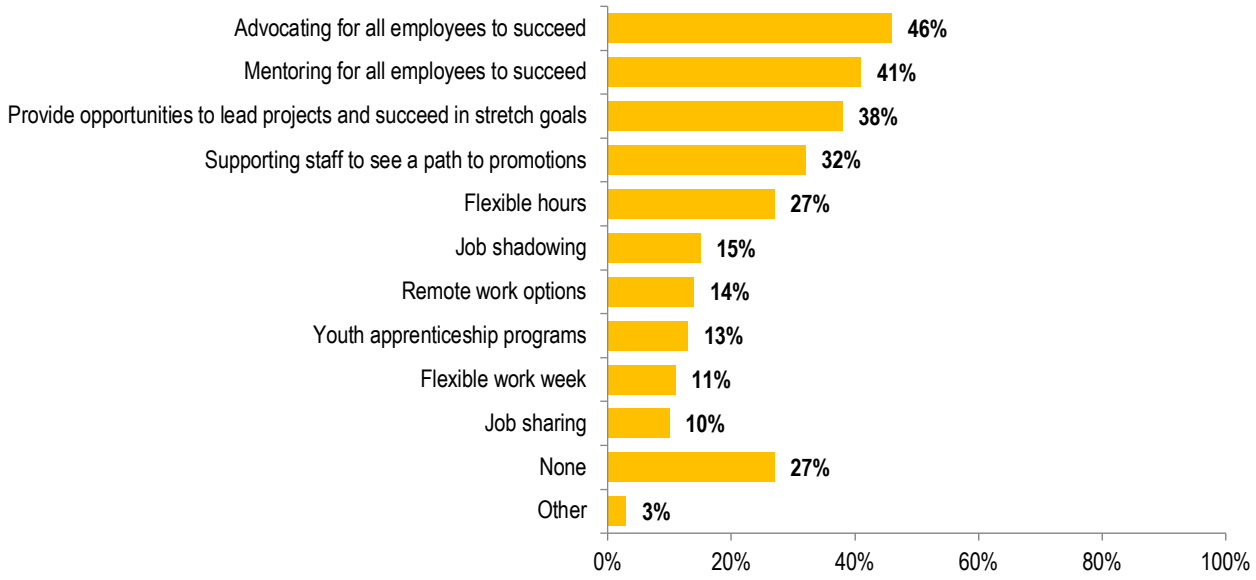
Outsourcing is a staffing solution that can help districts expand their capabilities and/or reduce costs for certain functions. Of the IT functions listed on the survey, three were the clear leaders for outsourcing. The majority (57%) of districts use outsourcing strategies for cybersecurity monitoring, more than double last year's rate of 23%. This dramatic increase suggests that districts see the need for the specific expertise and the most up-to-date technology that cybersecurity firms provide. Districts outsource remote network maintenance at 47% and break/fix (service equipment agreements) at 45%. Help desk has the next highest rate of outsourcing, but at a distant 19%. Twelve percent (12%) of districts have a virtual Chief Information Security Officer (CISO). Outsourcing the function of the CISO is a relatively new strategy that could grow in popularity. The need for the position is growing but the talent and funds needed to fill the position are not easy to come by. Rates of outsourcing for other functions listed on the survey are 11% for software installation, 6% for shared CTO, and 7% for other strategies.

Outsourcing Strategies for Key IT Functions



Districts are employing several strategies to retain and attract IT talent. The most popular are advocating for all employees to succeed (46%), mentoring for all employees to succeed (41%), and providing opportunities to lead projects (38%). Nearly a third (32%) are supporting staff to see a path to promotions and more than a quarter (27%) offer flexible working hours. The less popular methods are job sharing (15%), remote work (14%), youth apprenticeship programs (13%), flexible work week (11%), and job sharing (10%), with other strategies not listed on the survey accounting for 3%.

