

# 2022 State EdTech Trends Report

---

**By Liz Cohen and Evo Popoff**

**Preface by Jhone M. Ebert,**  
Superintendent of Public Instruction,  
Nevada Department of Education

Produced by

Commissioned by

**W/A** Whiteboard  
Advisors

**SETDA**

# PREFACE

By **Jhone M. Ebert**, *Superintendent of Public Instruction, Nevada Department of Education*

What a difference a year makes.

When students returned to school in January 2020 after their winter breaks, educational technology was present but not necessarily prevalent in every school. True, the use of technology had been increasing steadily in the past two decades, but at the start of 2020 fewer than half of the schools had 1:1 programs and many — particularly those in under-resourced communities — struggled to achieve and maintain adequate levels of broadband connectivity.

Fast forward to the beginning of the 2021-22 year and that digital divide had shrunk significantly. Nearly every student had a device, and schools had boosted their broadband to address the pressing challenge: continuing instruction for students during the pandemic, no matter where they were.

But the introduction of so much technology in our schools so quickly brought with it a host of challenges, including student data privacy, cybersecurity, home access — not to mention training educators, students and families how to use edtech tools effectively. These challenges were not necessarily new — in fact, I worked to address them when I served as the chief technology officer for the Clark County School District in Las Vegas over a decade ago — but the scale of the challenge was unlike anything state leaders had experienced before.

States around the country responded in various ways. For example, in Nevada we launched a statewide campaign to ensure that within six months, every student in public school had the tools needed to participate in online learning; this included both a device

and internet connection. The success of this first-of-its-kind outreach was a group effort: Nevada Governor Steve Sisolak sponsored the initiative, the Nevada Department of Education coordinated it, and business leaders from the gaming and hospitality sector, aided by school district superintendents and local foundations whom they enlisted, led it. At the same time, the Nevada Department of Education spun up a Nevada Digital Learning Collaborative that led with and trained digital ambassadors from every school district in the state; these digital learning specialists developed an online library of content, podcasts, how-to-guides, webinars and online curricula tied to state content standards.

As we emerge from the emergency phase of the pandemic and settle into our “new normal,” state education agencies find themselves in a changed world where technology has graduated from simply being present to becoming the prevailing way to conduct the people’s business. Yet little light has been shed on how states have responded — until now. This report is so important because it represents the first attempt to document the shifts taking place in state education agencies as they adapt to a digital world. In so doing, it spotlights great work taking place in states across the country while also identifying opportunities for further discussion, collaboration and improvement.

I am immensely proud of our work in Nevada, just as I am of colleagues in other states. But I also realize how much more work is required to sustain these recent investments in technology and our educators and to ensure that the tools we’ve brought into our classrooms have a lasting impact.

# FROM THE EXECUTIVE DIRECTOR

---

“Technology is best when it brings people together.”

---

Technology is best when it brings people together.<sup>1</sup>

One important lesson the world collectively learned in the past two-and-a-half years is that technology can serve as a lifeline, connecting students with teachers, teachers with other educators, parents with administrators, and more.

But as technology leaders at the state level, we also want to ensure that we are creating organizational structures as well as the technological infrastructure to support “anywhere” learning, improve equity and opportunity for all students and modernize educational institutions.

I’m proud to share the 2022 State EdTech Trends Report, the first report on SETDA’s new flagship State EdTech Trends survey

findings conducted in collaboration with Whiteboard Advisors and with the assistance of the Education Commission of the States. In this inaugural year, we heard from all fifty states, as well as the District of Columbia, the Department of Defense Education Activity (DoDEA) schools and the Northern Mariana Islands. Respondents included SETDA members, state superintendents, and other senior state officials.

This baseline data provides important evidence of what we know today and what we still need to learn and focus on in the near future. It’s a window into how states are internally organized, and it will also be a catalyst guiding SETDA’s work over the coming year.

– Julia Fallon, SETDA, August 2022

---

<sup>1</sup> Matt Mullenweg in [TechCrunch](#)

# TABLE OF CONTENTS

---

## 02 Preface

## 03 From the Executive Director

## 05 Acknowledgments

## 06 Introduction

## 08 Key Findings

## 15 Conclusion

---

### **About Whiteboard Advisors**

For more than 20 years, Whiteboard Advisors has collaborated with the most transformative organizations, individuals and investors in education. Our diverse team of educators, wonks and storytellers brings in-depth understanding of policy, technology and practice to bear on cutting-edge research, powerful writing, and the design of communications and advocacy campaigns that challenge the status quo. Whether we're working with startups or the most established organizations in education, we're passionate about taking breakthrough ideas to scale.

