



2023 Education Focus Report

Challenges, Priorities, and
Innovating Toward the Possible



Introduction

K-12 education is in a time of tension, caught between the urgent, the important, and the possible.

The pandemic introduced a rare opportunity to rethink how learning happens and harness technology in transformative ways. A door that opens fully only once a century, perhaps.

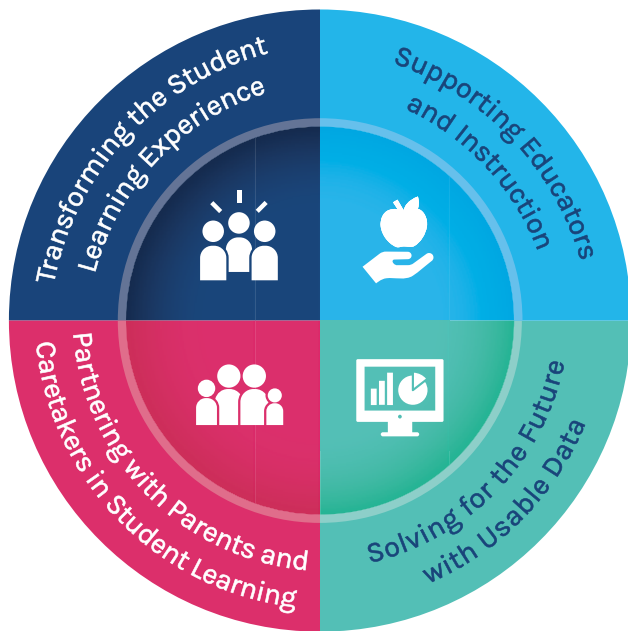
There is always a balance to be struck—in education as in any other sector—between the urgent and the important. Sometimes they are one and the same.

Student learning and wellness recovery is both urgent and important. We recognize that school and district leaders are under public pressure and scrutiny to maximize the recent influx of federal and state resources to move all learners back on track.

But we also know that existing practices leave opportunities to enhance the educational experience, so there is the project of ***innovating toward the possible***.

Speaking with dozens of education leaders and receiving over 1,700 responses through our annual national survey, we heard a collective sense that personalized learning, actionable data, and artificial—or augmented—intelligence (AI) hold the most promise to improve the future of education.

Recognizing these current dynamics in education, this report focuses on four areas, informed by educator input:



With all the talk about AI in school year 2022-23, we are hard-pressed not to start there. And we do discuss AI later in the first section. We will even share what ChatGPT says about its own potential to introduce a new epoch in education.

But the reality is that AI is part of a larger student learning experience picture. And that picture is deeply colored by the pandemic and how education leaders are responding to it.

Personalized learning—the concept and work of tailoring every learner’s journey with a more individualized approach and supports—is central to this picture.



I’m actually really excited about the rise of AI. It can be a great leveler—helping students remediate quickly. The cycle of remediation is one of the biggest barriers to equitable supports in schools. Now we can really address these obstacles. Now students can interact with AI to learn how to write a basic essay or learn a math skill, and teachers can focus on higher level concepts and learning progression.

TIM CLARK | Vice President K-12 Programs,
1EdTech

Bill Bass, Innovation Coordinator: Instructional Technology, Information, Library Media, and Federal Programs, Parkway Schools, MO, urges, **"We need learning experiences to be ruthlessly relevant to our students and their future. If we don't have the right tools and edtech partners, we can try, but we will hit big challenges. Personalized learning must be ruthlessly relevant for it to become 'the work' of schools."**

To work toward this relevance, the second section of this report addresses what educators need to provide personalized instruction, while the third section identifies the necessary systemic changes to move data from informational to actionable.

Finally, we discuss parents and caretakers as critical partners in education. We address key gaps in preferred modes of communication versus what's actually happening and how district leaders can consolidate and streamline systems to achieve better traction at home.

Throughout this report, we elevate educators' voices, believing that the future of education should be informed by their input today. PowerSchool is excited to evolve our partnership with school and district leaders to realize what's possible while addressing the current urgent and important needs of students and educators today.





“

We in leadership need to think differently about what our users—educators, support staff, parents—need out of data. So when you think about data, think about what is useful. There’s a lot of informational data. You must parse that from what’s actionable. ”

RYAN GRAVETTE

Director of Information and Technology, Idaho Digital Learning Academy, ID

Findings at a Glance

Our 2023 Education Focus Report focuses on four key areas:

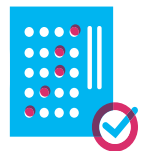
53% of district-level leaders agree in seeing value of **AI for teaching and learning**, compared to 44% of school-level educators.



Over **90%** of education leaders agree that finding and keeping good teachers is **harder now than it's ever been**.



Most educators say tech is streamlined to communicate with parents, while **7 in 10** parents say they must navigate 2-6 systems to access the information they need to understand how their student is learning.



Only **2 in 10** educators said they absolutely can say **what interventions are working** and have data to back it up.

Top Four Edtech Challenges in School Year 2022-23

SCHOOL			DISTRICT
	Keeping students on academic task	1	Connecting data across systems
	Incorporating technology effectively	2	Professional development for teachers and staff
	Juggling multiple digital tools for teaching/learning	3	Achieving a whole child data analytics view
	Lack of effective edtech professional development	4	Providing teachers with actionable data to support students

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Guiding Questions and Methodology

Guiding Questions

- How are educators **navigating the current urgent work to improve student learning while innovating?**
- What are the top **education technology challenges and priorities** from educators' perspective, and why?
- How can **personalized learning continue to scale?**
- What are the **promises and perils of AI in education?** What are school leaders' top use cases for AI now and down the road?
- How are districts **navigating workforce challenges** and how can technology help?
- How can **data be more usable?** How are school leaders achieving this?
- How can **technology aid the work of schools to achieve greater partnership with parents** in education?

Education Insights Advisors

This report was shaped in partnership with PowerSchool's Education Insights Advisors Group. This group of education practitioners supported the ideation and development of this report, including its findings. We extend a heartfelt thank you to these innovative and inspiring leaders:

- **Bill Bass**
Innovation Coordinator: Instructional Technology, Information, Library Media, and Federal Programs, Parkway Schools, MO
- **Abner Breban**
Director of HR Systems, Cobb County School District, GA
- **Chris Cromwell**
Instructional Technology Coordinator, West Chester Area School District, PA
- **Dr. Tracy Daniel-Hardy**
Director of Technology, Gulfport Schools, MS
- **Dr. Vernell Deslonde**
Director of College & Career Readiness, Fontana Unified School District, CA
- **Dr. Chris Diggs**
Chief Information Technology Officer, Albemarle County School District, VA
- **Sam Edwards**
Instructional Innovation Specialist, Parkland School District, PA

- **Ryan Gravette**
Director of Information and Technology,
Idaho Digital Learning Academy, ID
- **Barbara Haeffner**
Assistant Superintendent for Teaching
and Innovation, Meridan Schools, CT
- **Kris Hagel**
Executive Director of Digital Learning,
Peninsula School District, WA
- **Glenda Horner**
Director of Professional Learning,
Cypress Fairbanks Independent School
District, TX
- **Peggy Jones, Ph.D.**
Director, Accountability, Research,
and Measurement, Pasco County
Schools, FL
- **Sherrard Lewis Martin**
Project Director of Federal TSL &
GEAR UP Grants, Iredell-Statesville
Schools, NC
- **Challenger School Research Director**
Challenger School, UT
- **Dr. Michelle Tanner**
Associate Superintendent of the Deaf,
Utah Schools for the Deaf and Blind, UT

PowerSchool Education Solutions Team

This report was developed in collaboration with the PowerSchool Education Solutions Team. This group of passionate former education practitioners supported the concepting and research. We appreciate their dedication to better understanding the current state of education and how we can collectively make strides toward a positive future for students around the world.

- **Ryan Imbriale**
Thought Leadership | Strategic
Planning | Innovation
- **Jeremy Meredith**
K-12 Research | State & Federal
Funding | Policy
- **Kellie Ady**
Curriculum & Instruction, Learning
Management | Change Management
- **Lisa Andrejko, Ed.D.**
Educator Recruitment & Retention |
Educator Effectiveness
- **Katherine DeRosear**
Education-to-Career Pathways |
College, Career and Life Readiness
- **Ed Dedic**
Data & Information Systems |
Interoperability | Security
- **Dave Edwards**
Strategic Planning | State Strategy |
Business & Operational Systems
- **Beth Kawecki**
Assessment | Accountability | MTSS
- **Jeff Pelzel**
Strategic Planning | Thought
Leadership | Instructional Leadership
- **Jesse Roy**
Funding | Whole Child Support |
Continuous Improvement
- **Sarah Singer**
Analytics | MTSS | Data Culture

Survey Methodology and Overview of Respondents

We solicited insights from educators via roundtable conversations, a national online survey, and interviews with thought leaders.

Roundtables

Our research team convened eight virtual and one in-person roundtable. Conversations included more than 70 educators representing districts across the nation using a common question protocol. Roundtable participant roles included:

- Classroom Teacher
- School Instructional Technology Coordinator
- Chief Academic Officer
- Assistant Superintendent
- Chief Information Officer
- Chief Operating Officer
- Director of Student Services
- Executive Director of Digital Learning
- Instructional Technology Coordinator
- Director of Human Resources

National Survey

To gather perception data on key topics relevant to this report, we conducted a survey that opened February 21 and closed March 27, 2023. The survey limited responses to the U.S. and U.S. Territories.

Respondents were asked to identify their role, state or territory, years worked in education, and size of school district. To promote survey completion, respondents could opt into a nominal sweepstakes prize by submitting an email address. Ten winners were selected at random after the survey closed. Personally identifiable information, beyond the optional email address submitted for purposes of the sweepstakes prize selection, was not collected from respondents to promote anonymity and genuine responses.

We solicited perspectives from educators, support staff, school leaders, and an array of district leaders on the four key education priority areas covered in this report.

Upon survey closing, we received 1,756 responses, 1,370 of which were complete survey responses. We included responses that completed at least the first section of the survey and all full responses.

FIGURE 1.
Survey Respondents by Role

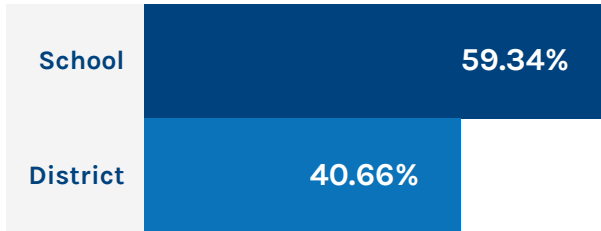
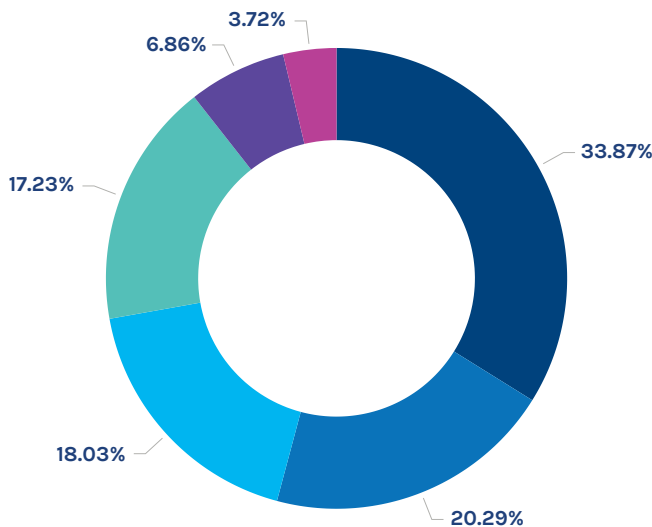


FIGURE 2.
Survey Respondents by Years in Education



Years in Education

- >21
- 16-20
- 5-10
- 11-15
- 2-4
- <2

We were glad to see the depth of experience of survey respondents; 34 percent of educators were 20+ year veterans, and 21 percent boasted 16-20 years of experience in schools.

In terms of geographic representation, we received responses from every U.S. state and each U.S. Territory. Respondents were geographically distributed.

Interviews

Beyond our Advisory Group and roundtable discussion participants, we extend a sincere thank you to these thought leaders who provided expert insight on the topics and findings of this report:

- **Tessie Bailey, Ph.D.**
Principal Consultant, American Institutes for Research (AIR)
- **Dr. Tim Clark**
Vice President of K-12 Programs, 1EdTech (formerly IMS Global)
- **Allison Powell**
Director, Digital Learning Collaborative, COO Evergreen Group
- **Dana Ryan**
VP Academic and Student Affairs, Western Nevada College, NV



Focus Areas

These four areas organize the report findings. They were shaped by the top edtech priorities educators identified in 2022, and channel the aspirations for this year and beyond.



Focus Area 1

Transforming the Student Learning Experience

Schools and districts are moving through the successes and challenges that are inherent to the rapid adoption of new technologies. Amidst increased use of technology and new student well-being needs, challenges have arisen in the wake of the pandemic to maintain student focus on learning. Educators indicate cautious optimism about the impact of AI on teaching and learning.



Focus Area 2

Supporting Educators and Instruction

Schools are finding it harder than ever before to find and hire talent. Leaders are getting creative and methodical about attracting educators to fill vacancies. Professional development surges to support the whole child, but continued need for more training to use technology is clear amidst growing adoption. Educators weigh in on AI and other innovations most promising for student learning.



Focus Area 3

Solving for the Future with Usable Data

To better address pandemic impacts, educators have looked to data to inform their practice more than ever before. But there is a difference between collecting data and using data to implement change. While data as a service (DaaS) solutions emerge as a trend in education, educators and leaders are still searching for the most effective ways to make data usable.



Focus Area 4

Partnering with Parents and Caretakers in Student Learning

Research confirms that parent and caretaker engagement in a student's learning is linked to improved academic outcomes, decreased behavioral and disciplinary issues, and stronger relationships with peers and adults. There are several opportunities for greater alignment between schools and families, particularly around communication, attendance, and technology platforms.



Focus Area 1

Transforming the Student Learning Experience

This section offers insights on K-12 schools' edtech challenges and priorities for 2023 and beyond.

Expanding personalized learning practices, the urgent need for innovation to support student recovery from pandemic setbacks, and the rise of AI in education all point to the formation of a new student learning experience.

Innovation Needed: Existing Practices Don't Add Up to Solve COVID Setbacks

The pandemic spurred a time of potential innovation for K-12 schools.

But alarming student learning setbacks are causing some leaders to return to status quo practices because they are familiar and involve less risk.

In October 2022, the Governing Board of the National Assessment of Educational Progress (NAEP), considered to be the "nation's report card," alerted the public that students suffered major learning setbacks in 4th and 8th grade math and English compared to pre-pandemic.¹

The announcement sparked panic. The NAEP findings—the most comprehensive study of the pandemic's impact on student learning—merited an urgent response.²



Our pandemic response in a word? Urgent. In a typical year, you have a whole school year to meet objectives. But now we must address the missed objectives and this year's learning objectives amidst the next iteration of accountability plans. There's a sense of urgency that we need to do more, recognizing that kids need to catch up.

BILL BASS | Innovation Coordinator: Instructional Technology, Information, Library Media, and Federal Programs,
Parkway Schools, MO

Many called for doing better. Better implementation of science-based reading.³ Better, high-dosage, expanded tutoring.⁴ Better wraparound supports.⁵ Better expanded education programming and an extended school year.⁶ In a nutshell, implementing best practices more effectively.

Others questioned whether this was enough.

Scott Mariam, Executive Director for Center of Assessment, NAEP, reflecting on the problem versus the solution, points out:

"The effect size of [pandemic] academic losses compared to our best science at improving learning is really humbling. I don't think it adds up. I think we need to talk about changing structures. If we keep trying to pour interventions into existing structures, they won't last, they won't sustain."⁷

Moreover, additional research found that emergency relief funding for schools (ESSER I, II, and III funds)—widely perceived as historically generous—is inadequate to address the magnitude of student learning losses stemming from schooling interruptions.⁸

So, schools face a conundrum: simultaneously get better faster and enact innovative systems change with funding that is likely inadequate for the task at hand.