Strategies to Incentivize Recruitment and Retention of IT Staff



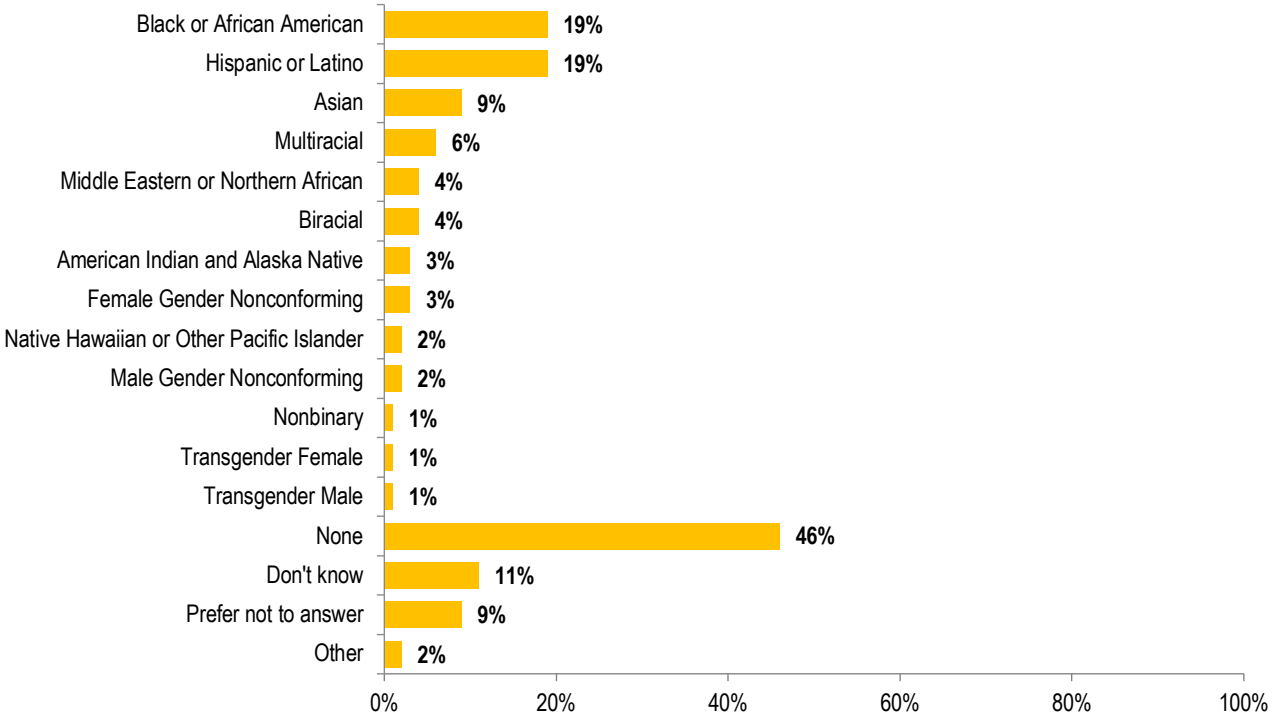
While questions about race, gender, and ethnicity of EdTech Leaders have been included in past surveys, a new question on the 2024 survey specifically addressed the diversity of their technology teams: “What measures do your districts take towards increasing diversity within technology teams?” As greater diversity has not happened organically, most districts (64%) are taking proactive steps to build teams that can provide insights from different perspectives and better reflect the makeup of the students they serve. However, only 15% of districts are capturing data on ethnic and gender composition—which means that most districts will not be able to share quantitative results of successful efforts to diversify their teams. Used by 25% of districts, active recruitment is the most common strategy. Another 22% try to engage current IT employees’ help in recruitment, and 20% look to engage

non-IT employees in the process. Additional strategies used are training in unconscious bias (14%), providing internships to underrepresented groups (8%), giving tours of the IT department (6%), “other” strategies not defined on the survey (4%), and incentives for referrals that would increase the diversity of the candiates (2%). While traditional referral programs perpetuate the status quo, referrals from historically underrepresented groups have the opposite impact and are used by several tech companies to increase diversity in their workforces.

Measures taken to increase Diversity within Technology Teams

When asked about recent hires (in the past two years), a third (34%) reported adding underrepresented populations to their technology teams. The plurality of respondents (46%) didn’t add any diversity in their hires, 11% didn’t know, and 9% preferred not to answer the question. Of those who did hire people from underrepresented populations, Black or African and Hispanic or Latino populations, each at 19%, were the populations hired most often. Asian employees were the next most-frequently hired at 9%, followed by Multiracial (6%). For each of the remaining 10 population categories listed on the survey, respondents reported hiring rates below 5%.

IT Department New Hires (past 2 years) from Underrepresented Populations Segmented by Race, Sex, and Ethnicity



The sum may exceed 100% since participants could select more than one answer

Segmenting the 46% of respondents that did not add underrepresented populations to their technology teams by metro status, most (60%) work in rural districts and the least (20%) in cities. The lack of diverse populations in rural districts likely accounts for the lack of diverse hires, with overall fewer hires being another contributing factor.

Districts That Did Not Hire from Underrepresented Populations Segmented by Metro Status

District Hires from Underrepresented Populations	Rural	Town	Suburb	City
None	60%	57%	36%	20%

Budget

The salaries of EdTech Leaders show year-over-year improvement. Respondents earning less than $70K account for 18% this year compared to 21% in 2023. The ranks of those in the next-lowest salary bracket ($70-99,999K) also shrank, at 25% this year from 28% the prior year. With 27%, $100-129,999 is the most popular salary bracket. The percentage of those earning at the higher end of the salary scale also increased, albeit modestly. EdTech Leaders earning $160-200K increased to 7% from 6%, and those with compensation over $200K comprised 2% this year compared to 1% the prior year.