### **About SETDA**

Founded by state education agency leaders in 2001, the [State Educational Technology Directors Association](#) (SETDA) is the principal non-profit membership association representing U.S. state and territorial educational technology and digital learning leaders. For over 20 years, we have provided well-established forums for advocacy on policy and practice, professional learning, inter-state collaboration, and public-private partnerships centered around digital learning and equity. SETDA members are known for leading the charge within their SEAs for proper uses of technology in schools, including supporting district leaders and their state colleagues in federal education programs, IDEA, assessment, curriculum, and data collection to ensure that technology is leveraged appropriately throughout the educational system.

# ACKNOWLEDGMENTS

We would like to thank the Education Commission of the States for their support in implementing this survey, as well as for feedback and insights contributing to the development of the survey.



We acknowledge the following individuals for participating in interviews included in this report.

**Melissa Banks**, *Director of Digital Learning*, Mississippi Department of Education

**Doug Casey**, *Executive Director*, Connecticut Commission for Educational Technology

**Rob Dietrich**, *Senior Director of Digital Teaching and Learning*, North Carolina Department of Public Instruction

**Jhone M. Ebert**, *Superintendent of Public Instruction*, Nevada Department of Education

**Joshua Huwe**, *Product Architect*, Mississippi Department of Education

**John Kraman**, *Chief Information Officer*, Mississippi Department of Education

**Ashley McBride**, *Digital Learning Initiative Consultant*, North Carolina Department of Public Instruction

# INTRODUCTION

States are working hard to bring the best technology to school districts and ultimately to classrooms and families.

In a world in which technology is a required asset — essentially a utility, even if distribution remains inequitable — it raises important questions that we seek to start answering with the 2022 State EdTech Trends Survey. How are state education agencies (SEAs) adjusting to this shift? What are SEA's priorities for technology and learning, including student, teacher and parent-facing technology as well as behind the scenes technological infrastructure? What are SEAs doing to help districts use technology effectively and safely?

One important takeaway from this survey is that SEA staff, other state leaders and policymakers use the word “technology” or even “educational technology” to mean many different things. Every state organizes their state education agency differently when it comes to edtech, and there's little consistency even with basic elements like whether the Educational Technology Department sits under instructional programs or under information technology offices — or even exists at all.

State education technology leaders are also paving an often lonely road to provide equitably edtech that facilitates learning while building the necessary infrastructure for safe and secure learning environments — which shows up as mitigating cybersecurity risks, ensuring student and data privacy, providing accessibility options, and supporting the interoperability of systems that may be less directly relevant to a teacher's daily lesson plan, perhaps, but are no less critical than a high-quality curriculum to 21st century education. In K-12 education, technology necessarily includes both “instructional” and “informational” technology, which themselves overlap. Yet just because it's complex doesn't mean it's not essential.

How state policy-makers are addressing that complexity as they transition from an analog to a digital world is precisely what the State EdTech Trends Survey explores. In this report, we supplemented the findings of that survey — the first in what will be an annual series — with interviews of leaders from a number of states to capture the stories of their efforts to support digital learning. We present four key findings:

**KEY FINDING 1:** States can more intentionally connect educational priorities and technological priorities — and support the connection with investment.