Top Three Pandemic Responses to Support Students

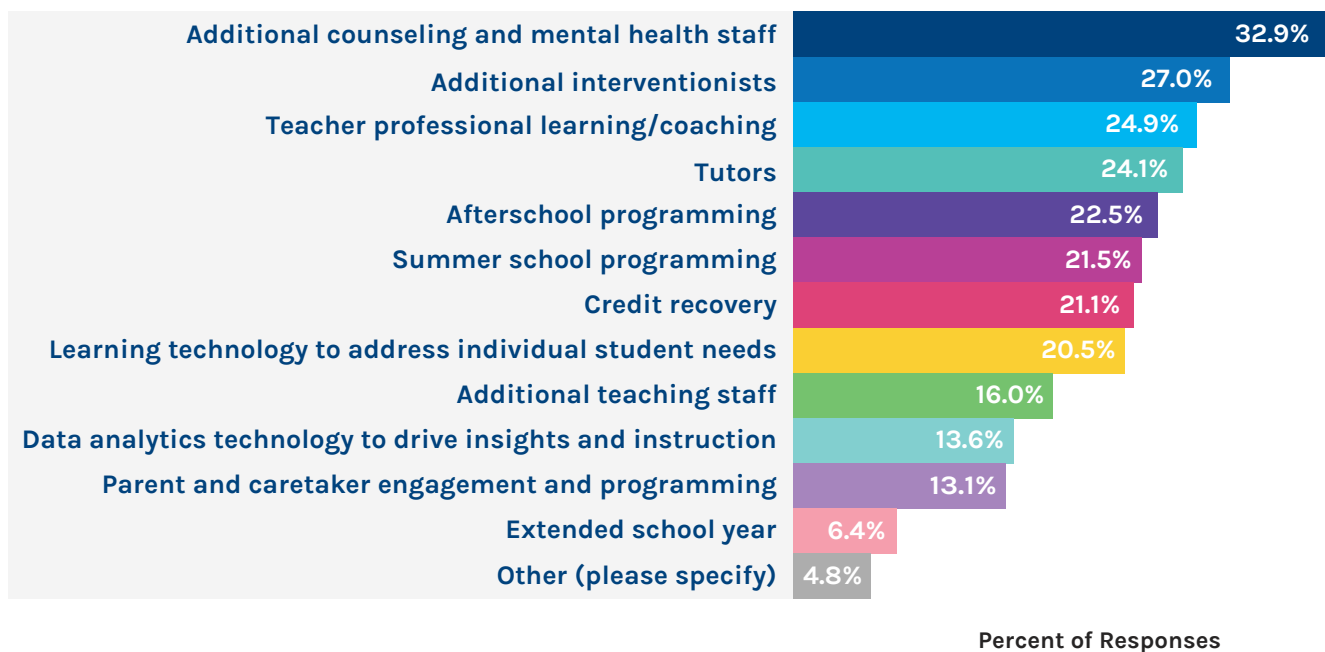
We asked educators which top three pandemic response initiatives their school undertook to help students recover from the pandemic.

Mental health counseling, additional interventionists, and teacher professional development and coaching rose to the top. This shows a significant surge to address student social and emotional health needs in the aftermath of the pandemic and schooling interruptions. More broadly, mental health and student wellness is widely recognized, perhaps for the first time in K-12, as foundational to academic learning.

FIGURE 3.

From the list below, select the top three initiatives in your school helping students to recover learning from the pandemic

[School-level]



Even with the rapid expansion of 1:1 devices and modern edtech, learning technology in support of individual student recovery lands mid-pack, raising questions about the impacts of various technologies, how well teachers are supported in using them, and how schools and districts are viewing edtech challenges and opportunities.

Top Edtech Challenges

For many education stakeholders—families, students, policymakers, and educators—the rapid adoption of technology fueled expectations of transformative change.

Many learned that the road to change, much less transformation, is a long one with many detours. Research has confirmed this, noting that transformative change in K-12 often takes at least 5-7 years until benefits are realized.⁹

Schools and districts are now moving through the challenges and opportunities inherent to the fast adaptation and learning of new technologies.

The pandemic fast-tracked technology adoption in K-12. We asked both school and district-level educators what edtech challenges they faced most during school year 2022-23.



Transformation is inherently risky. Different industries take the risk of transforming differently. Education can be really risk averse. The impact is not a monetary outcome, it's the growth of a child. Teachers are protective of students in this way. So, the amount of transformation you can do, I have learned, is challenging.

RYAN GRAVETTE | Information & Technology Director,
Idaho Digital Learning Academy, ID

What are your top edtech challenges this year (2022-23)?

FIGURE 4.
School Challenges

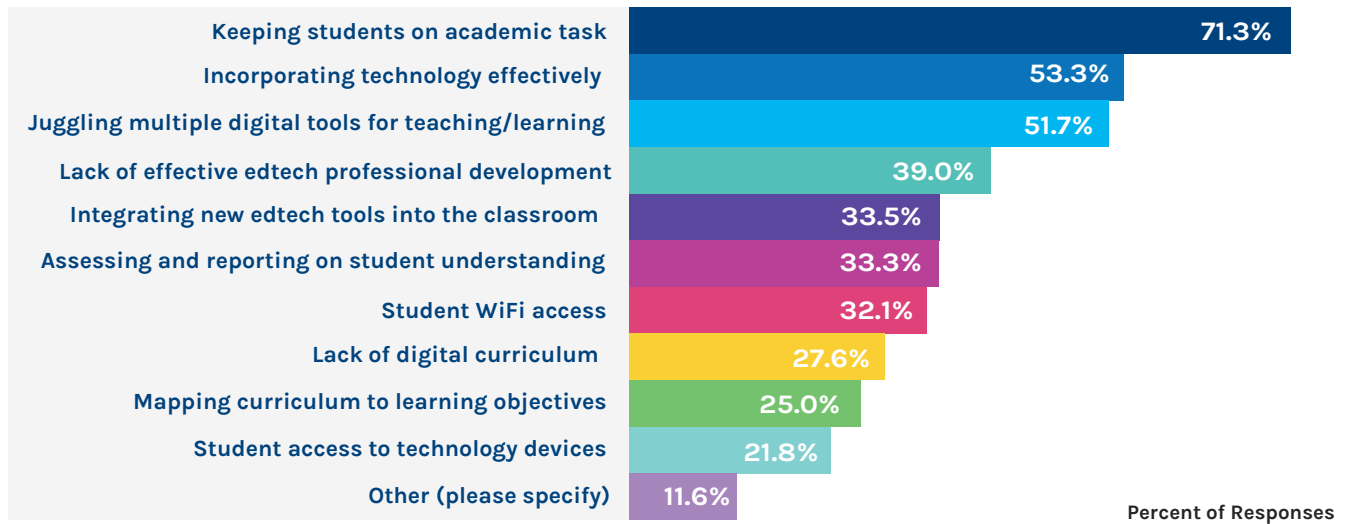
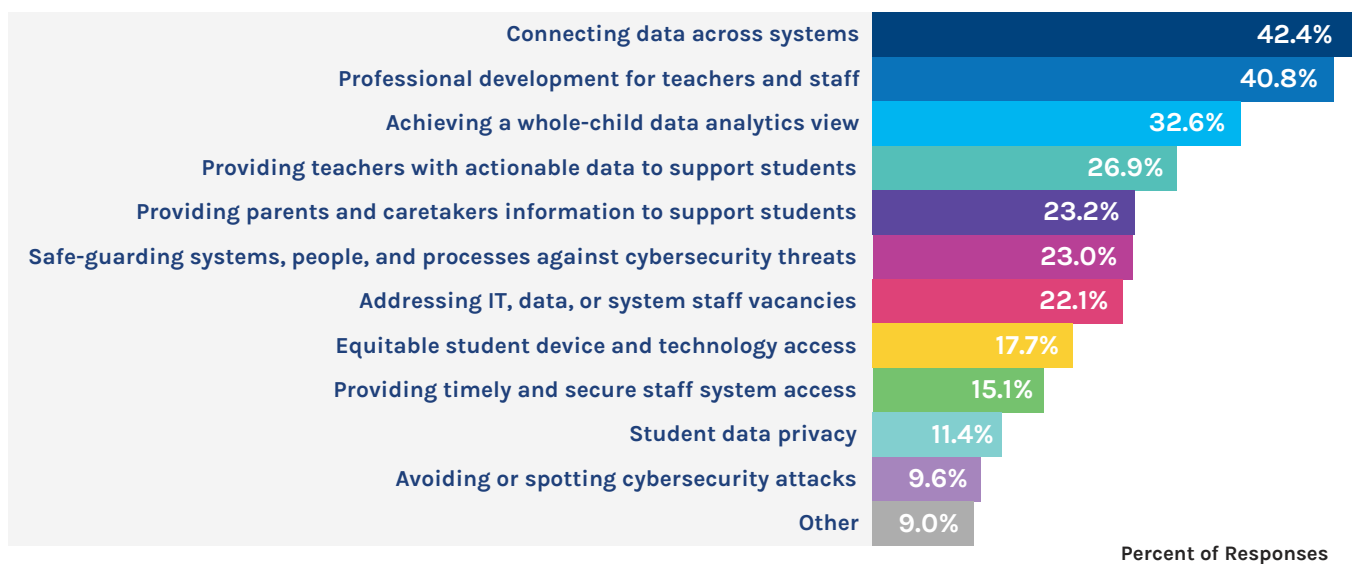


FIGURE 5.
District Challenges



Among school staff, the number one challenge is keeping students on task, suggesting schools face a steep learning curve to use 1:1 devices and a surge of new edtech effectively. Educators also point to struggles balancing various tools and using them effectively—further evidence that the rapid expansion of edtech is being felt by classroom teachers.

Notably, educators identified lack of professional development as an edtech challenge, suggesting that more supports, such as onboarding, training, and coaching, are needed to modernize instructional pedagogy and practice to fully harness new tools for learning.

District leaders agree with their school colleagues that professional development and assessing and reporting student data are key challenges. More broadly, leaders are working to solve data integration challenges and deliver more comprehensive, actionable data reflecting the whole child.

Ultimately, edtech must work for teachers and students—the primary end users of larger district systems. We asked classroom educators to tell us about their technology adoption efforts.

Sam Edwards, Instructional Innovation Specialist for Parkland School District, PA, shares:

"Technology laid the groundwork for teachers to be able to reach students virtually and engage them in new ways, but we've noticed, especially this year, some tech burnout. So, we're revisiting our district-wide focus on inquiry-based learning, and creating lesson plans and opportunities for students to become more invested in their education."

Educators also speak of combating the attention-scattering effect of smartphones on students, and keeping them on task when using devices and technology applications or platforms.

It's clear from this data that educators need stronger supports to integrate technology into their instructional approach and effectively redirect and focus students to engage in the learning at hand. Even with the rapid influx of more data, there is much room for improving the scope and richness of data for instructional insights and professional learning.

Edtech and the Hype Cycle: The Path from Disillusionment to Enlightenment

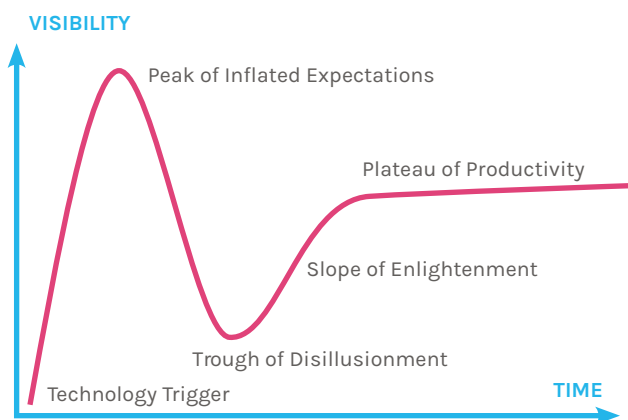
The K-12 education sector may be going through what the technology firm Gartner deems the "Hype Cycle" which consists of four phases:¹⁰

- 1 Emergence: "The Technology Trigger"
- 2 Excessive enthusiasm: "The Peak of Inflated Expectations"
- 3 Excessive disappointment: "The Trough of Disillusionment"
- 4 Gradual, practical adoption: "The Slope of Enlightenment" and "The Plateau of Productivity"

FIGURE 6.

The Technology Hype Cycle

[Gartner]



Gartner uses this model to consider how specific technologies may rise, fall, and grow. **In this case, it's a useful model to consider the rapid growth of edtech in K-12 over the past three years, and how schools are making sense of it.**

Using this model, the pandemic catalyzed broad excitement about edtech's potential to transform education. For some districts and schools, the trough of disillusionment came when those changes were not realized quickly or impactfully. In this phase, tech users struggle to realize expected value and worry that the technology may not deliver on its promise.

The climb up the "slope of enlightenment" is where users realize practical innovation value and system change. New, innovative practices become organized and coherent. Best practices take shape, and broad adoption occurs. Productivity and impact increase beyond the starting point and typically reaches a practical equilibrium.

Are You Currently in an EdTech Hype Cycle?

These guiding questions will help you consider whether your organization is going through an edtech hype cycle and, if so, what phase it may be in:

Questions to Consider		If you answer yes, you may be experiencing
Is your district going through major changes in circumstances?	➔	Awareness
Do you and your colleagues expect a given technology will revolutionize teaching, learning, or operations in K-12 education in a very short time?	➔	Inflated Expectations
Are you experiencing significant challenges or limitations when using this technology? Is your district going through a strong downcycle of expectations?	➔	Disillusionment
Have you found ways to overcome the limitations of this technology? Are users realizing benefits? Are best practices taking shape and getting traction?	➔	Enlightenment
Has this technology become a regular and useful part of your academics or operations? Could you perceive ever going back to the status quo?	➔	Gradual, practical adoption

With these reflections in mind, let's consider educators' 2023 edtech priorities.



Districts are at varying points of the hype cycle with different edtech aspects. A lot depends on what your edtech posture was when the pandemic hit. Some districts were thrust into 1:1 device adoption and rapid tech change and went through the trough. I think we will soon go through another hype cycle. We have not been triggered by AI yet, but it's coming, and when it does, we'll need to work through the implications.

DR. TRACY DANIEL-HARDY | Director of Technology, Gulfport Schools, MS

Top Edtech Priorities: Effective Use and Actionable Data

We asked educators about their top edtech priorities for next school year (2023-24).

School-level educators' top priority is to incorporate technology effectively, reflecting teachers' continued journey to use devices and tools deliberately with impact.

Reflecting the 2022 Education Focus Report findings, improving assessments, reporting, and data-driven decision-making remain top of list. This reinforces how data is critical in understanding and responding to student learning and how critical improvement of student data is to school success.

The other priorities, such as incorporating and consolidating technology, and motivating students to engage in edtech, are clear responses to the above identified challenges.

Surprisingly, few to no school staff identified data privacy, cybersecurity, or boosting parent and caretaker engagement as priorities.

District-level priorities align with school-level priorities in key ways. The focus on usable data to inform decision-making is the biggest point of resonance. Whole-child data, in particular, is a priority worth noting.



Top 2023 Education Technology Priorities

FIGURE 7.
School Priorities

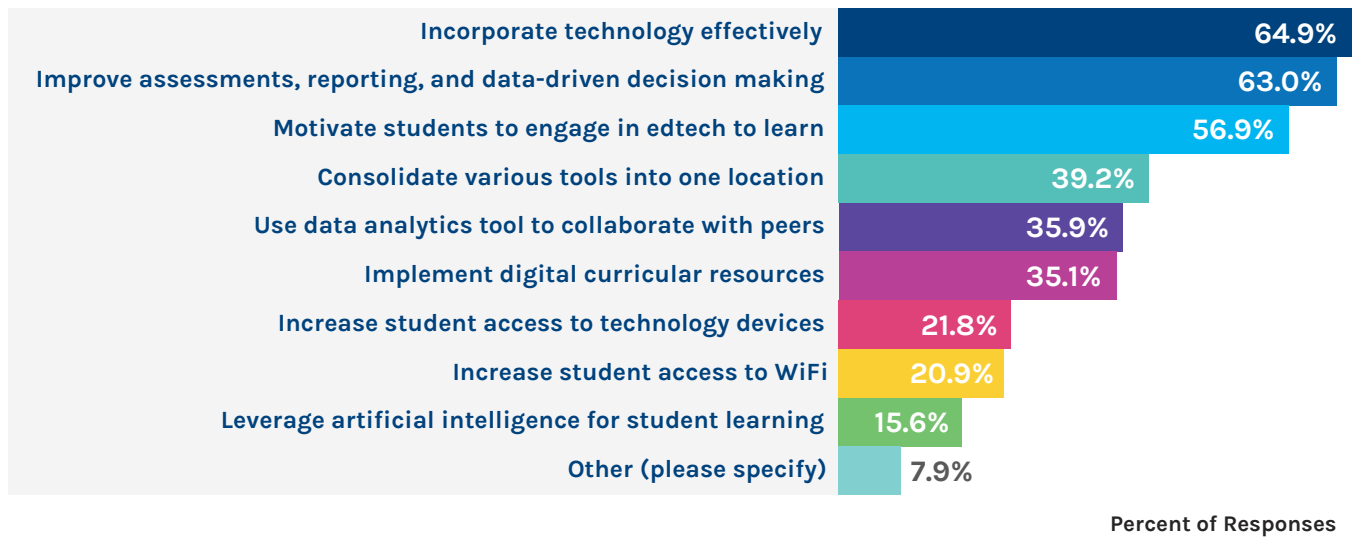
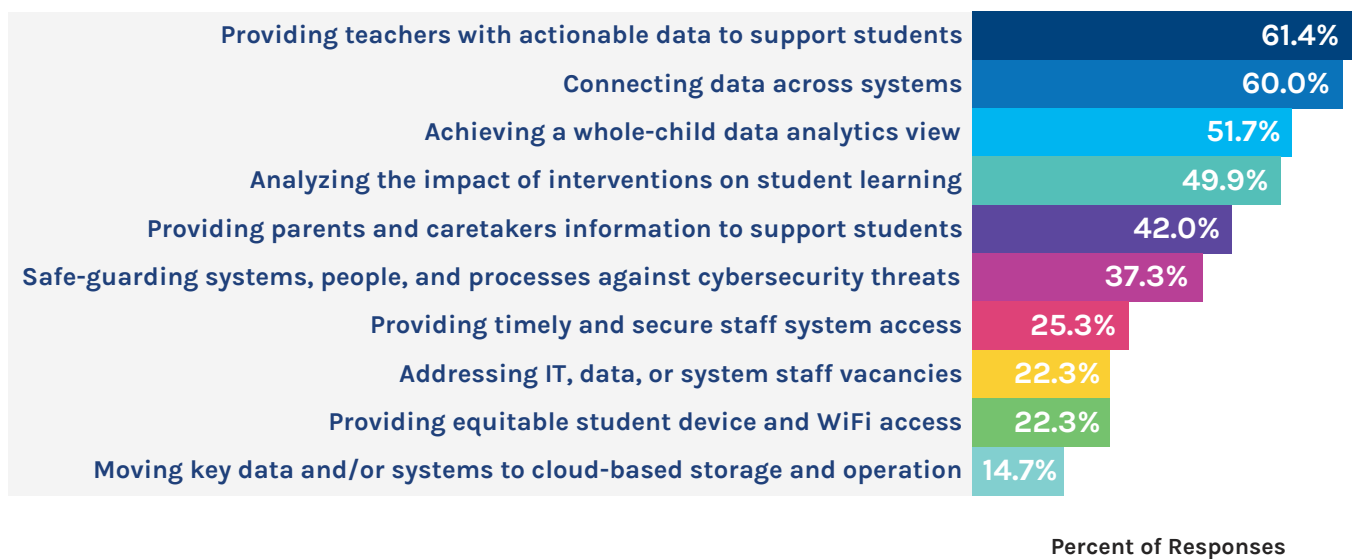