Year-Over-Year Salary Comparison

2024	Salary Range	2023
18%	▼ Less than $70K	21%
25%	▼ $70 - 99,999K	28%
27%	▲ $100-129,999K	23%
12%	▲ $130-159,999K	11%
7%	▲ $160-200K	6%
2%	▲ $200K or more	1%
8%	Did not provide or do not have a top EdTech Leader	10%

Segmenting the salary data by metro status, a salary divide becomes evident. EdTech Leaders working in rural areas and towns are paid less than their counterparts in the suburbs and cities. Three-fourths (75%) of EdTech Leaders in rural districts and 60% in towns do not earn a six-figure salary compared to 24% in cities and 21% in suburbs. Suburban districts have the most (78%) earning $100,000 or more. At 28%, cities have the largest percentage of EdTech Leaders earning $160,000 more, including 7% who are paid more the $200,000.

EdTech Leader Salary by Metro Status

Annual Salary	Rural	Town	Suburb	City
Under $70K	38%	22%	3%	8%
$70K – 99,999K	37%	38%	18%	16%
$100K – 129,999K	19%	30%	40%	29%
$130K – 159,999K	5%	9%	22%	19%
$160K – 200K	2%	1%	12%	21%
More than $200K	0%	1%	4%	7%

While the majority (59%) of technology budgets account for 5% or less of a district's total budget, it is an improvement over the prior year's 63%. Overall this year's survey results suggest improvement in technology budgets, with gains being made in all the higher-budget ranges. Districts that allocate 8% or more to technology account for more than a quarter of respondents (26%) compared to 19% the prior year. Districts that budget 6-7% for technology represent 16%, down from 18% in 2023. As the scope of technology departments continues to expand, these budget allocations will need to continue expanding as well.

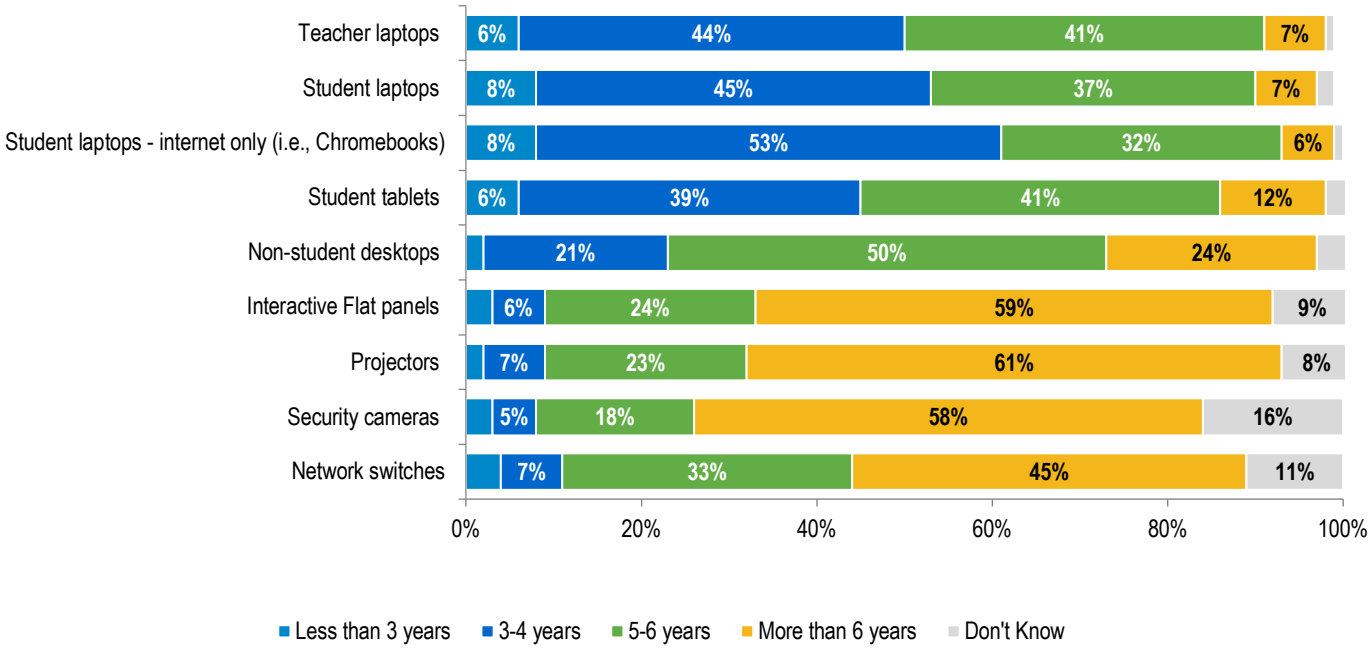
Year-Over-Year Technology Budget Comparison