**KEY FINDING 2:** States vary in their approach and role relating to ensuring edtech program and product effectiveness.

**KEY FINDING 3:** States don't have consistent definitions or categorizations for edtech.

**KEY FINDING 4:** Many states report a disparity between edtech priorities and their activities.

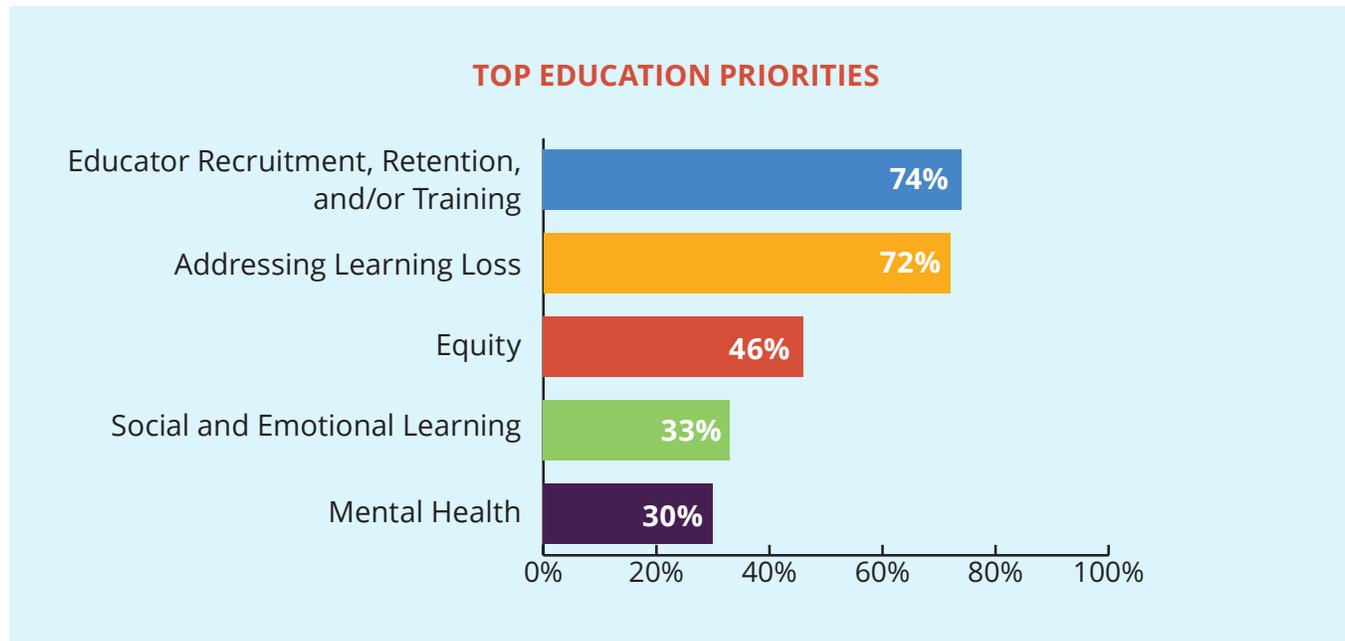
While the report spotlights the work taking place in a handful of states to exemplify some of the key findings of this report, we in no way mean to diminish the amazing work every other state across the country is

doing. Indeed, we look forward to the next administration of the survey in 2023 and the opportunity to tell more stories coming out of different states in next year's report.

## KEY FINDING 1:

### States can more intentionally connect educational priorities and technological priorities — and support the connection with investment.

In 2022, states are strongly focused on two main topics: educator recruitment and retention, and addressing learning loss.

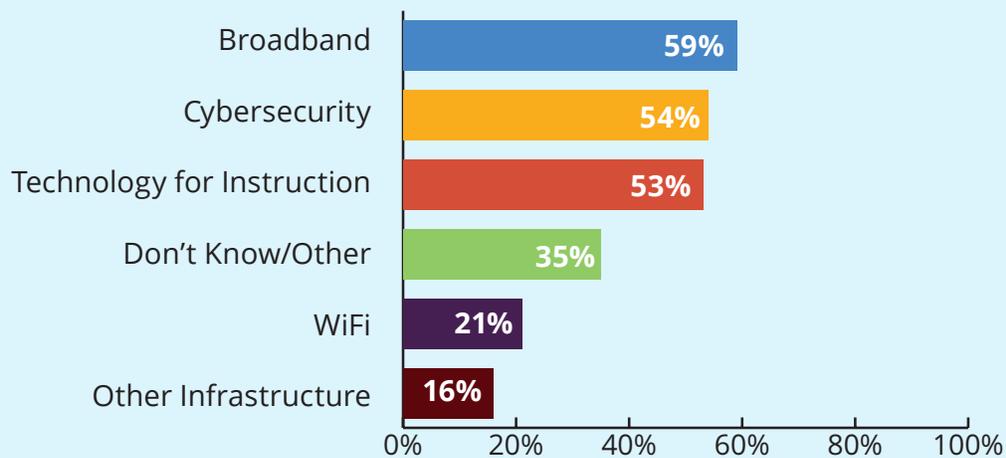


Meanwhile, the most common priorities when it comes to technology are equity (access to the internet)<sup>2</sup>, technology for instruction, and cybersecurity. It's not hard to see that ensuring all students and teachers have access to the internet matters — whether that's the quality of connection inside a school building or a student's ability to log onto a class website. If technology is truly ubiquitous in our everyday lives, then access to that technology in our classrooms must be equally ubiquitous, though we know we haven't yet achieved that standard.

