FROM CDS TO AI: SPEAK UP RESEARCH PROJECT FINDINGS 2003-2023

2023

WHAT DO K-12 STUDENTS SAY ABOUT THEIR DIGITAL LEARNING EXPERIENCES TODAY?

project tomorrow
SpeakUp
Celebrating 20 Years

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"We have clearly reached a turning point. All over this country, we see evidence of a new excitement in education, a new determination, a hunger for change. The technology that has so dramatically changed the world outside our schools is now changing the learning and teaching environment within them. Sometimes this is driven by the students themselves, born and comfortable in the age of the Internet."

National Education Technology Plan 2004, Executive Summary[i]

Introduction

In many ways, this quote from the U.S. Department of Education's 2004 National Education Technology Plan is as true today in 2023 as it might have been nearly twenty years ago. We are certainly at a turning point again today. There is evidence across the country of a new impetus for changes in how our schools address their central mission of educating our children. The world beyond school has most definitely been transformed by technology access and usage because of the pandemic, and there are emerging indications that technology is now, finally, being used more effectively in many schools to impact both educational outcomes and operational efficiencies. And we would certainly agree that the unvarnished views of our students are critical inputs to our collective efforts to transform schools to better prepare students for future success.

Project Tomorrow® has had a unique front-row seat on this evolutionary journey in the adoption of technology within teaching and learning in K-12 schools. Our original Speak Up® surveys were designed to collect firsthand feedback from K-12 students nationwide in October 2003 as an input to the National Education Technology Plan (page 19, National Ed Tech Plan 2004). The idea of listening directly to K-12 stakeholders about their technology experiences was out-of-the-box thinking and subsequently, the Speak Up Research Project evolved to be an annual national event collecting and reporting on the authentic views of not only K-12 students, but also the perceptions of teachers, administrators, and parents about the state of digital learning in America. In our annual reports, infographics, and briefings, we regularly share evidence of the milestone marks of progress to more effective use of technology within the learning process, both in-school and out-of-school. We also document the experiential ideas and insights from those stakeholders, most notably students, that serve as fuel for inspiring innovation in our schools. In the past twenty years of the Speak Up Research Project, over 6.2 million K-12 students, teachers, administrators, and parents have contributed their views to this important dataset. The Speak Up findings are used regularly by education, business, research, and policy leaders to inform education policies and programs.

In this twentieth year of the Speak Up Research Project, there is value in leveraging this longitudinal dataset to understand the dynamics of technology adoption more fully within K-12 education over the past few years, and to use that knowledge to lay a foundation for new digital innovations and initiatives that can support student learning and teacher effectiveness. To commemorate this twenty-year legacy, Project Tomorrow is releasing four national reports this year, each documenting the current views of a different K-12 stakeholder audience and providing context with a longitudinal perspective on the data findings. This first report in the series is focused on the ideas and insights of K-12 students, providing both the highlights from the 2022-23 data collection effort

nationwide, as well as pulling forward key historical data. For example, in the 2003 Speak Up survey, 60% of students in grades 6-12 said that their primary use of technology within the school day took place in a computer lab. Only 28% said they accessed technology while in their regular classroom. In 2023, 91% of classroom teachers report that their students have a personally assigned tablet, laptop, or Chromebook to use to support schoolwork and learning tasks, representing a dramatic shift in student access to technology. As could be expected, that move from computer lab to classroom usage also resulted in different types of learning experiences using technology within everyday activities. It is therefore noteworthy to understand how that transition and the resulting increased usage of online tools like games, animations, databases, and curriculum by students from their classroom locations impacted their perceptions of the quality of classroom Internet connectivity. In the 2022-23 surveys, 53% of students in grades 6-12 identified slow or inconsistent classroom Internet access as a deterrent in their quest to use technology to support their learning. Three-quarters of students (75%) in urban schools cite that same obstacle. The takeaway from this examination of the Speak Up research highlights that providing appropriate and effective student access to technology, though greatly increased over the past twenty years, is still a continuing challenge in many communities and we need to apply new creative thinking to ensure equity of learning experiences for all students. Topics such as this are discussed in this report and the other three companion reports to be released.