Technology Budget as Part of Total District Budget	2024	2023
Less than 2%	18%	20%
2-5%	41%	43%
6-7%	16%	18%
8-11%	16%	12%
12-15%	7%	5%
More than 15%	3%	2%

** Technology budget was defined to include salaries and benefits, outside levy funding, and capital funds used for technology for the 2023-2024 Fiscal Year*

Budgeting refresh schedules vary in length for different device types. The majority of districts extend purchasing beyond six years for projectors (61%), interactive flat panels (59%), and security cameras (58%). Network switches are also on the longest cycle, with 45% of districts replacing them after more than six years. The device type with the shortest replacement cycle is internet-only student laptops, with 61% replacing them in less than five years, including 8% that replace in less than three years. A majority (53%) replace standard student laptops in less than five years, including 8% that replace in less than three years. Teacher laptops are also on a shorter replacement schedule, with half of districts (50%) replacing them in less than five years, including 6% that replace in less than three. Non-student desktops are replaced less frequently, with only 23% replacing them in less than five years.

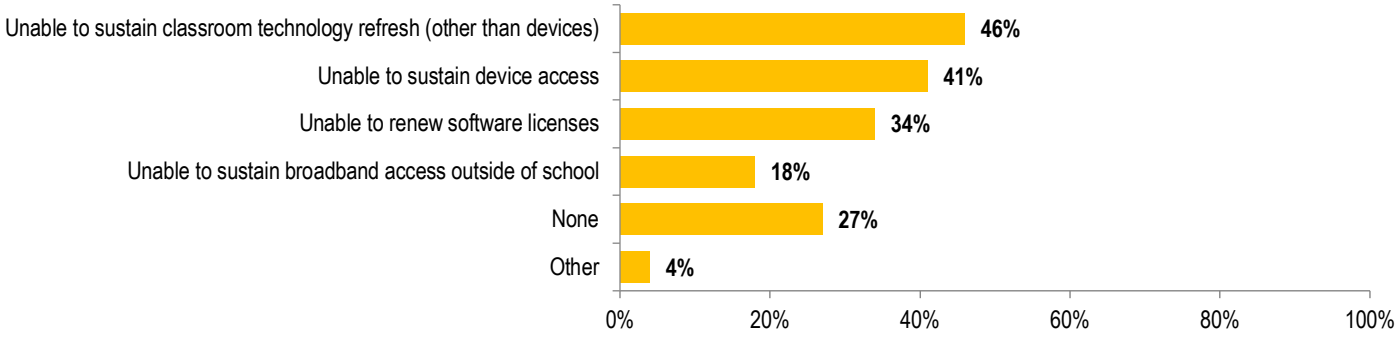
Refresh Cycle by Device Type



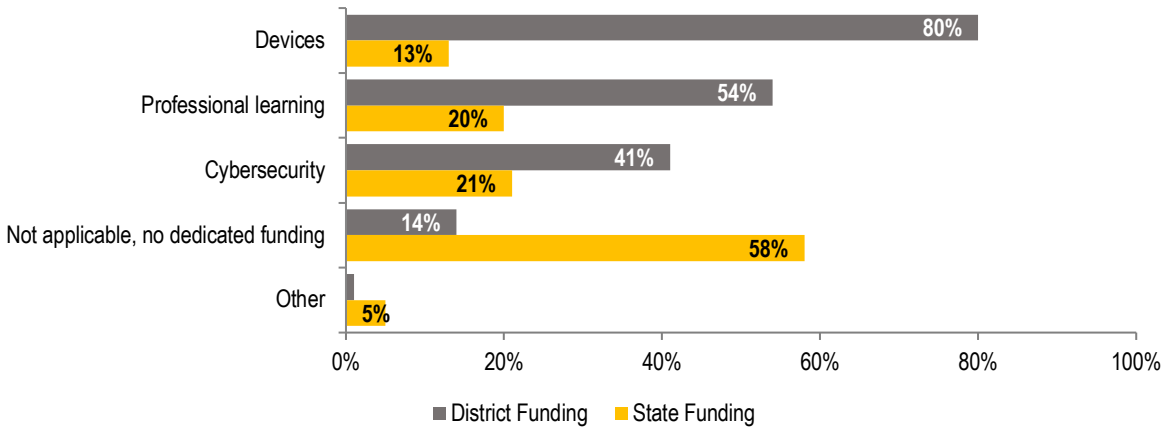
Forty-six percent (46%) of EdTech Leaders report concern about their ability to sustain classroom technology refreshes (other than devices) as federal emergency funding ends. Ability to sustain devices is also a concern, at 41%. A third (34%) are worried they will be unable to renew software licenses. Only

18% are concerned they will be unable to sustain broadband access outside of school. Off-campus broadband is less of a funding concern, not because funding sources are available but because most districts (as results from this year's survey show) have discontinued providing this support.