To achieve this goal, states may need more explicit conversations about the role of edtech in supporting broader technological strategies and priorities, such as the areas in which states identified having existing initiatives. Yet only 48% of respondents agree that their SEA has explicit conversations about the role of technology in supporting state priorities, while less than half of respondents — only 41% — say that the people working on edtech at the state level are regularly included in broader planning and strategic conversations around technology.

<sup>2</sup> Equity, of course, is more than access to the internet. In this case, respondents were asked to identify the state's top three technology priorities, which included "equity (access to the internet)" and "equity (access to devices)" as two separate options.

### DOES YOUR STATE HAVE EXISTING INITIATIVES RELATED TO ANY OF THE FOLLOWING TOPICS?



#### Spotlight on Connecticut: Reorganizing to Sustain EdTech Efforts

Connecticut is a national leader in student data privacy, cybersecurity and digital learning. The state's success is a result of a unique organizational structure that has enabled the state to focus on and sustain edtech efforts for more than twenty years.



Connecticut's Commission for Educational Technology, enacted by state statute in 1999, is made up of members from various state agencies, the state legislature, the governor's office and professional associations. Doug Casey, Executive Director of the Commission, credits this structure for the state's ongoing support of effective technology use in educational institutions, including LEAs. "Money will come and go," Casey said, "so setting up a structure that provides sustained, cross-agency leadership regardless of budget flow is crucial." It also means that at critical moments like now, when faced with a singular opportunity to use allocated American Rescue Plan dollars, various stakeholders have a ready-made venue for vision-setting, decision-making and long-term policy design.

Most recently, the Commission passed a [resolution](#) that positions unprecedented, pandemic-related school technology investments as an inflection point. Given the historic levels of edtech expansion, the resolution calls on all education stakeholders to ensure ongoing support for the essential conditions for learning in the 21st century — internet, devices, and the skills to use them — as well as sustained teacher professional development, among other priorities.

## KEY FINDING 2:

### States vary in their approach and role relating to ensuring edtech program and product effectiveness.

According to the survey, nobody thinks there's too much technology in education (caveat: we surveyed the technology folks!), but only 8% of respondents think more edtech is needed. Meanwhile, a majority say that while we have a lot of edtech programs and products, they aren't always used effectively. But with more than half of states reporting that they

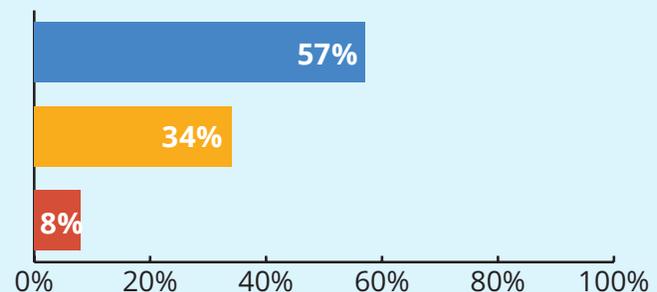
are not collecting adequate data on the use and effectiveness of edtech tools, perhaps it is more accurate to say that we don't know when or how to use these tools effectively. Connecting the dots on these responses, we see an opportunity to learn more about what works and for whom as states and districts invest in edtech tools.

#### EVALUATING USE AND EFFECTIVENESS OF EDTECH

We have a lot of edtech programs and products, but we don't always use them effectively

We use technology in a variety of impactful ways

We need more edtech in our state



How many states do not collect data on use or effectiveness of edtech tools?

19

How many collect at least some data on both use and effectiveness?

8



Historically, collecting this type of data has not been the responsibility of the state, and it is possible that some individual Local Education Agencies (LEAs) could be collecting this data. But, many LEAs — in particular the smaller districts that comprise the majority of our nation's schools — lack the resources needed to do so effectively, even as they are spending more time and money on digital

materials and resources. This creates an opportunity for states to potentially jump in and fill a need in supporting local decision-making. The funding available through the American Rescue Plan presents a once-in-a-generation opportunity to invest in collecting the necessary information to inform how best to use technology effectively to support teaching and learning.