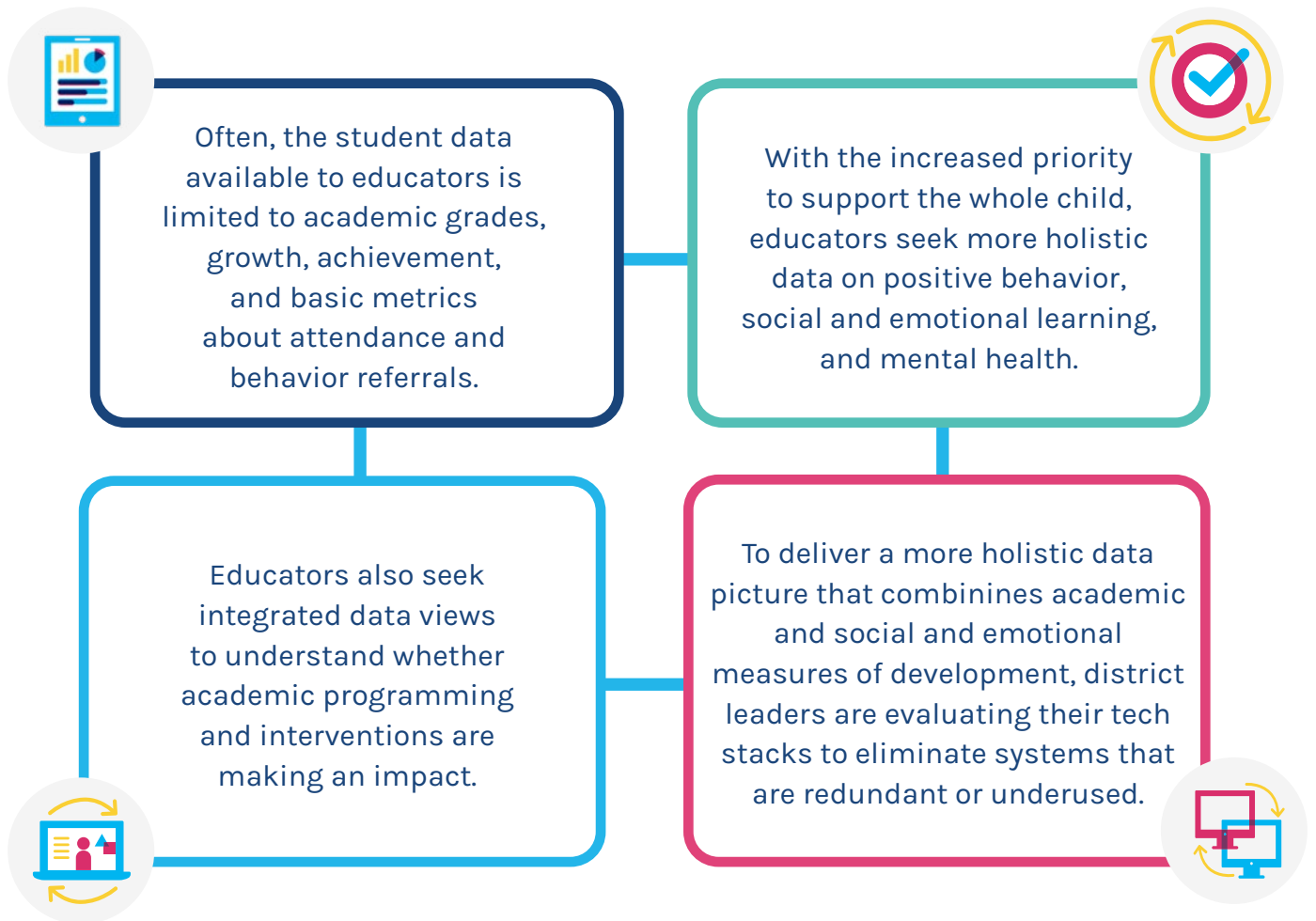
FIGURE 8.
District Priorities



Unpacking What We Heard from Educators About Top EdTech Priorities

Achieving a more comprehensive, connected data picture

What educators say about data limitations and needs.



Leaders shared a new, invigorated focus to consolidate systems for better connectedness of data in service of streamlined, usable insights.

Incorporating Edtech into the Classroom

Lessons learned and Insights from the Field



Motivating Students to Learn

What educators say about overcoming challenges and enriching learning



We heard from educators and technology leaders that screens are how students prefer to engage, but they also lead to distractions. Teachers can quickly become screen monitors and guardians of online safety, to the detriment of instruction.



Technology needs to make learning easier and more personalized, but it also needs to make learning richer and more engaging. Good digital citizenship practices that celebrate all the positive ways students can and are using technology are important for a culture of learning and edtech.



Teacher/student relationships, regardless of technological innovation, remain fundamental to student engagement and learning. To overcome the downstream impacts of the pandemic on student mental health and behavior, educators need focused professional learning and better understanding of student wellness to promote stronger relationships. Also, new investments in counseling, social worker, and mental health support services depend on good data.

83% of school educators agree:

When technology systems work together well,

I get important time back in my day to get things done.



It is noteworthy to consider the initiatives that landed at the bottom of these lists, as well. Have schools made such progress on educator collaboration, parent engagement, cybersecurity, and device access and WiFi that these simply aren't a need? Or are new priorities edging out old due to changes in circumstances in schools?

With an evolving set of edtech priorities in mind, let's explore personalized learning progress and hurdles, considering how priorities can help educators and students in this work.

Personalized Learning Practices Growing, but Still Perceived as "Extra" Work

We learned from educators that while the pandemic disrupted old paradigms of thinking, it also upended personalized learning efforts in some districts.

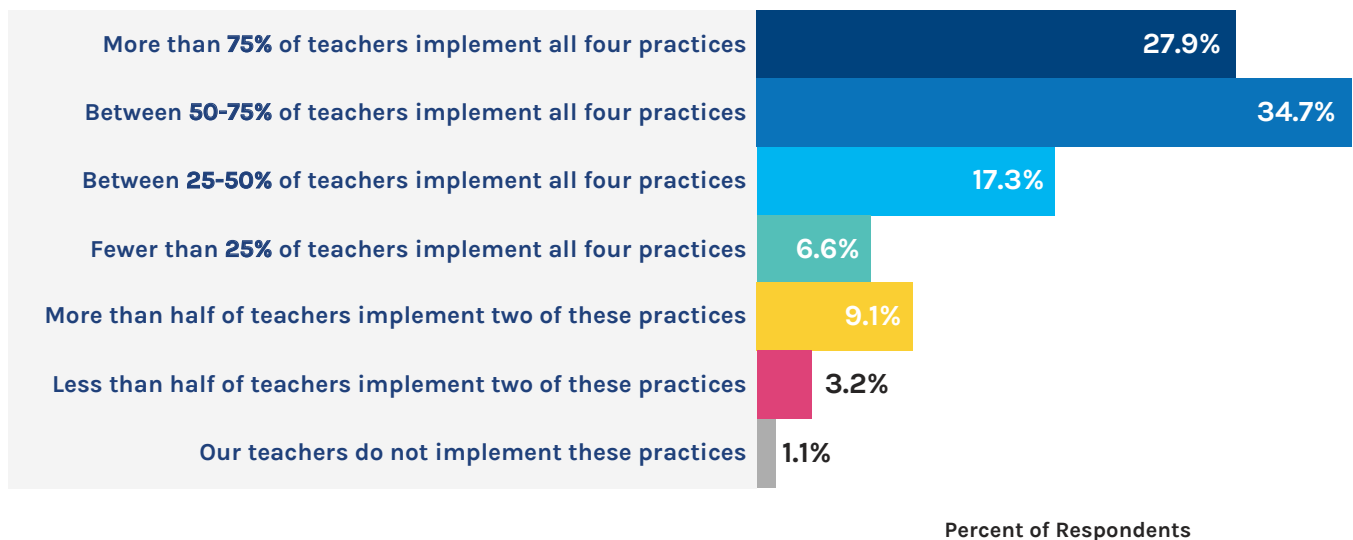
We revisited the state of personalized learning through the lens of four "core practices" identified by educators as most representative of this work:

1. Differentiating instruction
2. Using data to inform teaching
3. Leveraging edtech
4. Promoting student voice and choice in learning (agency)

We asked educators whether and how these four practices were present in their schools. Many agree that at least 1-2 practices are widely observable. But all four?

FIGURE 9.

Survey Prompt: In your perspective, does your school follow these four practices?



Most educators say that at least half their colleagues implement a majority of the four core practices of personalized learning.

This is very encouraging as we consider whether and how these practices are scaling across schools.

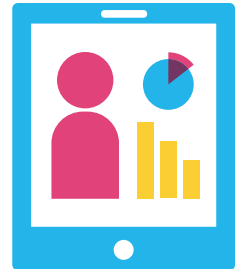
We dug further. Many educators say that schools do some practices well, but the pandemic set some schools back in doing all four practices cohesively.

Educators point to three key factors that may explain whether a system of schools is implementing personalized learning practices in school year 2022-23:

1. Whether the school started these practices pre-pandemic (early adopter)
2. Whether professional learning is provided on all four practices (continuous support)
3. Whether the school can sustain a personalized learning vision and practice amidst staff turnover (durable vision)

86% of school educators agree:

Technology helps me personalize student learning so I can focus on supporting individual needs and meet learning goals.



So, while the pandemic was an accelerant for personalized learning for some districts, it also disrupted the work of integrating all four key practices of personalized learning for others.

Some district leaders also point out a fundamental hurdle to these practices achieving broad cohesive uptake: personalized learning suffers from an optics problem.





“

One of the biggest problems is that personalization is seen not as **THE work** but **EXTRA work**.

There's new curriculum to implement. There's schedules and professional development. Those are seen as the work, currently. It's how we've traditionally defined what our work is. And until we've redefined that, we will struggle.

We haven't made personalized learning a priority as an educational system nationally. There are pockets of excellence, yes, but they're pockets. We haven't sold it to our communities. ”

BILL BASS

Innovation Coordinator: Instructional Technology, Information, Library Media, and Federal Programs, Parkway Schools, MO

Cecelia Gillam, a teacher at Hahnville High School in St. Charles Parish, New Orleans, LA, shares, "**Not all teachers do personalized learning. A lot of it is about comfort and training and showing teachers the benefits. Teachers who are not tech savvy face challenges. I assume that new teachers coming out of college have these skills, but they really don't. So, this is another barrier.**"

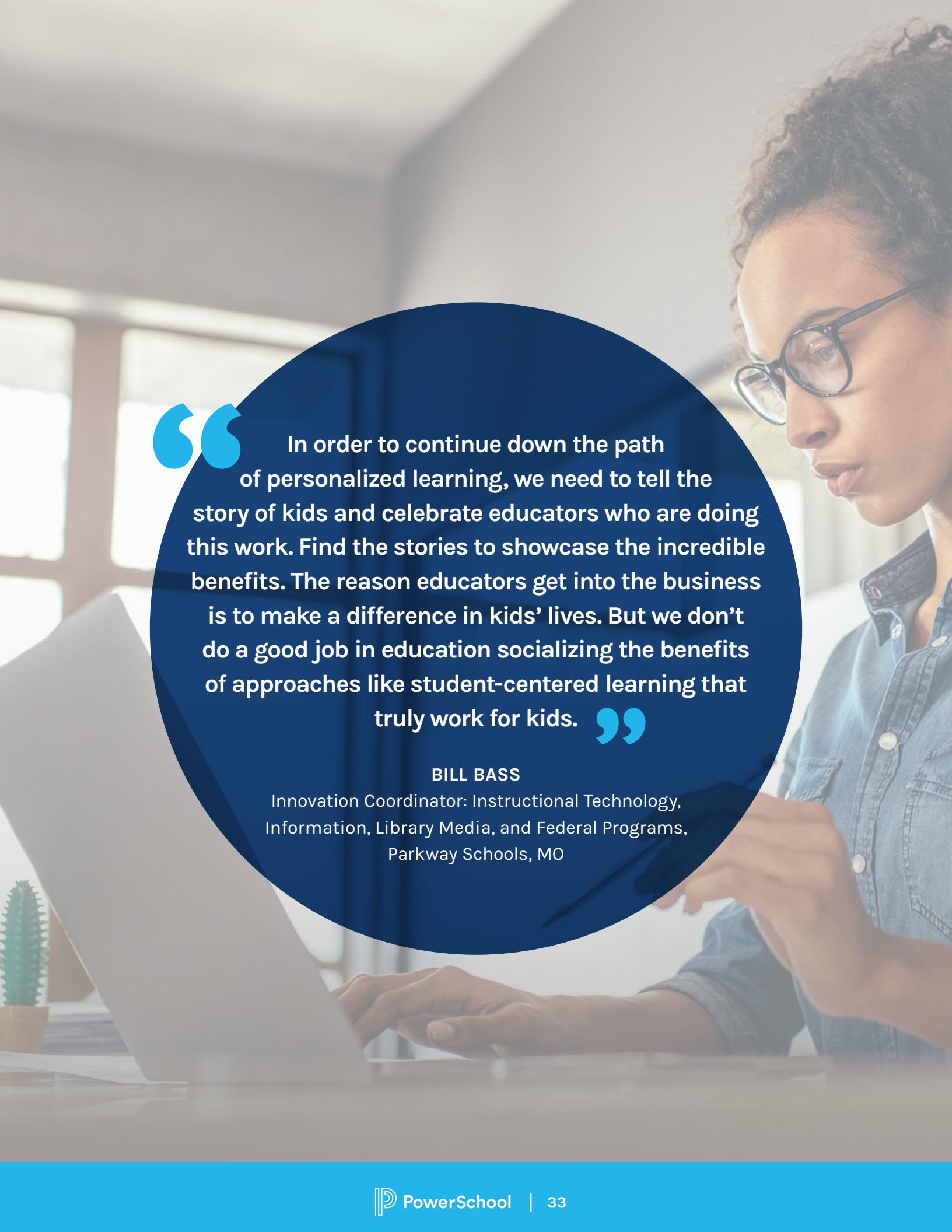
I tell teachers that once you start doing personalized learning, it's easier to teach and increase student engagement because students are more invested when they learn in the way that makes most sense to them.

—CECELIA GILLAM

Bill Bass adds that personalized learning must be "ruthlessly relevant" to become "the work" of schools and districts.

Having strong beliefs about the impact and promise of personalized learning is critical, and edtech partners are key. But to make learning personal means making every core practice—differentiation, data, tech, and student agency—ruthlessly relevant to the student learning experience.





“ In order to continue down the path of personalized learning, we need to tell the story of kids and celebrate educators who are doing this work. Find the stories to showcase the incredible benefits. The reason educators get into the business is to make a difference in kids’ lives. But we don’t do a good job in education socializing the benefits of approaches like student-centered learning that truly work for kids. ”

BILL BASS

Innovation Coordinator: Instructional Technology,
Information, Library Media, and Federal Programs,
Parkway Schools, MO

AI and Education

In November 2022, OpenAI released ChatGPT, a generative large language technology.

By January 2023, everyone was talking about the promises and perils of artificial or augmented intelligence (AI) for education. *Including ChatGPT itself.*

We interviewed ChatGPT and asked:

What are the promises and perils of AI making recommendations to teachers about how to best support students?




PowerSchool

Promises

The promises of AI making recommendations to teachers about how to best support students are numerous. Some of the most significant include:

- 1. Personalization**
AI-powered recommendations can help teachers personalize learning experiences for students, tailoring instruction to their individual needs, strengths, and weaknesses.
- 2. Efficiency**
AI recommendations can help teachers to quickly identify areas where students may be struggling and provide targeted interventions, saving time and resources.
- 3. Improved Outcomes**
AI recommendations can help to improve student outcomes by identifying areas where students may need additional support and providing targeted interventions to address these needs.
- 4. Data-Driven Decision Making**
AI recommendations are based on data analysis and can provide teachers with insights into student performance and progress over time, helping them to make data-driven decisions.




Perils

However, there are also potential perils associated with AI making recommendations to teachers about how to best support students. Some of these perils include:

- 1. Bias**
AI recommendations can inadvertently reinforce existing biases and inequalities if the underlying data is biased or if the algorithm is not designed to account for these biases..
- 2. Overreliance**
Teachers may become overly reliant on AI recommendations and fail to consider other factors or use their professional judgement, leading to potentially negative outcomes.
- 3. Privacy Concerns**
AI recommendations may involve the collection and analysis of vast amounts of student data, raising concerns around privacy and data security.
- 4. Ethical Concerns**
AI recommendations may raise ethical concerns, particularly around the use of student data and the potential for AI to make decisions about students without human intervention.

In fewer than 15 seconds, AI took stock of its own pros and cons, with a respectable, even-handed and comprehensive [self]-reflection.