Technology Investments Concerns as Federal Emergency Funding Ends



The large majority (80%) of respondents receive dedicated, district-provided funds allocated for devices. More than half (54%) receive dedicated district funding for professional learning, and 41% for cybersecurity. Only 1% cited funding for items not on the survey, and 14% reported their district does not provide any dedicated technology funding. The majority (58%) of respondents reported their states do not provide any dedicated funding. Cybersecurity was the area most funded by states at 21%, followed by professional learning at 20%. Only 13% receive state money for devices, and 5% receive state funding for items not on the survey.



Procurement

Districts are making steady progress towards better governance of the use of free tools. Acceptance of clickwrap agreements without proper oversight can put districts' data and systems at risk. Review is required by 68% of districts, up from 56% in 2022. The best practice with the biggest gain is adoption of an "approved apps" list, used by a majority (54%) of districts compared to 39% in 2022. More districts now have a process for adding apps to the approved list at 48% in 2024, versus 35% in 2022. More than a third (35%) have authorized a person to approve free tools, compared to 28% two years ago. The percentage of districts that conduct school-level review of license renewals has stayed fairly consistent, between 20 and 22% over three years.

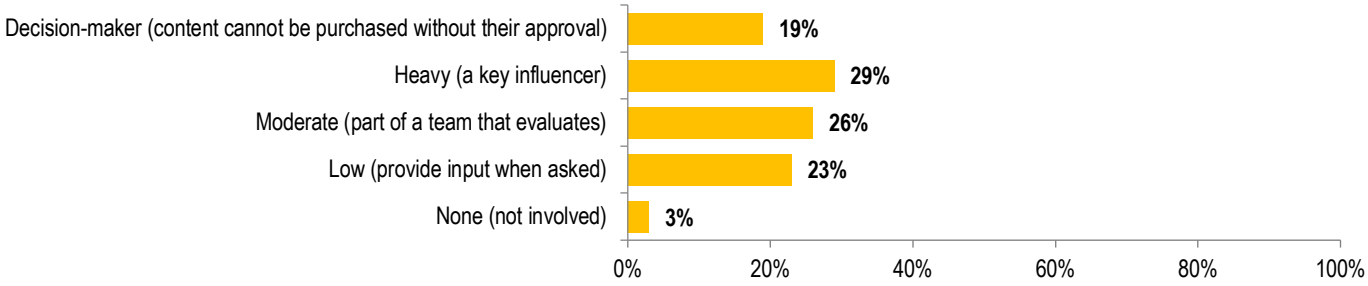
Process for Allowing the Use of Free Tools

Process	2024	2023	2022
Require review by IT	68%	60%	56%
Have a list of "approved" apps	54%	42%	39%
Have an established process for adding to "approved" list	48%	40%	35%
Have a designated person with authority to approve	35%	30%	28%
Review all license renewals at the school level	21%	22%	20%
Do not have a process	14%	20%	22%
Other	3%	2%	2%

Nearly half of districts (48%) rely heavily on their IT team when making decisions to purchase digital instructional materials, including 19% that will not purchase content without IT's approval. Another 26% include IT as part of an evaluation team. Unfortunately, 23% of respondents rated IT's level of involvement in procuring digital instructional materials as low, and 3% reported no IT input. Purchasing digital instructional materials without vetting

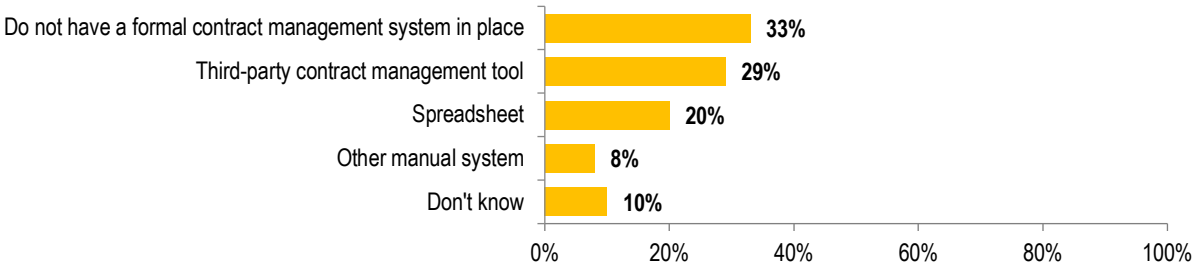
them though IT can lead to data privacy vulnerabilities, increased costs, and delays in system integration that impair the ability of students and teachers to use the materials.