## Spotlight on Mississippi: Supporting Impact



Some SEAs, like the Mississippi Department of Education (MDE), are taking a data-informed, active role in supporting impactful digital learning in their schools.

In 2020, through its MSConnects initiative, the state of Mississippi established a statewide 1:1 program, purchasing and delivering over 390,000 devices to students and teachers. “The critical issue,” said Joshua Huwe, Senior Network Support Specialist at MDE, “was how do we break through the barrier from ‘a device shows up in a box’ to ‘a device is in a kids’ hands.’” So, beyond the devices, the state also provided administrators with impact data and survey responses from students and educators.

MDE launched a Digital Learning Coaching program the following year deploying coaches to help districts and educators review their data and to support the effective use of technology. Most recently, the state co-developed a [Digital Learning Instructional Guide](#) with academics and technology experts to help educators and district leaders identify where they are on a digital learning implementation journey and what they need to take that journey to the next level.

Every step MDE has taken has been informed by data — surveys of students, parents, teachers and administrators, insights from coaches and impact data — with the goal of improving the quality of digital instruction to drive student outcomes.

## KEY FINDING 3:

### States don’t have consistent definitions or categorizations for edtech.

We begin to understand why states may not be tracking the effectiveness of edtech tools or may fail to connect edtech initiatives with broader goals when we look behind the curtain at how SEAs are structured. To truly unpack how states approach resource allocation, technology strategy and more, we need to understand how SEAs are organized. Almost no state takes the same approach as any other when it comes to edtech. Just under half of states don’t have a

specific office that coordinates educational technology. In the 55% that do, that office has a variety of names, leadership and placement within the broader organizational structure. Eight states call it the “Office of Educational Technology” — but in some states, this office falls under or adjacent to academics/learning, whereas in others, it falls under or adjacent to information technology (IT). Depending on the state, the title for the leader of this office could be the

Director of Educational Technology, or the Educational Technology Coordinator, or the Director of School Support and Educational Technology or the Associate Commissioner of Education.

Most states have between two to five staff working on edtech programs, but the more important question may be how those staff work with or are consulted by leadership or other parts of the agency. While many

states have put in considerable effort and resources to modernize and support IT, that work often focuses on business operations more than instructional technology. Creating better defined edtech roles, functions and responsibilities within SEAs will help modernize and support the use of technology for teaching and learning across the state, while also helping to ensure the sustainability — and impact — of state investments in both information and instructional technology.

JUST **27%**

of respondents say the person responsible for educational technology regularly meets with the state chief



**46%**

say edtech priorities are important to SEA leadership.



Defining the role of edtech within SEAs will be particularly important as states continue to adapt to an increasingly digital, post-pandemic world. Indeed, survey responses reflect a shifting landscape as states adopted or adapted policies relating to seat-time and online learning during the pandemic.

Specifically, eight states report that their state enacted policy changes around seat time during the pandemic, and another eleven states report a temporary policy shift on definitions of seat time due to the pandemic. Twenty-one states report a change in policy on, or definition of, online learning since March 2020. While these are important steps forward, additional work remains to set up K-12 education for the 21st century.

## KEY FINDING 4

### Many states report a disparity between edtech priorities and their activities.

Cybersecurity and privacy were consistently identified as high priorities for technology in survey responses, yet respondents also indicated that resource allocations often don't align with the level of priority. Moreover,

states appear to differ greatly in how they support these issues (and in how they support — or don't support — districts in addressing these issues).

ONLY **6%**

of respondents said their state provides ample funding for cybersecurity

**37%**

said the state provides cybersecurity tools to LEAs



**57%**

of respondents said their state provides very little or a small amount of funding for cybersecurity

Cybersecurity was identified as the second highest tech priority, but the second highest unmet technology need for states in the survey results. It also appeared often when we asked about emerging priorities. States are identifying cybersecurity as an area that requires more attention and resources for a reason. 70% of respondents report either the SEA or at least one LEA was the victim of a cybersecurity threat or attack in the past year. One respondent shared, “We see thousands of attacks of all kinds yearly. In 2021, we had nearly 1,000 [Distributed Denial of Service] attempts alone. This happens at the LEA, municipal and higher ed levels.” Another state said, “Before the pandemic, we averaged about 4 billion attempted cyberattacks on K-12 each

year. During the pandemic that increased, and still is increasing.”