We also found that ChatGPT can be bullish about AI’s impact on education. We asked:

Are we in a new era of AI-driven education innovation? 

Its response:

Yes, we are in a new era of education innovation driven by AI.

AI technologies have the potential to transform education by providing personalized learning experiences, improving student outcomes, and supporting teacher decision making.

It is essential for educators, policymakers, and technology providers to work together to ensure that AI is integrated ethically and effectively into the education system. By leveraging the potential of AI while addressing its potential pitfalls, we can create a more effective and equitable education system for all learners.

-Chat GPT, March 2022 (Open AI)

Why didn't this technology take a more measured approach to its potential? What led the generative "scraping of the internet" to a proposition of strong belief in [itself], when so many experts are concerned that without guardrails, this technology can become bigger and more powerful than we may conceive right now?

ChatGPT is one major technology of many AI technologies emerging. As of Spring 2023, there were dozens of AI tools available specifically for education uses.

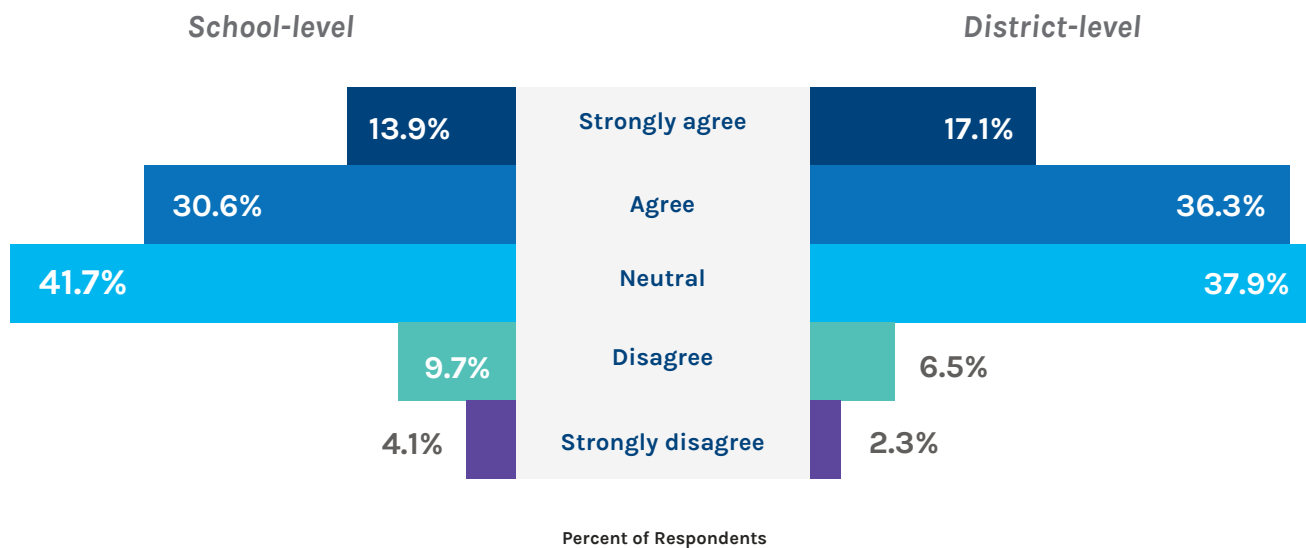
We interrogate the notion of trust and AI below. But first, we turn to educator perceptions on AI and how they are thinking through practical applications.

Most Educators Neutral on AI, District Leaders Optimistic

We asked educators for their perspectives on the potential of AI to enhance teaching and learning. We found that school-level educators exhibit careful intrigue, while district leaders are more optimistic and hopeful.

FIGURE 10.

Survey Prompt: I see value in the potential of Artificial Intelligence (e.g., ChatGPT, Jasper, etc.) to enhance teaching and learning.



The differences in perceived enhancement to teaching and learning between school and district levels may stem from how these educators are thinking about application of technology and whom this technology can benefit most.



“

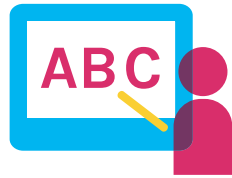
I think we're seeing a lot of interest in generative AI. I was shocked at the number of staff who signed up for a session recently to discuss AI potential uses and implications. There's fear but also intrigue about AI. We are 100% figuring out how to use this technology. I think there's huge benefits to save teachers time.

”

KRIS HAGEL

Executive Director of Digital Learning,
Peninsula School District, WA

53% of district-level leaders agree in seeing value of AI for teaching and learning, compared to 44% of school-level educators.



The Promise of AI: Give Teachers Time Back

We spoke with many education leaders and learned their major focus and interest in AI is not how students are currently using it or will use it (although these topics are important).

Rather, school and district leaders are interested in how AI can support educators and give them critical time back to focus on what matters most—building relationships with students, leading and supporting their learning, and guiding them through challenges.

Kris Hagel, Executive Director of Digital Learning at Peninsula School District in Washington, points out that their district is not worried about students using the technology to, for example, write five-paragraph essays.

"We've been trying to get teachers away from doing that for years. And if students are using it to cheat, change how you teach. Yes, we're having conversations with students about the ethics and bias of AI. But we're spending time focusing on how AI will save teachers time."

Hagel outlines some preliminary examples of how AI might save teachers time:

- Ask AI for word problems on math equations, or ask it to write customized questions for all students in the class
- Ask AI to help draft lesson plans, such as a three-week curriculum on a text
- Give AI a rubric and have it grade students' work using that rubric

As educators grapple with this new technology, many are wary about the algorithms driving its determinations. Greater transparency will be needed, along with guardrails—either at the district, state, or federal level—to promote ethical applications.

Rapid AI application expansion will create practical value for educators, increasing its allure. Through this, educators must decide whether and to what extent to trust AI.

More sophisticated tools will soon enable fast student learning data analysis and instructional recommendations and check lesson plans against learning standards. In sum, AI holds major promise to make curriculum and lesson planning,



grading, and personalized learning experiences all easier and simple than ever before.

Whether humans will understand, adopt, trust and use AI (or criticize and reject it) are the looming questions of our time.



Trust is critical to the forward movement of AI and innovation in K-12 schools. The teacher culture is one of ‘show me your thinking’ and this needs to be recognized if and when AI is incorporated into instructional decision-making processes.

SHERRARD LEWIS MARTIN | Project Director of Federal TSL & GEAR UP Grants,
Iredell-Statesville Schools, NC

Educators Optimistic about Evolving Role of Teacher

Technology is changing what it means to be a teacher.

Fifty years ago, teachers were the gatekeepers to knowledge and opened that gate through their pedagogical process. Twenty years ago, teachers began to leverage technology and use data to inform practice and augment the student learning experience.

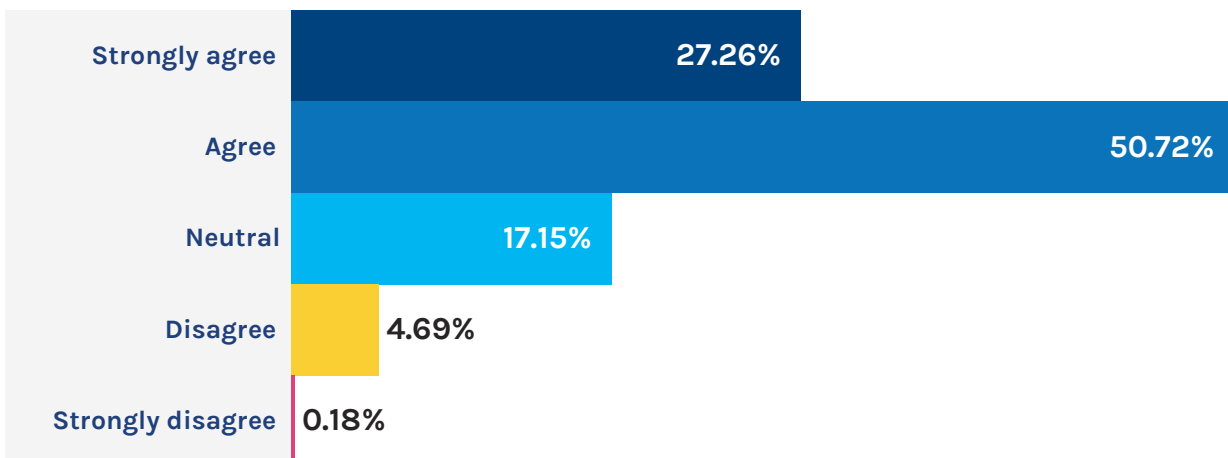
Today, teachers are facilitating student-led learning to greater extents. To do so, they must exercise data fluency and make creative and impactful use of technology, which will likely soon include using AI to achieve efficiencies in lesson planning, grading, and teaching itself.

We asked educators their perceptions about these changes and found most were optimistic.

FIGURE 11.

Survey Prompt: When I think about how the role of teachers is changing through the increased use of technology and data, I'm optimistic for the future.

School-Level



Let's harness this optimism as we explore how educators and instruction can be better supported.



Focus Area 2

Supporting Educators and Instruction

Increased workforce challenges and new shifts in professional development tell an evolving story of the teaching role and craft.

We also take a closer look at career readiness and how edtech can strengthen these efforts.

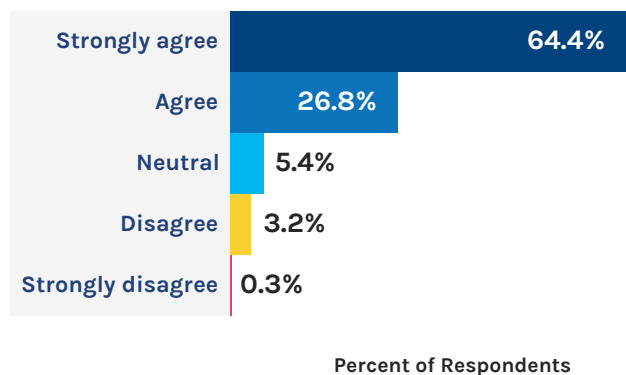
Teacher Retention Harder Now than Ever Before

We can't talk about supporting educators and instruction without first addressing the real workforce challenges school and district leaders are facing.

Exact numbers of teacher shortages are notoriously tricky to measure due to varying definitions and reporting data across states. Some of the latest data available shows more than 36,000 vacancies nationwide, with states in some regions, such as the southeast (Florida, Georgia, Alabama) dealing with 3,000+ educator vacancies each.¹¹

FIGURE 12.
Finding and keeping good teachers is harder now than it's ever been

[School and District]



According to the sixth American School District Panel Survey conducted in Fall 2022:¹²

Teacher turnover increased four percentage points above pre-pandemic levels, reaching 10 percent nationally at the end of the 2021–2022 school year. Principal turnover increased too, reaching 16 percent nationally going into the 2022–2023 school year.



Teacher turnover in 2021–2022 was highest (around 12 to 14 percent) in urban districts, high-poverty districts, and districts serving predominately students of color. Meanwhile, principal turnover was highest (around 21 to 23 percent) in high-poverty districts and in rural districts.



We asked district leaders about their educator shortages. Over 90 percent of education leaders agree that finding and keeping good teachers is harder now than it's ever been. Two out of three strongly agree.

According to a recent Annenberg Institute study, interest among students to enter teaching, preparation for entry, and job satisfaction is at a 50-year low.¹³ **"Most of these declines occurred steadily throughout the last decade suggesting they are a function of larger, long-standing structural issues with the profession."**

School Leaders Get Creative and Methodical to Find & Retain Talent

Whether workforce shortages will follow a longer arc or not, district leaders are acting boldly now.

Dr. Chris Diggs, Chief Information Technology Officer at Albermarle County School District in Charlottesville, VA, shares, "We started this school year with shortages in math and special education. One of our solutions was to leverage teaching assistants and work with them to get them into teaching positions and subsidize their postsecondary training and credentialing. This is part of a new educator pipeline initiative to get ahead of shortages."

"We've hired a talent, recruitment, and retention specialist. We're doing listening tours, where educators can share input and express themselves. We're doing retention interviews, where you can talk about what motivates you as a teacher and keeps you here. These have been really enlightening," shares Diggs. "We also hired a market study to look at compensation now and going forward, e.g., cost of housing, benefits, etc. So, we are taking informed steps to retain teachers."



In the same breath some leaders are saying they have big teacher shortages, but they want to raise licensing standards. I'm not saying don't have standards, but raising the standards right now in our current context is really challenging.

Our teachers—teachers of the deaf—need to have a Master's degree, which is limiting already. Beyond that, our state is asking that teachers get additional training and credentials in each subject area they're teaching (math, or history, or social studies). We can only do so much. We have to help our schools address these vacancies.

**DR. MICHELLE TANNER | Associate Superintendent of the Deaf,
Utah Schools for the Deaf and Blind, UT**

Barbara Haeffner, Assistant Superintendent for Teaching and Innovation, Meridan Schools, CT, shares, **"Each year, we provide our teachers with dashboards that reflect the metrics we use with our students, attendance, academics, and behavior. We use the tool as a springboard to ask teachers what support they may need throughout the year. We recognize teachers who have made academic growth with their students at board meetings and award them ribbons that are displayed in their classrooms. These strategies build a positive climate and culture, and Meriden Public Schools is where teachers want to be."**

Private schools are taking a similar approach. **"We are methodically addressing key factors for attracting and retaining teachers, including competitive salary, benefits packages, professional development opportunities, and a supportive work environment. Our comprehensive evaluation process featuring regular assessments and feedback sessions, ensures understanding and effective response to teaching staff needs, aligning with our mission and values,"** Challenger School's Research Director noted.

We surveyed educators on whether technology is being used effectively to support growing talent needs. Most identify observation, evaluation, professional learning, and hiring as practice areas where technology brought value. But overall, we find technology is underused when it comes to talent needs.



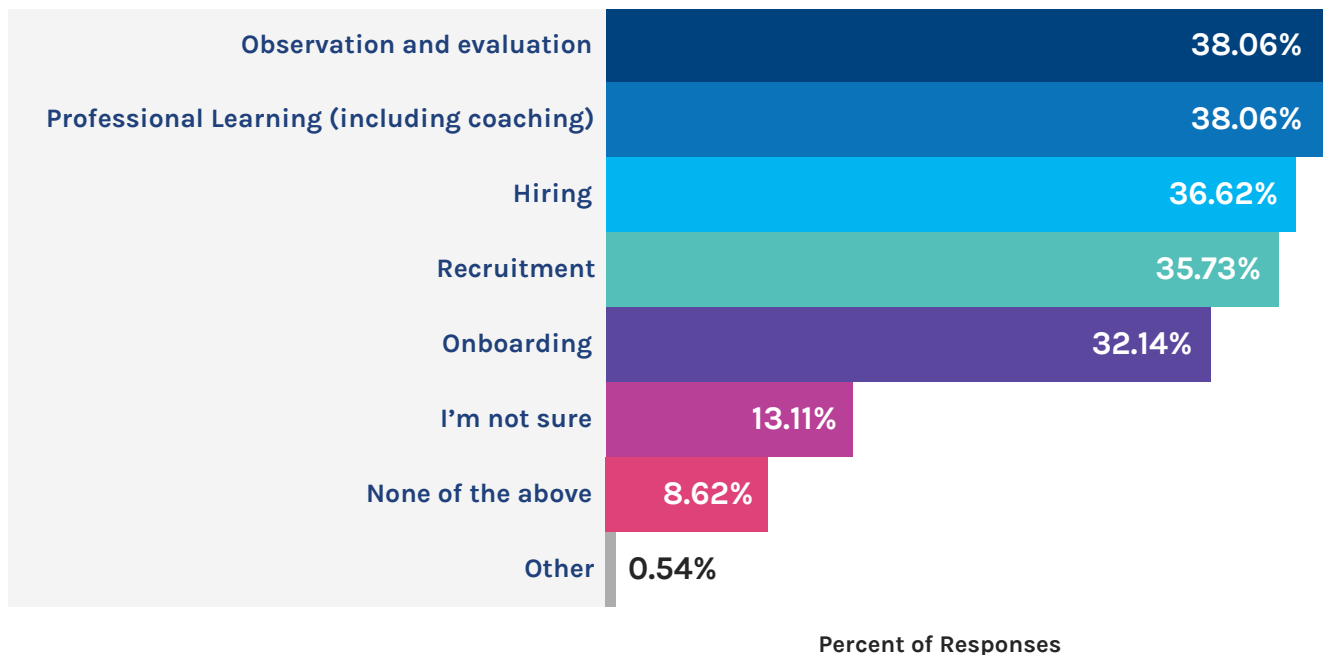
There are opportunities to leverage technology to support onboarding and recruitment.

With heightened turnover, districts are considering how to support novice classroom talent in their first years of teaching while providing professional learning that pinpoints educators' needs.

FIGURE 13.

My school district uses technology effectively to support the following talent needs

(Select all that apply).



Social and Emotional Learning PD Surges in SY22-23

In 2022, educators shared that the pandemic disrupted or delayed professional learning efforts. This school year, school and district leaders shared that they were able to deliver much needed professional development in greater volume.