Level of Involvement in Digital Instructional Materials Decisions



Districts are behind the curve in leveraging technology to help manage their technology. Only 29% use a third-party tool to manage their contracts. Nearly the same percentage (28%) track contracts manually, mostly using spreadsheets (20%). Alarmingly, a third (33%) report not having any formal contract management system in place. A tenth (10%) of respondents don't know what system their district is using.

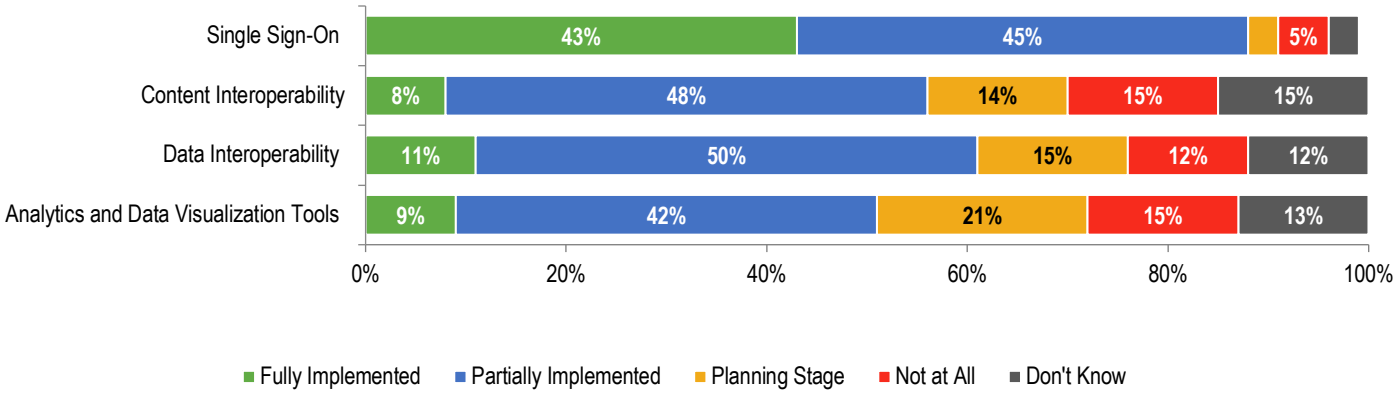
Contract Management (Including Software and Data Privacy Agreements)



Interoperability

Single sign-on (SSO) is the most-implemented interoperability initiative—88% of districts have at least partial implementation, including 43% that have achieved full implementation. As there are several third-party vendors that offer SSO services, this aspect of interoperability is easier to accomplish than others. Also, SSO is a high priority for districts because without it, every user in the school system—from students to superintendents to parents—has diminished productivity. A majority of districts (61%) have partially implemented data interoperability, though with 11% at a much lower rate of full implementation than SSO. The majority (56%) of districts have at least partial implemented content interoperability; however, only 8%. districts have achieved full implementation. Analytics and data visualization tools are the least implemented, with a combined partially and fully implemented rate of 51%.

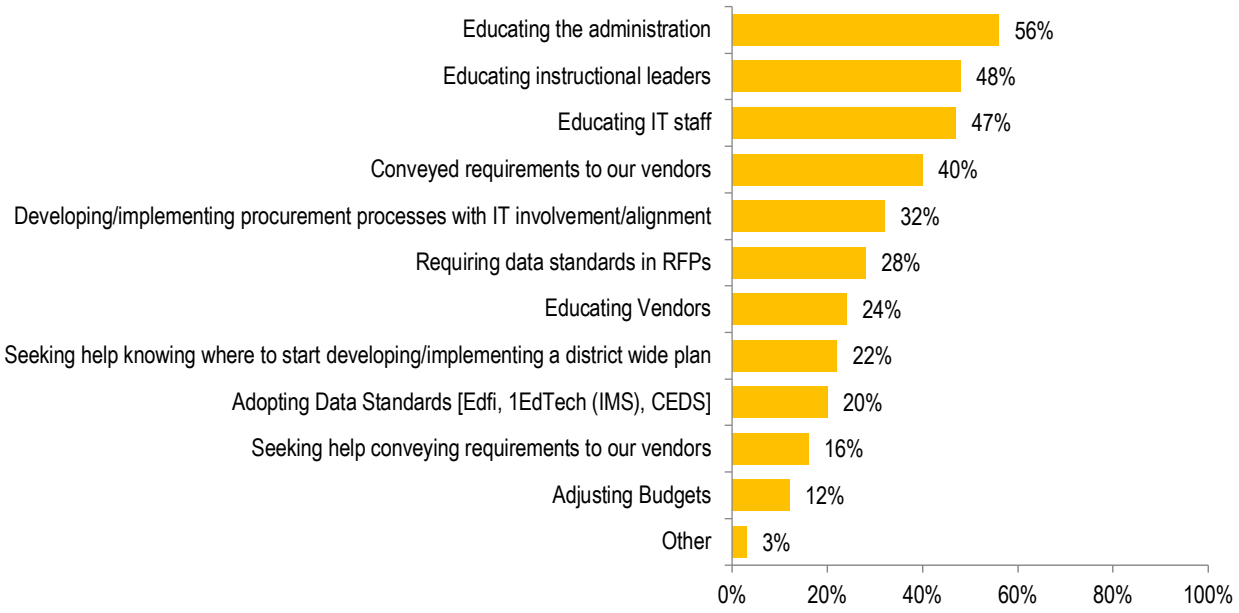
Implementation of Interoperability Initiatives