Project Tomorrow's twenty years of helping education, business and policy leaders translate the Speak Up research into actionable knowledge and new practices has provided us with a keen understanding about how to make the Speak Up research findings operative and meaningful for many new audiences. This new report, *"What do K-12 students say about their digital learning experiences today?"* is organized to support effective usage of the research findings, including initiating new discussions and conversations about how to harness the long-promised potential of technology to improve student outcomes and teacher effectiveness.

Using the student data findings as the primary input, the first section, **From Then to Today: Milestone Markers of Progress (pages 3-9),** provides key Speak Up research findings over the past twenty years to document the expansion of digital access, the evolution in the use of technology to support student learning experiences, and the development of a new value proposition from the student perspective around the use of digital solutions and tools within everyday teaching and learning. In the second section of the report, **From Today to Tomorrow: Ideas to Inspire Innovation (pages 9–15),** we leverage the notable accomplishments discussed in section one to identify evidence from the Speak Up Research Project findings that our work is far from done in using technology within education effectively to meet student needs and prepare them for future success. We have unfinished business to address in terms of digital access as an equity imperative and designing the types of digital learning experiences that are most meaningful for students. This section also includes the insights of students about what they would include if they were designing a new school today.

As long documented in other Speak Up Research Project reports, too often educators make assumptions about students' preferences based upon their own adult-centric world view, rather than truly appreciating the authentic lived experiences of students themselves. Those assumptions can lead to decisions that are not necessarily in alignment with student needs, expectations, or aspirations. Meaningful reflection often begins with important questions. The ending thoughts in this report therefore provide education leaders with **5 Big Questions (pages 15–16)**, which are designed to help leaders stimulate new creative thinking and innovative ideas for transforming their students' learning experiences. These important questions can be the foundation for challenging long-expired anecdotes and myths about students and technology. They can also be used as discussion starters within professional learning community discussions as well as community conversations

about the future of education. It is our hope that the Speak Up research findings and insights that we have selected for this report can support those important discussions.

From Then to Today: Milestone Markers of Progress

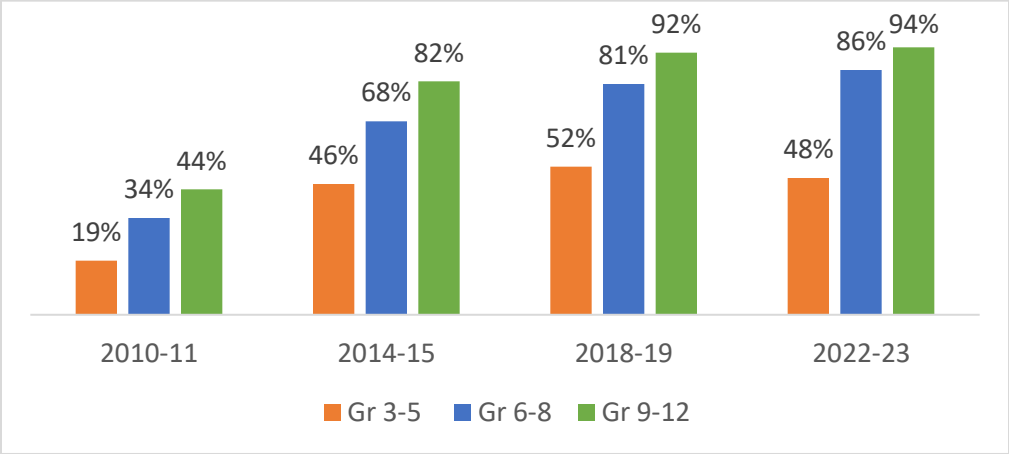
- **Expansion of Digital Access**

Digital access for students is often defined across two metrics: a) student access to a digital learning device in school (i.e., tablet, laptop or Chromebook) and b) student access to technology at home or when they are beyond the school walls, including Internet connectivity. The Speak Up data findings provide evidence of a significant expansion in terms of students' access to technology to support learning over the past twenty years.