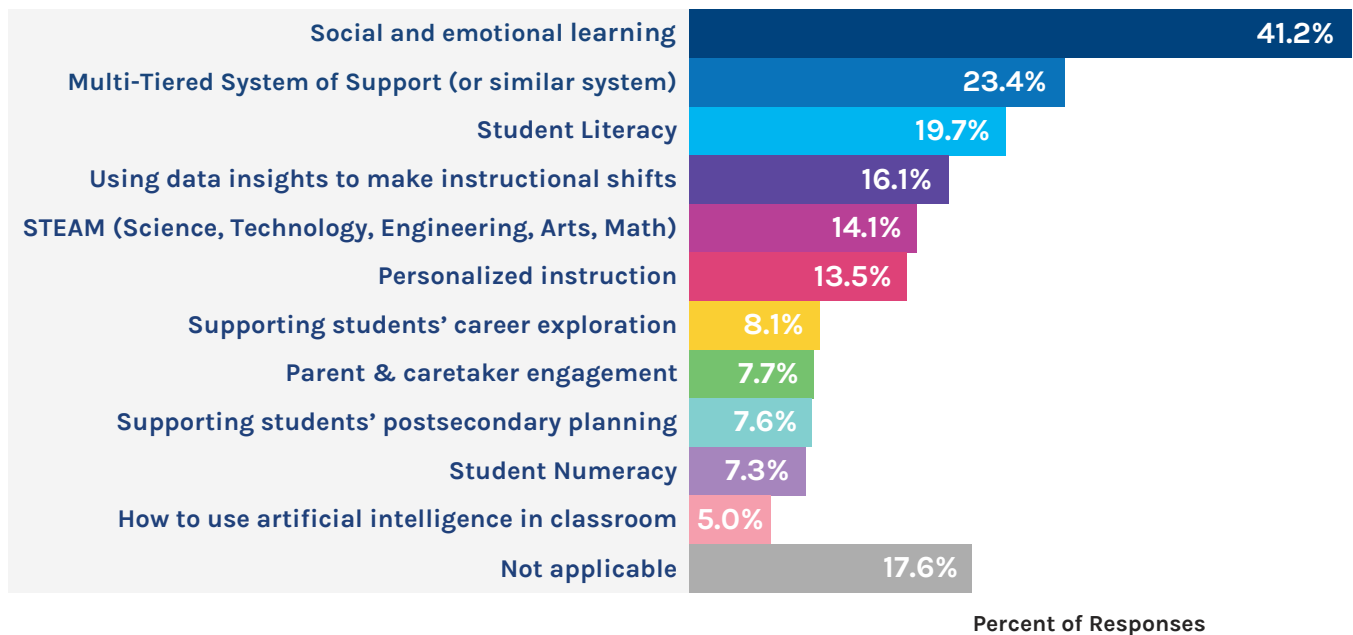
We wanted to understand the focus of these supports.

Social and emotional learning PD has grown the most, according to our national survey results. This aligns with PowerSchool’s 2022 research showing that K-12 institutions are prioritizing the whole child, including positive behavioral supports, social and emotional skills, and mental wellness.

FIGURE 14.

Compared to prior years, I’ve received more professional development in these areas this school year. (Select all that apply)

[School-level]



MTSS, student literacy, and data insights take the other top slots. This increase in tiered support practices is also identified as an expanding district strategic priority area. AI and parent and caretaker engagement ranked low.

Just **4 in 10** educators say they receive **quality professional development** to personalize learning for students.



Reflecting on professional learning areas and focus, Peggy Jones, Ph.D., Director, Accountability, Research, and Measurement in Pasco County Schools, Land O' Lakes, FL, shares that this school year, "**We had to build a shared language and norm on what exactly does high-quality Tier 1 instruction look like for us. That starts with a strong curriculum. We have identified a need in the area of foundational skills, so we are focusing on that.**" She adds that "**we love the idea of giving students choice when it comes to building personalized learning practices.**"



Most Valuable PD: PLCs, Multi-Session Workshops, and Coaching

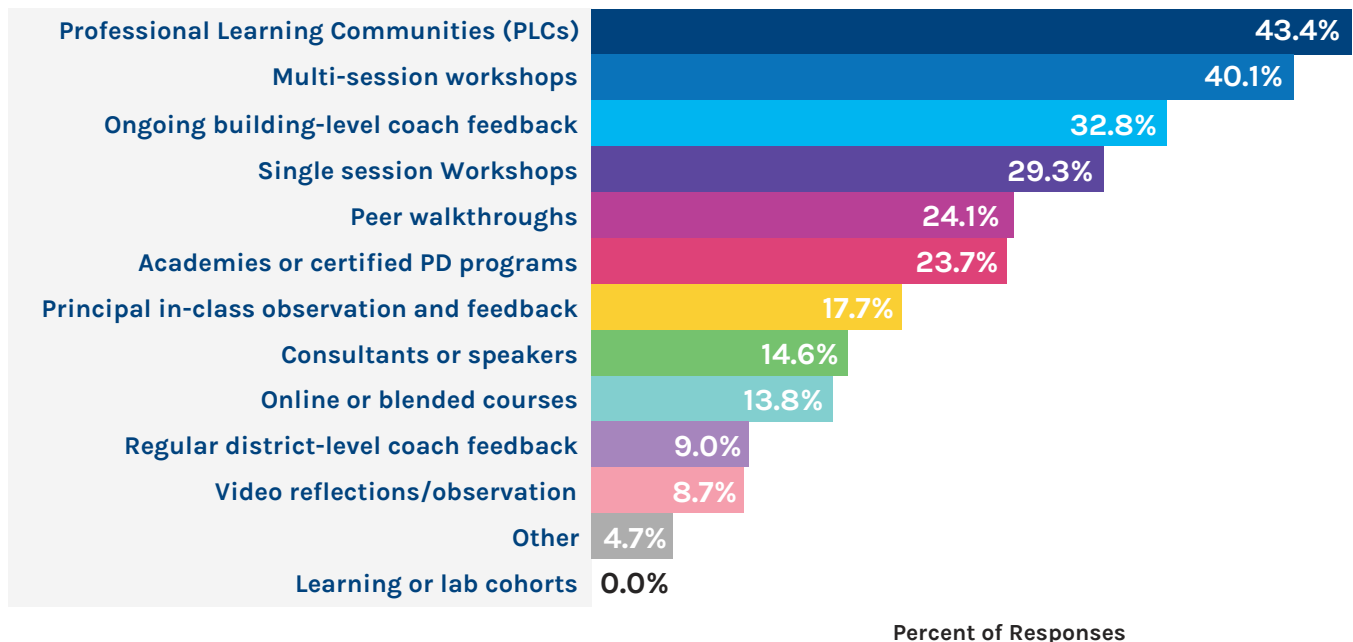
Both years PowerSchool has surveyed educators on the most valuable professional development formats, Professional Learning Communities (PLCs), extended workshops, and coaching were named as the best way teachers learn and shape their craft.

This is encouraging, because peer collaboration, learning that builds on itself, and school-based coaching all resonate with research on core components of effective professional learning.¹⁴

FIGURE 15.

From the list below, select three types of professional development that provide the greatest value to improving instruction.

[School-level]



Lower on the list are video or streaming courses. We asked why.

Dr. Tracy Daniel-Hardy shares that Gulfport Schools "have instructional technology specialists to ensure teachers have what they need to engage with professional learning. COVID pushed us to use more on-demand training through video and streaming tutorials. Video PD is great for busy teachers during the day, but for the most part face-to-face is preferred. It's good to have variety to meet different learner needs."

We also heard that because in-person learning—the common factor across the top three most valuable PD approaches—was paused during the pandemic, educators are more motivated to work together face-to-face, much like students are with their peers.

Over

7 in 10

educators agree with the statement,

"I prefer in-person coaching to virtual;

you just can't replace the value of face-to-face instructional support."



Educators Say Computer-Guided Learning Content, Career Exploration Innovations Hold Most Potential to Help Students

We asked educators their perspectives on innovations that have the greatest potential to help student learning.

Increasing numbers of school districts are using edtech platforms that generate content aligned to student learning levels and offer near-instantaneous diagnostic readings of student needs and suggestions for teachers about how to address them. These innovations are being met with empirical studies showing measurable positive learning impacts.¹⁵

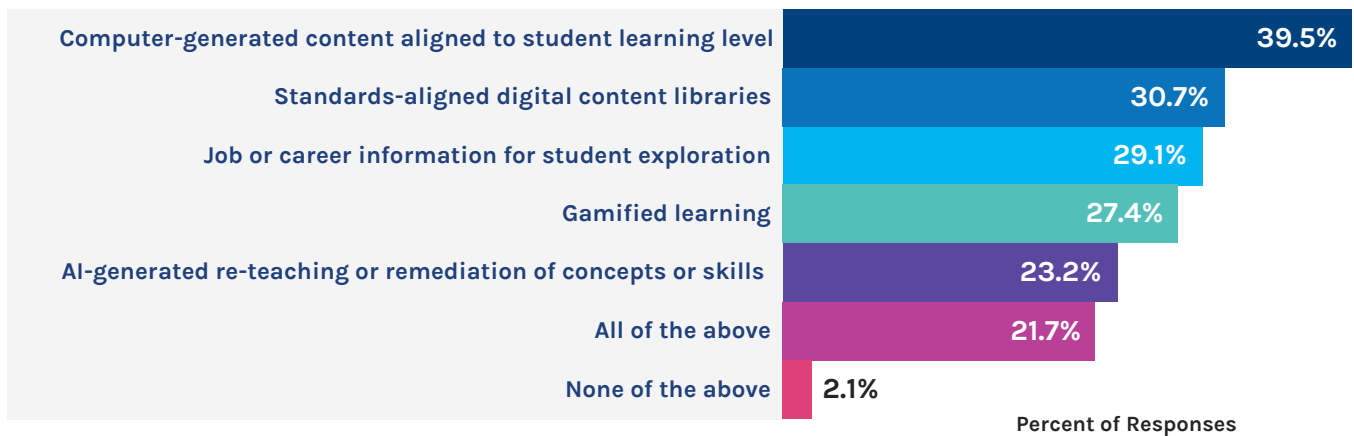
Educators are picking up on the promise of machine learning or AI-based content prompts and instructional suggestions, rating them as having great potential to help students. If the content is standards-aligned, all the better.

Educators are also optimistic about job or career information tools providing clear and compelling learning experiences to inform students' thinking about their skills, passions, and workforce options.

FIGURE 16.

From the list below, select two learning content innovations that have the greatest potential to help student learning.

[School-level]



Shaping the Instructional Experience: How Edtech Supports Career Readiness Efforts

Speaking with education leaders, we heard a growing need to incorporate career readiness skills into K-12 instructional best practices.

Recent declines in college admissions indicate that students and families are more unwilling to take on the debt of a four-year degree if the benefit is not clear, or information about financial aid and the college admissions process is murky.¹⁶

Simultaneously, obtaining industry certifications, acquiring work-ready skills at technical and community colleges, and participating in apprenticeships have all increased in value for students.¹⁷

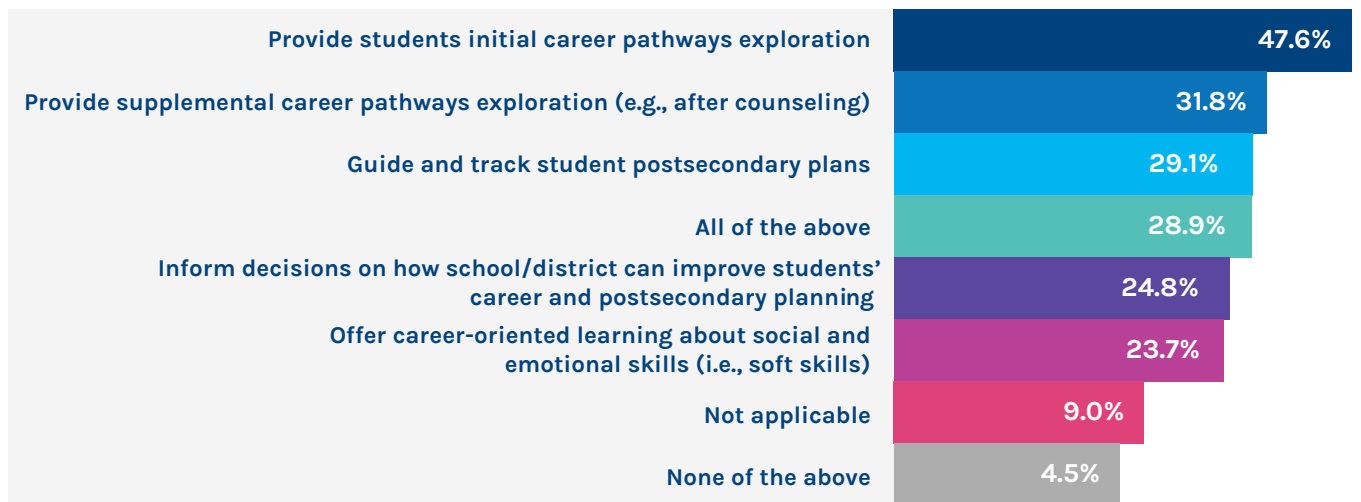
We found that using edtech to deliver career readiness instruction varied among schools. Most survey respondents said that their school uses technology to provide students initial career pathways exploration.

However, fewer respondents said edtech was used to provide supplemental exploration after counseling, used to guide and track postsecondary plans, or offer career-oriented learning about social-emotional skills.

FIGURE 17.

In terms of career exploration and postsecondary planning, my school uses technology to:

(Select all that apply).



Percent of Responses



So how can K-12 best facilitate career readiness?

For a long time, K-12 education considered career skills as a binary equation: soft and hard skills. There is a third category, however: career navigation skills. This skillset is critical in identifying the alignment between student interests, aptitudes, financial goals, and setting goals and developing action plans to pursue a career. We spoke with Dana Ryan, Vice President of Academic and Student Affairs at Western Nevada College, NV.

Ryan urges that **"building career navigation skills is urgent and critical. Starting in elementary school, we must teach students using workplace applications of core subjects, such as English and math. In addition, we need to teach students how their skills are transferable. Students will have a new job every 3-5 years. We better teach them how to pivot."**



Education has not adequately embraced the narrative that we are preparing young people for lifelong career success where they will spend significantly more time working than they will in formalized education. To prepare them to best manage their path to success, we must equip them with career navigation skills.

**DANA RYAN | VP Academic and Student Affairs,
Western Nevada College, NV**

Career navigation skills enable students to pursue life goals with success and satisfaction, manage personal career pathways, and engage in lifelong learning and earning. Career navigation literacy includes the following key components:



Labor Market Knowledge

Knowledge of in-demand industries, occupations, and career pathways.



Self-Discovery Skills

Skills to think critically about one's own strengths and interests, and align those qualities with careers that feel meaningful and purposeful.



Goal Setting and Planning

Ability to create an action plan for employment, continuing education, and career advancement.

Increasing adoption of Profiles of a Graduate—essentially summaries of what students should know and be capable of after completing high school—provides a bridge between career readiness and workforce preparation.

But these Profiles lack an explicit consideration of career navigation and labor market literacy skills.

Ryan shares that there's a big opportunity to infuse K-12 instruction with practical connections to careers, such as writing a memo to your boss when learning to write a persuasive essay. Drawing clearer connections between what students learn in the classroom and the applicability of those skills in the workforce also helps build career navigation literacy.



Focus Area 3

Solving for the Future with Usable Data

The pandemic increased educators' use of data to address student learning needs.

In this section, we explore whether usable data is a reality, the role of data governance, and the latest insights on multi-tiered systems of support (MTSS). Each of these elements play into the equation to solve for more personalized learning in the future.

Educators need usable student data—learning measures, but also positive behavioral and social and emotional development—to design learning experiences that are rigorous and personal. Counselors need usable data about students' career aspirations to nurture their pursuit of pathways. School leaders need usable data to support their staff and allocate resources in a responsive way.

When surveyed, many educators said they agreed they have data at their fingertips to improve instruction. This was not always the case.

Just two decades ago, the Elementary and Secondary Education Act (ESEA), reauthorized as No Child Left Behind (NCLB), initiated a wave of "data-informed decision-making" conversations in K-12 education. In a 2009 report—eight years after NCLB became law—the U.S. Department of Education wrote about the availability and use of data in schools:

Although teacher-reported access to student data systems is growing rapidly, the data systems themselves are currently not supporting instructional decision making at the school level. District data systems often cannot share data across systems, are not user friendly, contain limited data, and lack instructional tools to help teachers act on the data provided to them.¹⁸

—2009 U.S. DEPT. OF EDUCATION

Is data really more available and usable now? We dig into this, and opportunities for improvement that remain.



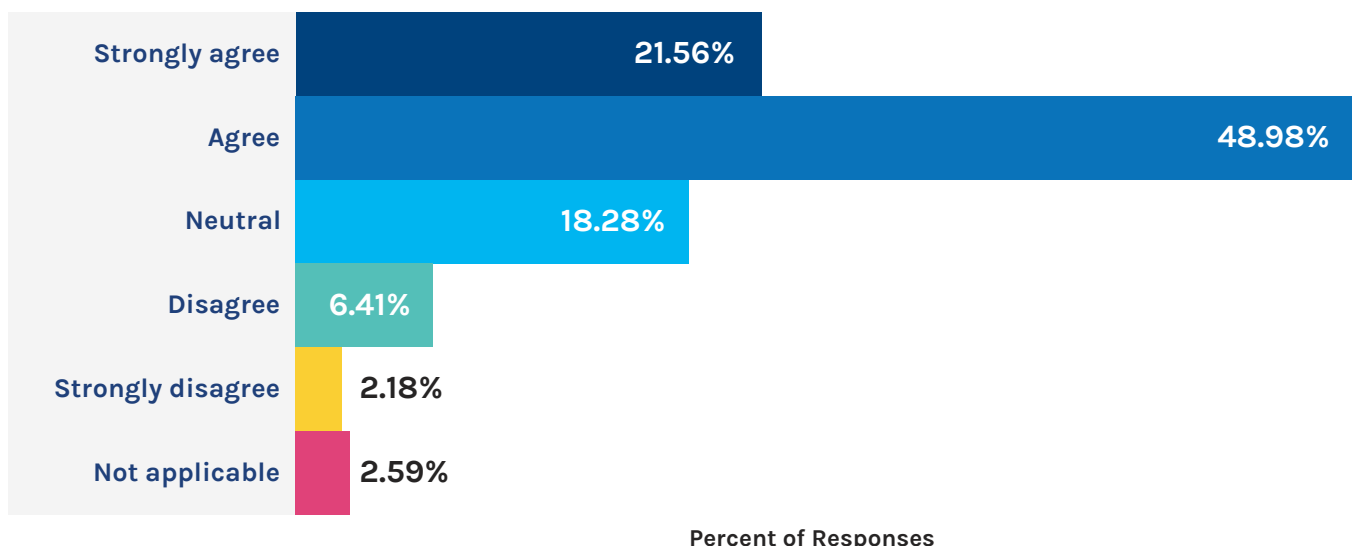
Most Educators Report Usable Data Is Now at Fingertips. The Reality Is More Complex.