To advance data interoperability in their districts EdTech Leaders focus on professional learning for stakeholders. Most (56%) are educating administrators, as it is difficult to advance initiatives without buy-in from the top. In relatively equal measure, districts are educating instructional leaders (48%) and their IT staff (47%) on why interoperability is important. Another

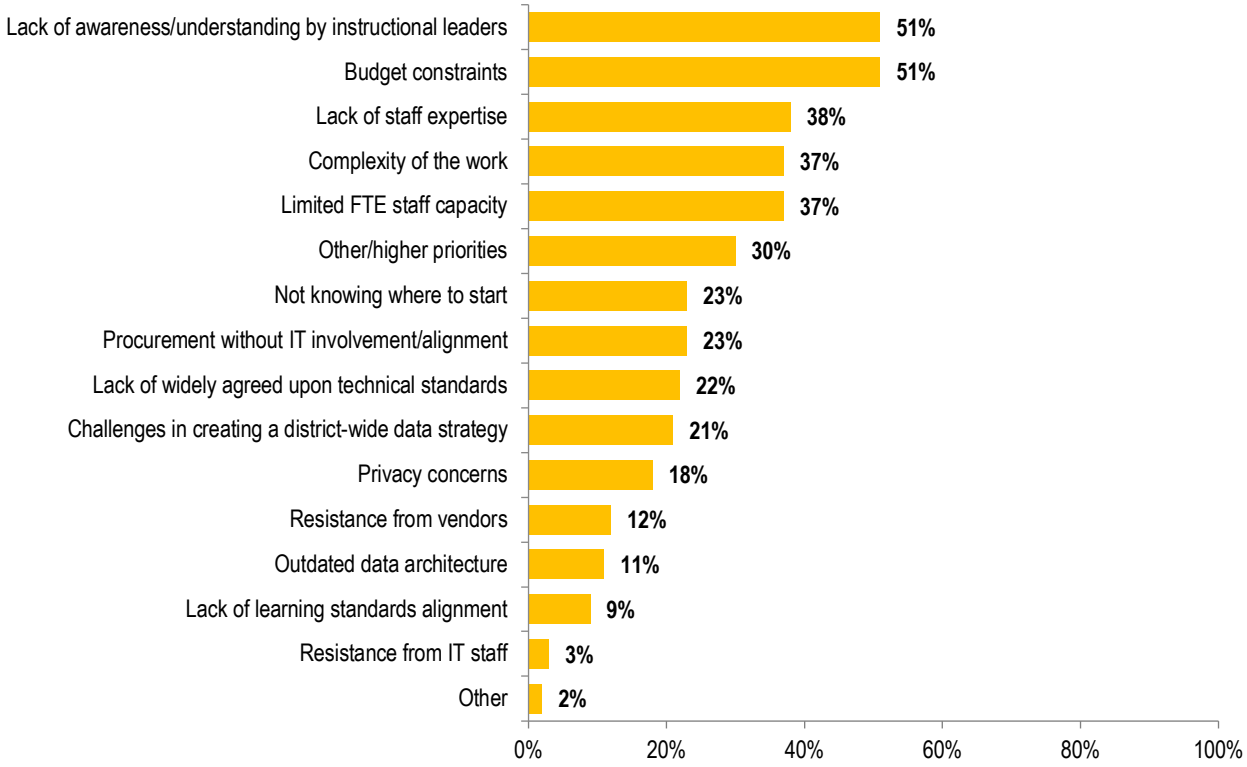
key stakeholder for achieving data interoperability is the EdTech provider community, and 24% of EdTech Leaders are working to educate their vendors. Almost third (32%) are instituting procedures that include IT involvement during the vendor procurement process, and 28% require data standards in their RFPs. However, the percentage of districts adopting data standards is relatively small at 20%.