Disparities between identified priorities and state activities may also reflect differences in philosophy on and perceptions of the role of the state. Should SEAs merely promulgate regulation and provide funding, or should they be more “hands-on” and provide more direct guidance and support for districts? Survey responses on data privacy provide a good example: while over 70% of states report having data privacy policies in place, fewer than half the states — about 43% — take a more active role through guidance, oversight and training in supporting local education agency data privacy efforts.

## Spotlight on North Carolina: Investing in Educators



As technology becomes more prevalent in education, it is inevitable that the work of educators will change. To facilitate this shift, states can play an important role in mapping out a path that teachers can follow while also providing critical resources and support to help them along their journey.

The North Carolina Department of Education has embraced this approach in developing and implementing their new digital learning plan. The original plan, from 2015, was 130+ pages. It was hard for “people in the field like me to really find myself in [the plan], or to understand how my role as a tech director at the time could help achieve these things,” shared Digital Learning Initiative Consultant Ashley McBride. This time, McBride engaged 54 educators, edtech coaches, IT staff and others from districts around the state to develop the new North Carolina Digital Learning Plan, recently approved by the State Board of Education.

Under leadership of Dr. Vanessa Wrenn, the NC DPI CIO, and Rob Dietrich, the Senior Director of Teaching and Learning, the SEA has also embarked on a first-of-its-kind approach to provide every educator in the state with ISTE membership, which will be supported by linking ISTE resources to rubrics in the new Digital Learning Plan.

Dietrich says, “I think about what educators need as a three-legged stool. One leg is consistency and funding, the second leg is professional development and the third leg is support from their district. Without one of these, the stool falls. Our job at the state is to advocate for what districts need for any of these legs, and to promote our mentality that we are all in this together to help our students achieve.”

# CONCLUSION

While the key findings presented here represent important baseline data, we also don't discount the work that states have been doing for years to build reliable technological infrastructure and support effective instructional technology use. Moreover, these findings are just some of what we learned in the survey — we asked other questions about privacy policies, Open Education Resources, Artificial Intelligence, Digital Equity Plans and more.

From here, future survey data will track progress against this baseline while continuing to support state edtech directors navigating a future in which the only certainty is perhaps the centrality of technology in education.

We already saw respondents recognize that centrality in this year's survey. When asked about the future, survey respondents acknowledge the ubiquity of technology in education — from the classroom to the front office to students' homes — and the inextricable connection between information technology and instructional technology. The survey responses and our conversations with state leaders also reveal a growing appreciation of the work and effort that is needed to build, maintain and sustain a truly technology-supported, technologically-integrated K-12 education system.

Indeed, the question on many state leaders' minds seems to be: **Now that we have this technology, how do we demonstrate its utility and improve its potential for impact?** This was reflected in the emerging priorities state leaders identified. While many

of the most common answers — professional learning for teachers, including addressing how teacher prep programs train incoming educators on the use of technology for instruction (28%), cybersecurity (24%) and interoperability (17%) — are aligned with leaders' current priorities, many others — such as the following responses — revealed this “next level” challenge that leaders are seeking to address:

- “Diversified instruction utilizing technology”
- “Sustainable technology infrastructure”
- “Ensuring teachers have confidence in using technology to effectively enhance instruction”
- “Integration into pre-service educational programs”

Answers to the survey's question on the “next big issue” in edtech were also a mix of technical considerations and the role of technology in instruction. While cybersecurity (17%) and Artificial Intelligence (13%) were the most common responses, the variety of other responses shows edtech leaders are thinking deeply about the role of technology in every aspect of education, alongside considerations of budgets and equity. For instance, answers included:

- “Sustainability of the devices and home connectivity provided during the pandemic”
- “Technology overload — we need to simplify”
- “Effective use of educational technology”

These responses show that, even as state leaders are attending to the unending work required to provide educators and students with the technology they need on a daily basis, they are also engaging in long-term thinking on how to build out technology infrastructure and support to enable the educational future our students deserve. Those working most closely with edtech have invaluable insights for state leaders to consider, and those who feel unsure about what questions to ask or approaches to pursue can learn from states like Mississippi,

North Carolina and Connecticut — and the many other examples we weren't able to share in this year's report.

We encourage you to explore the full survey results, available [here](#), and to continue asking important questions of SEAs, LEAs and state leaders around educational and technological priorities, how those priorities are supported with resources and how we can work together to create technology-rich schools and districts for all students.