School and district education leaders have embraced data, and data culture is visible in the work of classroom educators and school-based staff.

According to our national survey, 7 in 10 school-based educators agree with the statement, "I have usable data at my fingertips to help improve the quality of instruction."

FIGURE 18.

I have usable data at my fingertips to help improve the quality of instruction.



But what does usable data mean to educators? The answer varies.

"Each person can define usable data differently," Dr. Chris Diggs shares. "Unless you've had deeper training about what usable data looks like to answer problems of practice, some may assume they have it."

Dr. Michelle Tanner reflects, "Educators have more data than they've ever had at their fingertips. That's part of the bigger problem. Sometimes schools get overwhelmed with how much data is now available and need guidance about which path to travel down with it."

“

With how consistent and available surface level data is (like attendance and grades), it leads many of us to say ‘yes we have usable data.’ But when we ask ‘why?’ about a dataset, we often find the data doesn’t exist to answer that question, or we have it for some students but not others. We have a long way to go to address gaps in data and understand connection between inputs and outcomes. ”

”

CHRIS CROMWELL

Instructional Technology Coordinator,
West Chester Area School District, PA

We sought to understand how usable data figured into district leaders priorities in the coming year and beyond. The top four priorities were:



Learning analytics
(visualizing student academic data)



Whole child analytics
(visualizing student behavioral and mental wellness)



Data integration as a service
(connecting data for ease of use)



Organizational analytics
(visualizing district data)

Only **2 in 10** educators "strongly agree" they have usable data at their fingertips to improve instruction. 5 in 10 "agreed."

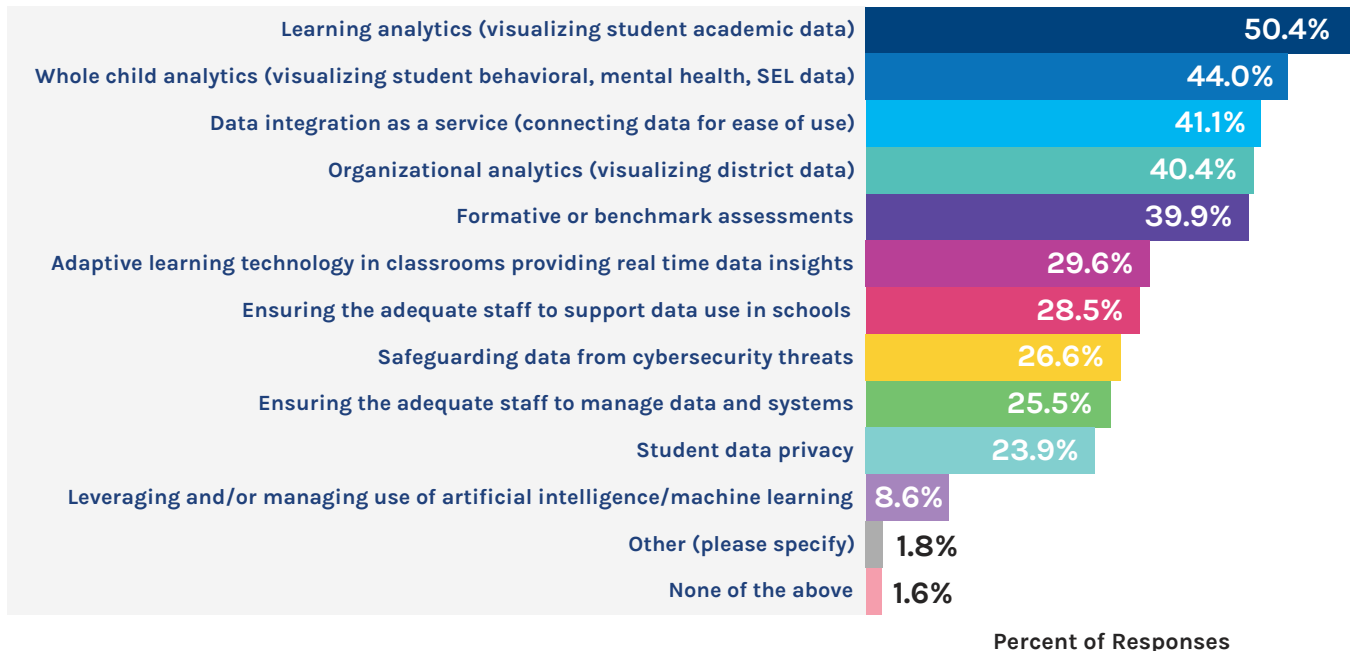


These top data priorities edged out cybersecurity, staffing, data privacy, and leveraging AI.

Combined, the focus on analytics and data as a service underscore where school systems are in their data modernization journey; namely achieving more comprehensive, connected, and ultimately, usable data as the top priority.

FIGURE 19.

Select the top four data priorities for your district in 2023.



Clarifying What Usable Data Means

Education and technology leaders shared what they learned about what it takes to obtain more usable data. They identify three critical needs:

- 1** Connect data across systems by insisting on standards
- 2** Embed actionable (vs. informational) data in high-usage systems
- 3** Provide ongoing training to individual teachers and educator teams



Connect Data Across Systems

There's often a gap between data connectivity goals and reality.

True interoperability—where data seamlessly pass between systems, e.g., a student information system (SIS) to a learning management system (LMS) to a parent and caretaker communication system and back to the SIS—is the north star for many information and technology leaders.

Interoperability is the foundation of usable data because it delivers a shared source of truth to all users and enables critical information sharing with little to no friction.

Interoperability depends in large part on the school system and its edtech vendors adhering to key expectations in data exchange. One of the key ways to achieve this is data standards, such as Ed-Fi, One Roster, or Common Educational Data Standards (CEDS). These standards and practices are managed by standards bodies.

These standards bodies have curated core data models into a common format that vendors certify against. The certifications allow states and districts to rely on and pull common data elements from multiple systems into their central repositories.

These standards-based data sets do not represent all data, but each data set grows through working groups and special interest groups (SIGs).



“

We used to be in data overload. We have state and formative assessment data, and so much more. Data lived in many systems.

Tech has enabled us to combine the data picture, enabling individualized student support. Kids ebb and flow in and out of additional supports they need at any given time; this is the power of usable data.

It's what we've been working towards for decades – interoperable data insights! ”

KIM NIDY

Director of Technology
North Canton City Schools, OH

These groups are governed by technical advisory groups and advisory boards made up of stakeholders within each standards body. As these groups help define and expand the data standard elements, states and districts are rolling back custom solutions and adopting common data standards.

As school systems evolve their use of standards, standards bodies are expanding their focus to standardize data areas underserved by common data standards to date. For example, there is now a major focus on achieving usable, connected PK20W data as more state leaders place higher demands on understanding the linkages to addressing workforce needs and growing their economies.

1EdTech has led the charge to synthesize and define standards for interoperability.¹⁹

Tim Clark, VP of K-12 Programs at 1EdTech, shares:

"Members are increasingly requiring that applications meet 1EdTech's standards rubric. EdTech suppliers are realizing that they want to do well and are thankful for the direction to improve."

Clark adds, **"Teachers and tech coordinators and school leaders have a big role to play by providing input and feedback, such as where edtech isn't meeting privacy and interoperability standards. Districts need a way to catalog and vet applications for efficacy, safety, etc. They often need a partner in this work."**

Vendors and integrators can augment standards-driven data by using numerous custom and proprietary Electronic Transfer and Load (ETL) methods for disaggregation.

Many of these standards enable states and districts to easily share important compliance and funding data. These new standards-based approaches constituted a major improvement from old practices of district batch uploads and manual submissions.

This modern form of data transfer using standards is automating and validating data for state education agencies and school districts, powering data dashboards and downstream systems. As indicated by our national survey of district technology leaders, there is a growing interest and investment in the data as a service model for more secure and curated data streams.

Embed Actionable (vs. Informational) Data in Day-to-Day Systems

Ryan Gravette, Director of Information and Technology at Idaho Digital Learning Academy, ID, shares that **"It's really about delivering data within the existing systems so there's embedded insights. It's not about a third widget on a two-widget dashboard."**

He continues, **"When you log in to the learning management system, for example, we're surfacing actionable data for teachers and parents. We pull data from all systems, connect it via our data warehouse, and incorporate in the relevant tools. Multiple rounds of meetings with end users have provided feedback to get this right."**

Moving from disconnected, incoherent data to interoperable and reliable insights for action means many school systems have reached a critical milestone in data practices. There remains much room for growth in this area, and education technology suppliers can in many ways lead the charge to embed and connect data in day-to-day systems.

Provide Ongoing Training to Individual Teachers and Educator Teams

No matter how connected and usable, data is meaningless unless people know how to use it.

Training takes time. But even time well-spent merits justification.

Kadion Phillips, Director of Educational Technology for Oxford Public Schools, MA, shares, **"If you're going to spend time learning something—in this case, how to navigate systems and available data—be clear on the why. Time is the most precious resource for educators. Investing the time in using data for increasing positive impact on students is key."**

Educators shared that they benefit immensely from training and data coaches to move from information to insights and action.

Kim Nidy of North Canton City Schools, OH, shares, **"We need positions to help us take next steps in how we use our data. We have so much data, we need support roles to manage how we take our next steps with using data to motivate teams and take action."**

Many school systems offer educators data coaches, but these critical support staff often are subject to budget constraints. As districts navigate the last year or so of ESSER funds, district leadership should consider the importance of data support staff in achieving effective data practices. Systems and processes only go so far.



We are valuing valid data more than ever before. Our teachers are looking at the data that leaders are bringing to them and asking what's going on and how do we use this data to better support our kids. This has been a journey, and leadership focus on using data has been critical.



SHERRARD LEWIS MARTIN

Project Director of Federal TSL & GEAR UP Grants,
Iredell-Statesville Schools, NC

The Future of MTSS: Less, Not More

Last year, our 2022 Education Focus Report noted that MTSS frameworks were gaining traction across school districts. But many educators were overwhelmed or confused about what MTSS should be, or what it means for them.

For example, twice as many district leaders reported MTSS challenges as school-level educators, suggesting highly variable practices across schools.

"Sometimes you need a facilitator for change. COVID was it," reflects Tessie Bailey, Ph.D., Principal Consultant, American Institutes for Research (AIR).

"The pandemic gave permission to take on a more simplified approach that gets results. Those schools that streamlined their tiered supports approach are growing students and achieving better clarity."

TESSIE BAILEY, PH.D.

Districts that found success have focused on core programming and data-informed practices, and less on what the MTSS framework is or whether it meets a standard definition.

"Educators were saying: We can't be at 150 percent every day. COVID forced educators to think more strategically. If I have a kid needing math and reading supports, how can I feasibly provide those supports? Whereas before there were a lot of extraneous processes—intervention blocks for example—to get hung up on."

Bailey adds that after the first six months of the pandemic, schools' interest in MTSS grew rapidly. Pandemic relief funding changed leaders' orientation.

But schools were simultaneously trying to address students' and teachers' pandemic-based needs and undertake systemic change and getting overwhelmed.

"As a result, there was a real need to make MTSS manageable. We know we didn't have sustainable systems prior to COVID, but these new conditions required that we streamline to get results."





We need to step back and prioritize the things that produce the biggest effects.

To do that, we need to edit, and in some cases, subtract in order to simplify the [MTSS] work. Less can be WAY more. Giving kids the opportunity to learn using well-designed instruction and supporting their growth—that’s what matters most.

TESSIE BAILEY, PH.D.


Principal Consultant, American Institutes for Research (AIR)

FIGURE 20.
Editing Key MTSS Practices for Simplicity

Examples

	Existing Approach	Simplified Approach
Screen	Multiple screens across multiple domains – data overload!	➔ A few brief, valid and reliable measures predictive of risk
Assess	Multiple data teams working in isolation, data fishing or sifting through data ‘looking for patterns’	➔ Single decision-making team using standardized teaming structures that allow for efficient decision-making on previously selected areas of focus
Intervene	Too many interventions or interventions that can be delivered within the existing schedule	➔ A few high leverage interventions that can be adapted for individual student needs
Monitor Progress	Complicated systems that require loss of teacher time	➔ Engaging students in the progress monitoring process; simple data collection and graphing approaches

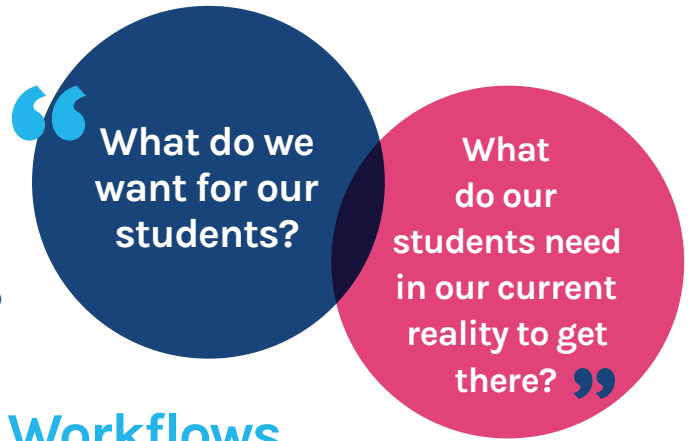
It’s also important to clarify how MTSS aligns with and differs from the four core personalized learning practices of differentiating instruction, using data to inform instruction, leveraging edtech, and promoting student agency in learning.

A woman with long brown hair, wearing a white cardigan, is leaning over a young boy with red hair. The boy is wearing a plaid shirt and is focused on writing in a notebook with a blue pen. The background is a soft, out-of-focus light blue.

“ High quality core instruction (in which personalized learning components are present) where 80% of students are benefiting and you just need tier 2 and 3 supports to support the 20 percent of students in need of remediation or acceleration has been lost in the excitement and funding focus on interventions. There’s been overemphasis on tier 2 and 3. You need an overall collective efficacy of Tier 1 instruction that sets the context of tiered supports to promote personalized learning. ”

TESSIE BAILEY
Principal Consultant,
American Institutes for Research (AIR)

When considering a way forward from the pandemic and system change, Bailey suggests leaders ask themselves and their teams two simple but powerful questions:



Using these questions as touchstones can help clarify what's critical and subtract extra work.

Intervention Impact, MTSS Workflows, and Whole Child Data: Updates from the Field

Intervention Impact

Tiered support systems like MTSS play an important role in driving pandemic recovery efforts. Can school and district leaders say with confidence they know which interventions work?

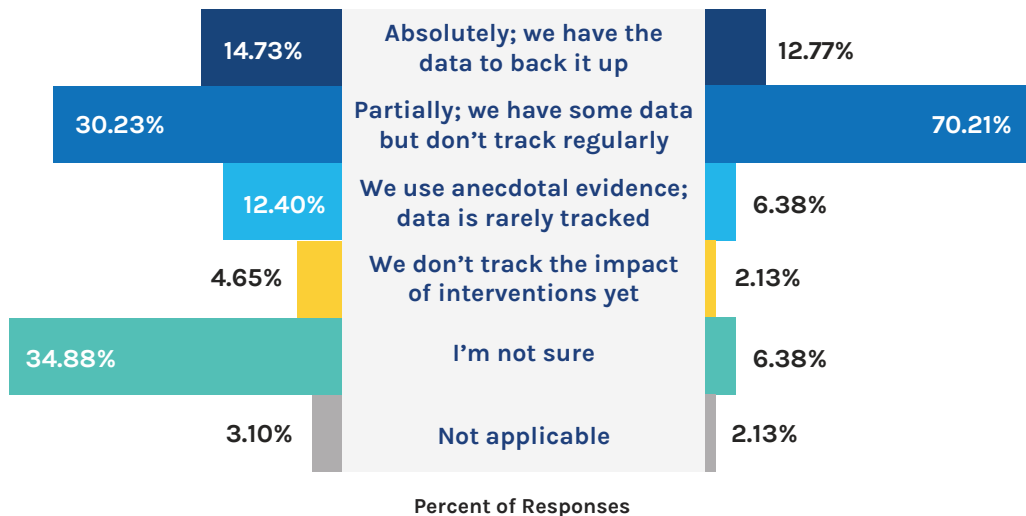
According to survey results, 4 in 10 educators can partially say which interventions are working, based on some data collected. Only 2 in 10 say they "absolutely" know what works and have the data to back it up.

FIGURE 21.

Can your district say which student interventions are working, based on data?

District Technology/Information

District Instructional Leader



This is clearly an area of opportunity, given the investment and focus on tiered systems of support. Without a cycle of effective monitoring of impact, schools must rely on anecdotal evidence or worse yet, assumptions about what gets results.