Steps to Improve Data Interoperability



Lack of awareness/understanding by instructional leaders and budget constraints are barriers to improving data interoperability for more than half (51%) of districts. Staffing issues are also a problem, with 38% citing lack of staff interoperability expertise and 37% limited FTE staff capacity, though only 3% deal with staff resistance. Less than third (30%) report other priorities getting in the way. Each of the remaining 10 potential data interoperability barriers on the survey were cited by less than a quarter of EdTech Leaders.

Interoperability Barriers



Summary

The scope and depth of the role of EdTech Leaders is ever expanding. Technology is increasingly ubiquitous and embedded in nearly every aspect of the school system, and that requires EdTech leaders' involvement and vision. They are responsible for the cybersecurity as well as the technology that supports the physical security of their school systems. They engage in ongoing professional learning to ensure they are up to date on a broad number of emerging technologies, changes to existing technology, district requirements, community expectations, and student needs. But EdTech Leaders are too often faced with staffing and funding constraints, severely limiting what they can accomplish. For one respondent, who put it bluntly—"All this is just pie in the sky nonsense when you don't have a workforce." Until a way is found to address the perennial problem of budget constraints and lack of resources, each will continue to be cited as EdTech Leaders' top challenge year after year.

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About the Survey

Results from this year's survey were compiled from 981 surveys. With the help of our partners CDW Education, LightSpeed Systems, AASA, K12 Insight, and MCH, the 61-question survey was emailed to EdTech Leaders in U.S. school systems and data collected January 10 through February 29, 2024. Findings for each item in the report exclude participants who did not answer a specific question. Percentages in graphs may not total 100 due to rounding.

CoSN, the world-class professional association for K-12 EdTech leaders, is driven by a mission to equip current and aspiring K-12 education technology leaders, their teams, and school districts with the community, knowledge, and professional development they need to cultivate engaging learning environments. Visit cosn.org or email membership@cosn.org to find out more about CoSN's focus areas, annual conference and events, advocacy and policy, membership, and the CETL™ certification exam.

CDW Education makes technology work so students can do great things. We are a trusted partner to schools, districts, and institutions of all sizes. CDW Education leverages a unique combination of decades of boots-on-the-ground education experience and best-in-class partners, solutions, and services to help you drive the education outcomes that are most important to you.

Lightspeed Systems® is dedicated to providing K–12 districts with time-saving solutions to create safe, secure, and equitable education, so they focus where it matters most—students and learning. Lightspeed Systems' cloud-managed solutions; Security & Compliance, Safety & Wellness, and Engagement & Impact; are purpose-built for school networks and devices. Headquartered in Austin, Texas, Lightspeed Systems serves more than 23 million students using 15 million devices in 31,000 schools throughout 42 countries. To learn more, visit www.lightspeedsystems.com.

AASA, The School Superintendents Association, founded in 1865, is the professional organization for more than 13,000 educational leaders in the United States and throughout the world. AASA's mission is to support and develop effective school system leaders who are dedicated to equitable access for all students to the highest-quality public education. For more information, visit www.aasa.org.

K12 Insight helps districts automate workflows across departments, centralize inbound and outbound communications, create a culture of customer service, and listen to their community with a powerful customer service platform with a generative AI-powered chatbot, expert-led research services, a DIY survey solution, and professional development.

With the only all-in-one customer service and intelligence platform purpose-built for K-12 education, districts improve community engagement, identify problems before they become crises, build trust with their community, lessen political polarization, and make data-driven decisions.

MCH Strategic Data is a pioneer and innovator in educational marketing data. For nearly a century MCH has helped businesses reach administrators and educators within school districts nationwide and of all sizes. Trusted by the CDC, National Institutes of Health, and Harvard to provide the most up-to-date school district data during the pandemic, they offer national data coverage, invaluable expert insights, and top-tier personal service to help clients reach their customers with pinpoint accuracy.

About the Survey Report Author

Paula Maylahn is an education consultant with 40 years' experience across K-20. She is a project director for CoSN's interoperability initiatives, contributing author on "The Experts' Guide to the K-12 Market" and "The Experts' Guide to the Postsecondary Market," and the author of the paper "Interoperability: Definitions, Expectations, and Implications." Paula is a council member of the Women's Education Project, a twice-elected board member of the Software & Information Industry Association Education Division, former executive council member of the PreK-12 Learning Group of the Association of American Publishers, and former board member of the United Design Guild where she chaired the education council.