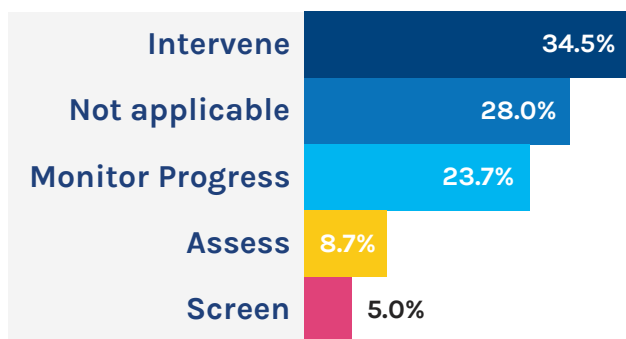
MTSS workflow challenges

We also asked educators which aspect of the MTSS workflow is most challenging.

FIGURE 22.

Which aspect of the MTSS workflow is most challenging?

(Select one)



Interventions were identified as the top challenge, followed by monitoring progress, both of which do not come as a surprise given the explosion of focus and energy on addressing student learning losses in SY2022-23.

Indicating the variety of tiered support approaches, many educators reported "not applicable," suggesting that close to 3 out of 10 educators do not implement Multi-Tiered Systems of Support (MTSS) per se or may not identify their tiered supports process as MTSS.



4 in 10 educators can partially say which interventions are working, based on some data collected. **Only 2 in 10** said they absolutely can say what works and have the data to back it up.

Whole Child Data

Educators want more data on whole child well-being.

They also need help achieving a holistic data view and balancing learning with wellness data.

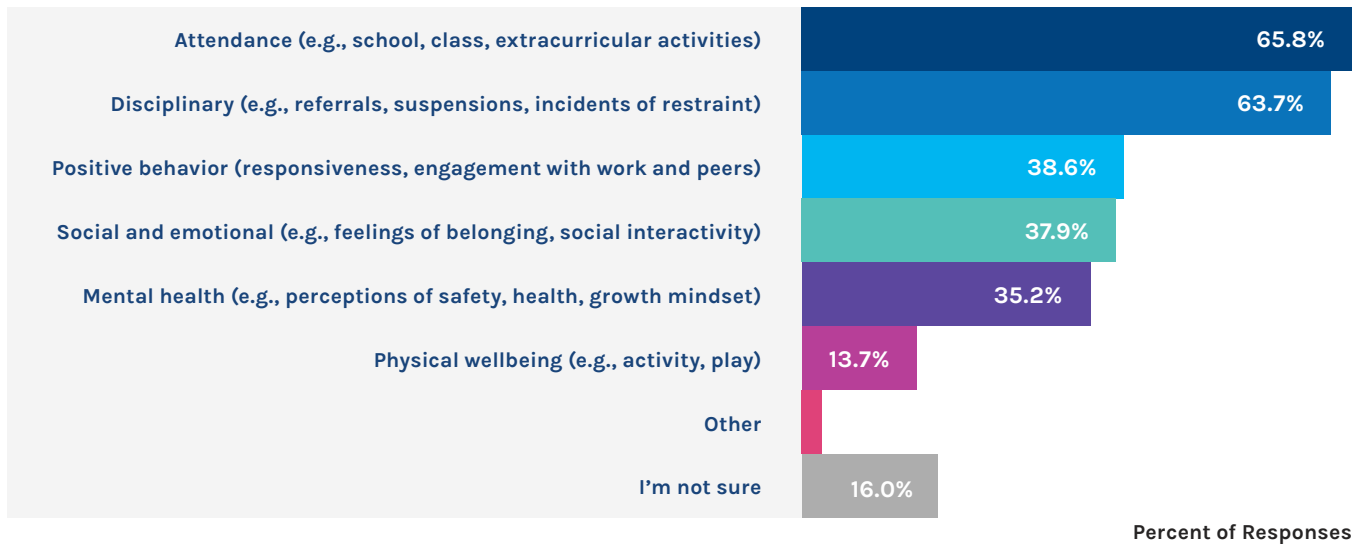
Kadion Phillips, Director of Educational Technology for Oxford Public Schools, MA, shares, **"We realized our data is in silos, and we implemented a unified data system, which has been a big ask for a number of years. How can we see the full picture for student attendance, discipline, academic progress data, etc.—all in one place? We want to see where students are struggling and look at correlations between data sets to unpack relationships and more systematically address needs."**

We asked educators what behavior data their school collects to inform supports. As expected, attendance, discipline, and positive behavioral support data surfaced to the top, with mental health and physical well-being data trailing.

FIGURE 23.

My school captures these student behavior data to inform supports

(select all that apply)



We dug into some of the existing assumptions and practices involving whole child data.

Bill Bass, Innovation Coordinator for Parkway Schools, MO reflects:

"We value school inputs and outputs. But we don't necessarily value the inputs that we don't control like what happens to student development in the home or amongst their peer groups. This is an opportunity."



We used ESSER funds to take a look at how we can expand some of the good work we were doing to address learning losses and improve our tiered supports processes. We had to step back and have very focused conversations with our teachers on what Tier 1 vs. Tier 2 looks like and what those processes are. So we had to do that before taking on new systems. We've made a lot of progress and we are in a better place now to enhance our data systems.

KIM NIDY | Director of Technology,
North Canton City Schools, OH

“

In order for us to meet our mission, we have to focus on the whole child.

We are trying to set up systems where the good in students is the default, and areas of improvement are the exception. Right now, education data systems are typically focused on tracking negative things, like behavior referrals and absenteeism. This shift requires having genuine conversations about what must change about the culture of data and valuing what we track in relation to our mission. ”

BILL BASS

Innovation Coordinator: Instructional Technology,
Information, Library Media, and Federal Programs,
Parkway Schools, MO

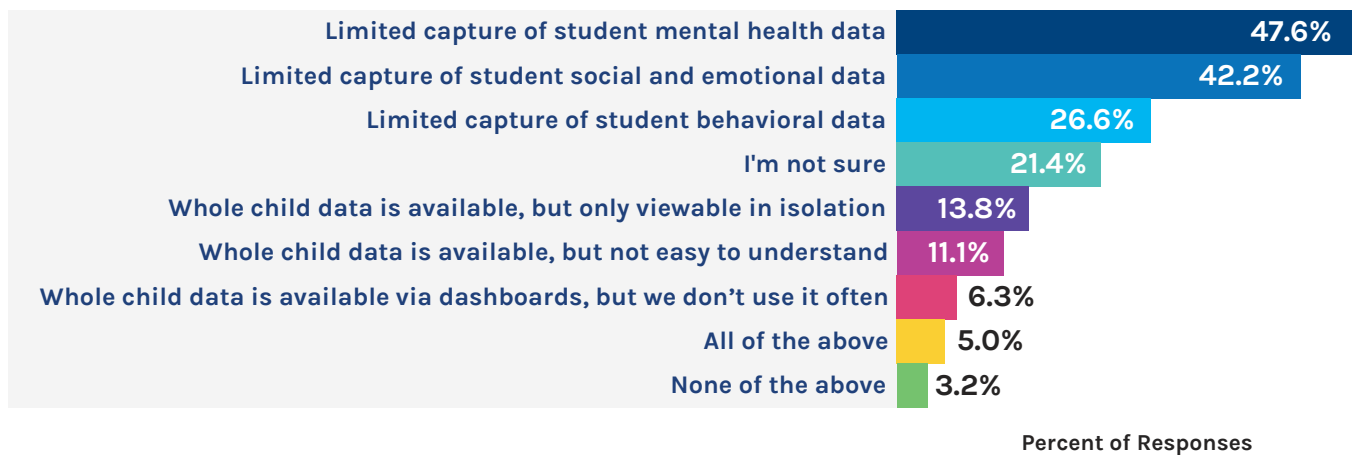
In terms of barriers or constraints to achieving a fuller picture of students, educators identified limited capture of mental health data, social and emotional learning, and physical well-being as top limitations.

As school systems work to expand their whole child data and align what they track to what they value, much depends on the larger architecture of how data systems are organized and connected to enable a shift towards more positive, mission-driven whole child data.

FIGURE 24.

Consider the use of data to understand and support students' whole child well-being.

Select all the barriers that apply to your school/district.



Data as a Service Is Revolutionary, but Effective Data Governance Is Key

We spoke with Tim Clark, VP of K-12 Programs at 1EdTech about a range of topics, from interoperability to innovation and the latest insights on effective data governance.

He discussed the promises and perils of increasingly popular cloud-based approaches to data governance through data as a service (DaaS) tools like data lakes, warehouses, and exchanges.

Tim shares, "The promise of DaaS is big. Data is accessible from anywhere. You don't need an extended data team to maintain it. There's flexibility, ease of use, and it's ready to be updated at any time."

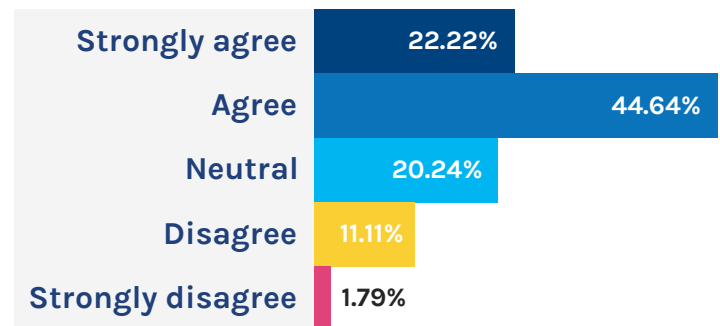
He continues, "One of the perils is how the data is being managed by the edtech suppliers. This must be clearly communicated. And of course, data can become exposed. But this same problem is possible with data hosted on premises versus in the cloud. Responsibilities are increased for suppliers. If there is a breach, they need to be timely in communication and contingency plan with schools to safeguard data."

We surveyed school and district educators on cybersecurity threats and data privacy. A majority—over 6 in 10 district leaders—report they agree that they have had adequate training in how to spot and/or avoid cybersecurity threats. While encouraging, the number and variety of cyber incidents publicly reported has trended markedly upwards over the past decade.

FIGURE 25.

I have had adequate training on how to spot and/or avoid cybersecurity threats

[District]



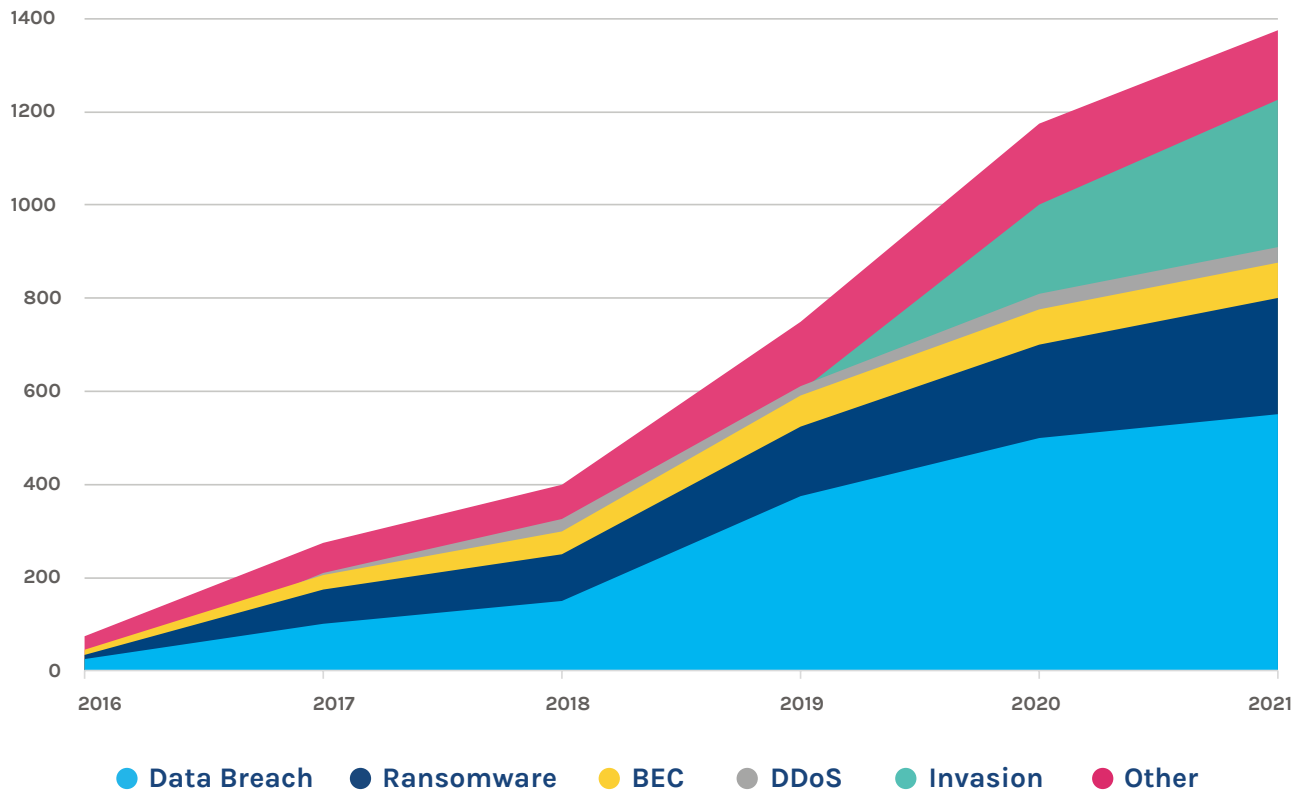
According to K12 SIX, a nonprofit K-12 education cybersecurity watchdog group, a projected 1,500 incidents (and growing) will occur in coming years.²⁰ Cybersecurity training is a key element to safeguarding school districts' critical data, including personally identifiable information.

So too is data governance.

We were interested: Are school districts getting better at governing data, and balancing access with security? What big trends are afoot in this area, and key takeaways?

FIGURE 26.

Number of K-12 Cyber Incidents by Type 2016-2021



Traditionally the superintendent is tasked by the school board to put a data governance model in place and the chief technology officer owns it. Really innovative CTOs are learning that data governance is shaped in partnership with academics, HR, finance, etc. Every department has to collaborate and have a voice.

TIM CLARK | VP of K-12 Programs, 1EdTech

We break down Tim Clark’s latest insights on data governance by people, processes, and systems:

1Edtech on Data Governance

People



One thing we’ve learned from district leaders is that everyone should have input in how data will be used. No one owns the data individually. It’s about data integrity. Whoever touches the data is a co-owner.



We’ve learned that leadership needs to look beyond their own district and join key networks to modernize their systems better.

Process



You can have a process in place but it can be overridden by urgent needs and demands and lack of interoperability. So, creating contingency procedures is key.



When school districts lean on partners to support edtech validation procedures, they benefit, especially when those apps are vetted by third parties, such as through 1Edtech’s TrustedApp program.

Systems



Rostering remains a big challenge. 1EdTech’s One Roster is used widely and solves for this. Some vendors push back and say that they don’t need One Roster. But learning tools require interoperability—teachers and students deserve it.



Increasingly, school districts are insisting that edtech suppliers meet interoperability standards in their request for proposals and contracts to set expectations. Small districts don’t realize they have the power in the numbers.



The promise of DaaS is big: data is accessible from anywhere. You don’t need an extended data team to maintain it. There’s flexibility, ease of use, and it’s ready to be updated at any time.

TIM CLARK | VP of K-12 Programs, 1EdTech



Focus Area 4

Parents and Caretakers as Learning Partners

Parents, families, and caretakers are critical partners in their child's education. They shape students' pre-academic skills and values and guide their children through career navigation and postsecondary planning.

A meta-study²¹ of family impact on student’s learning outcomes (elementary grades) found that:

The majority of studies, including some randomized controlled trials, demonstrate that family involvement is positively linked to children’s outcomes in preschool, kindergarten, and the early elementary grades. A preponderance of research confirms the link between family involvement and children’s literacy skills, and a number of studies demonstrate positive relations with children’s math skills. A few studies also show positive associations with children’s social-emotional skills.

Parents and caretakers are also key to improving student attendance. Research shows that when schools foster family connections and build stronger relationships with families, student attendance can improve substantially.²² For example, sending text messages to parents of middle and high schoolers reduced course failures by 39 percent, increased class attendance by 17 percent.²³

Recognizing parent and guardian perspectives and their role in achieving educational outcomes sets the stage for our findings and conversation.

In this section, we explore parent and educator perspectives about schooling, communication, and technology, and elevate opportunities for greater alignment.

Note: The learnings discussed during this section are taken from survey respondents who identified themselves as parents to school-age children.



Parent Perspectives on Pandemic Schooling

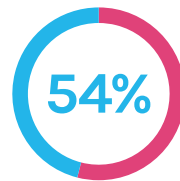
During the pandemic, caretakers had a new lens into the classroom through their students' virtual learning.

In many ways, it was a sensitive time of change and adaptation for both parents and teachers. Pandemic response learning occurred overnight for entire swaths of schools—most for the first time.

A Pew poll of parents conducted in fall 2022 revealed 6 in 10 parents said the first year of the pandemic had a negative effect on their children's education. Just 7 percent found it had a positive effect, while 28 percent say it had neither a positive nor negative effect.²⁴

Another poll from Pew found notable differences of whether parents were "very satisfied" with how their child's school handled instruction, depending on schooling modality:

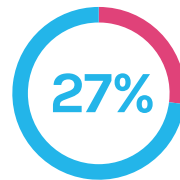
Pew Poll Results



of parents whose children attended school fully in person were very satisfied




of parents whose children received only online instruction were very satisfied



of parents whose children received a mix of in-person and online instruction were very satisfied.

Now that most if not all schools are back to in-person instruction (while still offering virtual learning programs for students in some cases), we assess the current state of parent and school partnership, communication, and how technology is helping or hindering progress.



A woman with long brown hair, wearing a yellow top, is looking down at a young girl with curly hair. They are both smiling and appear to be looking at a book or document together. The background is a bright, sunlit room with a window. A large blue circular graphic is overlaid on the image, containing a quote and the woman's name and title.

“ We are welcoming families back into schools, and they are coming back in droves! We had parents lined up to the book fair with their kids. Beyond this kind of programming, we are pushing into meaningful engagement to get parents and caretakers involved in supporting the learning happening in classrooms. ”

JEANNETTE JOHNSON
Director of Student Information,
Kershaw Schools, SC

Parents and Educators Have Mixed Perspectives on Partnering for Student Wellness

We asked educators and parents about their perceptions of the other’s willingness to work together on solutions that contribute to student learning and wellness.

Most parents believe their school or district seeks common ground on educational issues. Educators weren’t as aligned, with most identifying as neutral on parents seeking common ground.

FIGURE 27.

[Educators]

Our parents and caretakers seek to partner with our school/district to identify solutions that contribute to student learning and wellness.

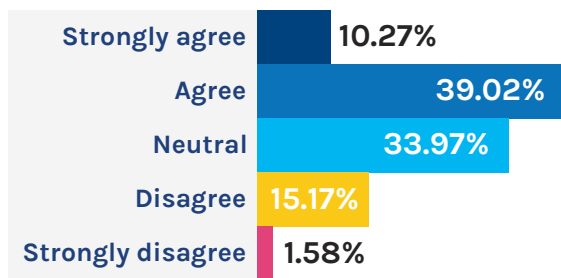
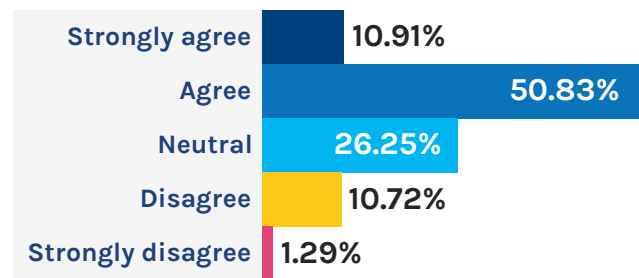


FIGURE 28.

[Parents]

My school/district seeks common ground with parents to identify solutions that contribute to student learning and wellness.



I want stronger and more positive connections with my parents. When parents and schools are a team, we achieve the best outcomes for students.

DR. MICHELLE TANNER | Associate Superintendent of the Deaf,
Utah Schools for the Deaf and Blind, UT

Technology Enables Intentional Engagement with Caregivers and Families

Challenger School Research Director shared, **"Over the past year, we gathered feedback from stakeholders to identify areas for improvement. We leveraged technology to better understand their needs, combining both qualitative and quantitative data. While maintaining open communication, we aim to enhance the structure of our information gathering process."**

There's a balance to be struck. We heard from educators that technology can easily be overused to understand parent needs.

"We're becoming more intentional about why and what we're surveying families on to ensure we don't over-survey them; tracking surveys and ensuring questions are purposeful are critical," shares Amy L. Patton, Coordinator of College Access in Springfield Public Schools, MO.

Still other districts struggle to reach parents, regardless of modality.

Dr. Tracy Daniel-Hardy, Director of Technology at Gulfport Schools shares, **"Every year, we conduct surveys with our stakeholders about learning and safety. We do get information from those that complete it. But there's gaps in hearing from those we often can't reach."**

But when parents are partners in education, great things can happen.

Dr. Daniel-Hardy goes on to share, **"We received a lot of input from parents about changing our school year calendar from the typical one to a year-round approach with intercessions and heard from the community about the need for daycare and 'summer-like' programming during breaks. Because of this successful feedback loop, a lot of neighboring districts are replicating this approach and using what we've learned and done with parent and caretaker engagement to find success."**

7 in 10 educators agree **they have streamlined technology to update parents on student progress and keep open lines of communication.**

Yet 7 in 10 parents say **they must toggle between 2-6 technology platforms to access the information they need about their children.**

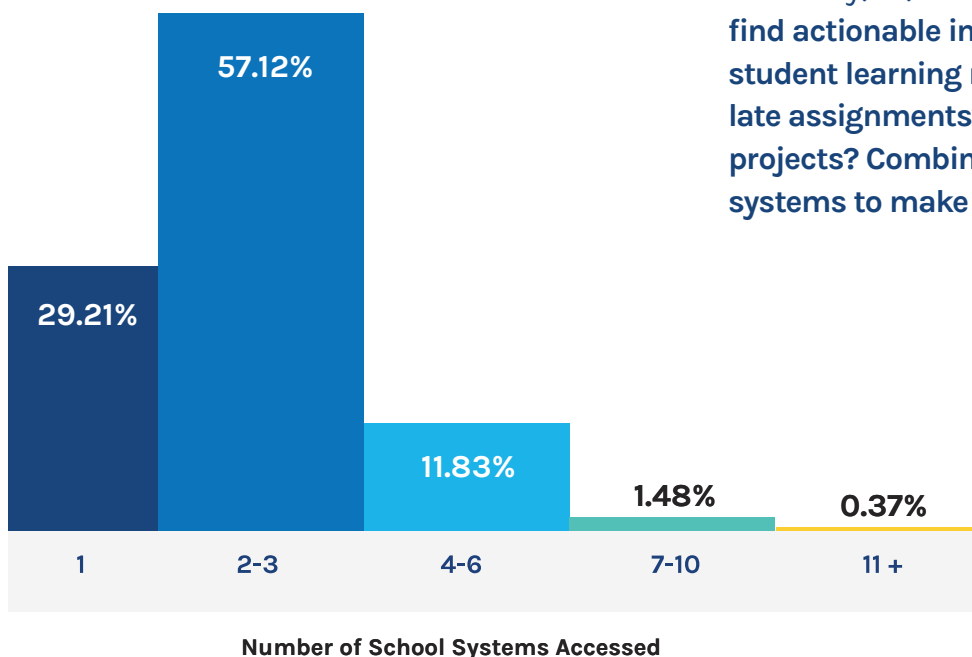


Parent and Educator Perspectives on Communication Technologies

Many caretakers complain that there are just too many systems involved in understanding how their student is doing and communicating with educators.

FIGURE 29.

Select the number of different school/district systems (e.g., portals, apps) you must access to get the information you need to support your student.



The proliferation of technology has moved districts to consolidate tools or source partners who offer multiple solutions in one tool.

Many districts have too many tools with too specific uses. For example, they need tools that handle learning updates, communication at home, and track attendance all in one. It is not unordinary for districts to use multiple technology platforms across grade spans (elementary, middle, high) and communicate with families through all three, depending on the ages of the families' children.

The use of multiple platforms often results in a deluge of information for parents, which causes them to feel frustrated and overwhelmed, or even shut off the school "information spigot" entirely.

Whatever the system changes, Ryan Gravette of the Idaho Digital Learning Academy, ID, shares, "make it simple to find actionable information. What is my student learning next week? Do they have late assignments? Are they working on key projects? Combine key information across systems to make it simple for parents."

Changes to Attendance Notifications to Meet Parent Preferences

There are some clear gaps between how schools typically reach out to parents about student attendance and parent preferences, namely:



Phone calls are the most common, but third on parents' preference list



Written communication is the third most common strategy, but low on parents' list



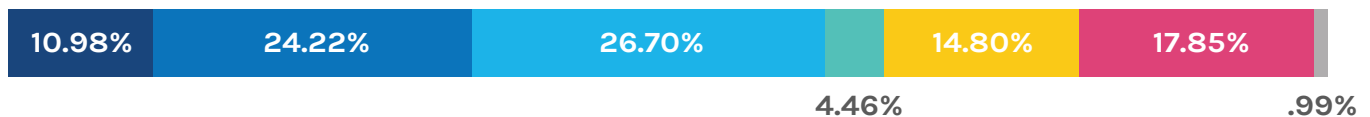
Text messages are low on schools' strategy list, but high on parents' list

FIGURE 30.

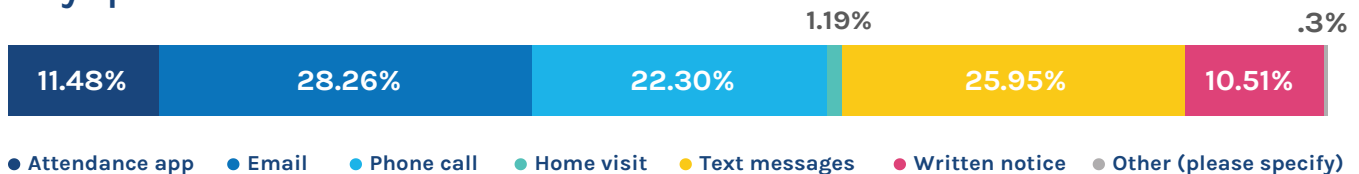
Comparison of ways parents are notified vs. How they want to be notified about attendance.

[Prompt] Identify all the ways your school/district notifies you if students' attendance is a concern.

Ways parents are notified by school/district



Ways parents want to be notified



Equitable communication is also a major focus. Increased frequency, supporting multilingual contact, and providing family liaisons to reach parents and caretakers is critical. Also, across parent groups, consistency of communication timing is key. System leaders can enhance traction with parents by using a consistent communication cadence.



How PowerSchool Can Help

Zooming Out: Reflections on Priorities

The future of education starts with listening to educators today.

Reflecting on our conversations with educators and findings from this year's national survey, we identified several key areas to prioritize in the service of creating a richer student learning experience.

Key Takeaways

First, any opportunities to provide differentiated instruction to meet individual student needs can significantly impact a learner's development. A cultural shift that reframes personalized learning as the work, rather than extra work, can help educators align more purposefully and effectively around student success.

Second, AI stands poised to advance human learning in transformative ways. It's essential that we use this technology ethically and responsibly. Daniel Schwartz, the I. James Quillen Dean and Nomellini & Olivier Professor of Educational Technology at Stanford Graduate School of Education, said at the recent AI+Education Summit, "A lot of AI is going to automate really bad ways of

teaching. So [we need to] think about it as a way of creating new types of teaching."²⁵ It is unproductive to resist the inevitable ubiquity of AI and far more worthwhile to learn how to leverage its abilities to advance personalized learning and confront educational inequity.

Third, we as an educational community need to invest in meaningful professional development and growth opportunities for teachers. That so many teachers are leaving careers in K-12 education indicates that expectations of educators are more burdensome than the support provided to them.

Advancements in technology allows for the collection of meaningful student data on academic achievement and on social and behavioral development. Using data to create a portrait of the whole child significantly improves the ability to personalize learning and identify and dismantle barriers to equity. This means that data needs to be easy to collect, accurate, and actionable.

Lastly, research shows that family engagement is one of the most influential factors determining student outcomes, regardless of race and socioeconomic status. While there are significant obstacles that impact the equity of family engagement, schools can invest in resources that break down barriers to partnerships.

For technology to be helpful in addressing the focus areas iterated above, it must meet some essential criteria.

What Education Needs from Technology

Our conversations with educators, administrators, and families have surfaced four key actions that PowerSchool is committed to addressing.

If we build and support systems that personalize education to deliver a richer student learning experience, we believe we can help educators and students get what they need from technology:



Personalized. Technology should meet the user, regardless of their role in the district or school, where they are, and take them where they need and want to go. This personalization is vital because it helps ensure:

- ✓ Efficiency
- ✓ Centralized, integrated information
- ✓ Tailored access and views
- ✓ Accessibility
- ✓ Equity

In addition to being personalized, the tech tools used by schools and districts should be hallmarked by these features:



Simple. The user experience for any technology should be intuitive and simple.



Ease. Technology tools should integrate seamlessly and deliver powerful insights without the user needing to execute complicated processes.



Secure. As districts increasingly rely on cloud technology, edtech vendors are responsible for being diligent defenders of student data. They must meet data security regulations, safeguard against cybersecurity threats, and employ best-in-class data security and privacy protocols.



How PowerSchool Can Help

At PowerSchool, we believe that for students to succeed they must feel connected to their learning in a personal way. We envision schools where educators are empowered to know their students better. They have easy access to powerful tools that collect and analyze data, deliver valuable insights, and create a portrait of the whole child. Armed with this knowledge, educators can personalize learning for every student, fostering engagement, curiosity, and a passion for lifelong learning.

Personalized learning is built on four key pillars:

- 1 Data-informed decision-making
- 2 Differentiating instruction
- 3 Leveraging technology
- 4 Incorporating student voice and choice

To support education's movement toward personalized learning and in addition to innovations in AI, we recently introduced PowerSchool Clouds, bringing together all the digital tools unique stakeholders need to succeed in their roles. PowerSchool Clouds are one more step we've taken to realize our mission: to empower educators to engage every student to learn in a way that's right for them.

For every focus area identified in this report, we have a Cloud that contains features meant to offer a complete, integrated user experience built around technology that is personalized, simple, easy, and secure.

The PowerSchool Clouds

Student Information Cloud

Focus Areas Supported:

- Collecting usable data
- Engaging parents and caretakers as partners in learning

Yesterday's SIS won't get districts where they need to go tomorrow. In today's ever-evolving learning environment, schools need operational systems that are flexible and easy-to-use to set them up for success today as well as in the future. PowerSchool's Student Information Cloud is the first complete, cloud-hosted solution for student information, enrollment, data management, reporting, and analytics. The Cloud provides a streamlined, interoperable platform that enables staff and teachers to work more efficiently and families to engage more easily, all while ensuring student data accuracy and security. The Student Information Cloud is easily adaptable to districts' unique operational needs so they have the data and insights necessary to improve student outcomes.

Personalized Learning Cloud

Focus Areas Supported:

- Transforming the student learning experience
- Supporting educators and instruction

PowerSchool's Personalized Learning Cloud supports curriculum and instruction directors who are passionate about empowering teachers and customizing learning experiences for every student, no matter their unique needs or learning style. With the Personalized Learning Cloud, teachers can leverage lesson planning, comprehensive assessment management, and built-in instructional tools to create engaging learning opportunities that meet each student's specific needs. The platform also provides early warning metrics to identify students needing targeted support.

Student Success Cloud

Focus Areas Supported:

- Transforming the student learning experience
- Supporting educators and instruction
- Collecting usable data
- Engaging parents and caretakers as partners in learning

PowerSchool's Student Success Cloud provides the complete support students need to reach their potential. Student Success Cloud solutions reduce chronic

absenteeism, promote positive behavior, and include a comprehensive MTSS solution that allows districts to identify and track student needs, provides extensive inputs to conduct and monitor interventions, and reviews the fidelity of MTSS framework.

Workforce Development Cloud

Focus Areas Supported:

- Transforming the student learning experience
- Supporting educators and instruction
- Collecting usable data

PowerSchool's Workforce Development Cloud provides the complete support districts and state leaders need to prepare the emerging and existing workforces in their state—from supporting career exploration for students, developing workforce skills for career seekers, and delivering key insights through unified data. This ecosystem brings together key stakeholders to encourage career exploration, provide data on regional and state-specific industry demands, and connect cross-agency data to unite talent and workforce pipeline.

Educator Effectiveness Cloud

Focus Areas Supported:

- Transforming the student learning experience
- Supporting educators and instruction
- Collecting usable data

Effective professional development is key to teachers' learning and refining the skills needed to help students problem-solve and develop mastery of challenging content. The Educator Effectiveness Cloud has integrated tools to transform real-time observation data into personalized goals and professional development recommendations for educators. The Educator Effectiveness Cloud helps districts retain top-tier educators and improve teacher support by implementing practical evaluation and coaching practices. With the Educator Effectiveness Cloud, districts can increase teacher retention, deliver meaningful content, and provide thoughtful, personalized professional learning and support that will positively impact student achievement.

Educator Recruitment Cloud

Focus Areas Supported:

- Supporting educators and instruction
- Collecting usable data

Revolutionizing the educator recruitment process, the Educator Recruitment Cloud, designed specifically for K-12 school districts, streamlines and simplifies the entire recruitment and onboarding process, making it easier to find and attract top talent. With expanded reach to applicants, reduced administrative burden, and simplified HR management, districts have everything they need to recruit and onboard the best candidates quickly and efficiently.





A Bright Future

The future of K-12 education holds immense promise and transformative potential. As we stand at the precipice of a new era, marked by technological advancements, societal shifts, and evolving learning needs, it's clear that education is undergoing a metamorphosis.

In this report, we have explored the key drivers of change that will shape the future of education. We have witnessed the rise of personalized learning, enabled by adaptive technologies that cater to individual strengths, interests, and pace. We have recognized the power of artificial intelligence with its ability to revolutionize assessment methods, enhance personalized feedback, and enable data-driven insights into student progress. And, we strive to ensure its capabilities are used responsibly, ethically, and with student learning and operational efficiency always top-of-mind.

Moreover, we have emphasized the need for a whole-child approach to education, encompassing not only academic knowledge but also social and emotional development.

As educators and stakeholders, it is our responsibility to embrace and harness these advancements. We have the tools

to usher in a future where education is accessible, inclusive, and lifelong, transcending barriers of age, location, and socioeconomic status. We can empower learners to become active participants in their own educational journeys, cultivating a love for lifelong learning and an insatiable curiosity for the world around them.

In the future of education, we have the power to provide high-quality education to every student and to create an educational landscape that equips individuals with the knowledge, skills, and values necessary to navigate a complex and interconnected world. The time is now, and the future of education is ours to shape.

Sources

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