As noted in the introduction, 60% of students in grades 6-12 reported in 2003 that their primary location for technology access was a computer lab. Only 28% said that they were regularly using technology within a classroom setting. By 2018, the percentages had flipped with 62% of students now saying that they had access to Chromebooks to support learning in their classroom and only 25% of students were relying upon a computer lab experience for their technology usage. According to teachers in 2018, however, only one-third (37%) said that the devices were personally assigned to students. In most cases, students picked up a generic device from a laptop or Chromebook cart that was scheduled by the teacher to support a particular lesson or unit. The usage, though now classroom-based instead of computer lab situated, was not often integrated within an entire class period or school day, but rather was "on the side" of regular instruction. Technology integration within everyday curriculum was an important by-product of the experimentation with virtual learning during the pandemic. While many school districts had long envisioned providing 1:1 device access to students, for use in school and to support extended learning at home, that only became a reality with the support of pandemic funding. In the 2022-23 Speak Up survey for teachers, 91% now report that their students have an assigned tablet, laptop, or Chromebook to support learning throughout the school day.

During this same period, students' personal access to mobile devices including smartphones has also increased significantly. The Speak Up reports annually document students' personal device access. Chart A examines the percentage of Grade 3-12 students who report having a personal smartphone during the 2010-11, 2014-15, 2018-19 and 2022-23 school years. As noted, students' personal access to an Internet-connected device that could be used to support online learning opportunities (schoolwork directed or self-directed) expanded significantly from 2010-to2023, with high school students' access more than doubling in that time. Notably, urban high school students (91%), rural high school students (95%), and suburban high school students (96%) reported relatively similar levels of smartphone access in the 2022-23 surveys. The same was true for students in Title 1 schools (95%).

Chart A: Students' access to a personal smartphone – longitudinal data review



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These research findings on students' personal access to a smartphone may seem like a trivial or non-learning focused data point. Common perceptions are that students use their smartphones for communications and entertainment more than learning. And to many educators, the students' smartphone usage in class is a distraction, rather than a learning support tool. However, nearly two-thirds of students in grades 6-8 (64%) and 75% of students in grades 9-12 report in the 2022-23 surveys that they are more likely to use their personal smartphone to support homework or to complete assignments than their school-provided laptop or Chromebook (Table 1). Only 27% of students in grades 6-8 and 21% of students in grades 9-12 say they rely upon their school device to do homework.

Table 1: Devices students report using most often to support learning when at home

Device	% of students in grades 6-8	% of students in grades 9-12
Personal smartphone	64%	75%
School-provided Chromebook	27%	21%

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This new finding may be an adaptive behavior by students relative to their home Internet access as well as a long-standing student preference for using personal devices. Since the first Speak Up survey in 2003, Project Tomorrow has polled K-12 students about their Internet connectivity and technology tool access outside of school. In 2007, 79% of high school students, for example, said that they connected to the Internet at home via a hard-wired broadband connection. In this year's findings, 85% of high school students say they connect to the Internet via Wi-Fi when they are at home. That finding is fairly consistent across different community types including urban (89%), rural (80%) and suburban (90%). Only 22% report ever using a hard-wired connection. Given the relative ease of connecting to online resources, school or classroom portals and learning apps through an always-connected smartphone, it may be that convenience drives students to reach for their phone rather than their school Chromebook when doing schoolwork at home. This behavior may resonate with many adults as

well who are probably more likely to look up an NFL score or order a book from Amazon via their smartphone than on a laptop.

- **Evolution of Digital Use to Support Learning Experiences**

Students report greater access today to a wide range of digital tools to support their classroom learning experiences. They also report using digital tools to support self-directed learning outside of school, beyond teacher sponsorship or facilitation.

Traditionally, the primary ways that students interacted with technology in their classroom prior to the pandemic was by doing online research or taking an online test. Both of those use cases continue today. But in the evolution of digital use in the classroom, new tools are being used on a more frequent basis to support student learning. Per Table 2, 8-in-10 students in grades 6-12 now report using a learning management system (LMS) at least monthly; more than two-thirds of students (69%) say that usage is weekly. In 2010, only 10% of teachers reported using an LMS in their classroom. Additionally, the use of online videos has increased as well since the pandemic. Nearly three-quarters of students in both grades 6-8 (72%) and grades 9-12 (73%) say that they watch online videos from YouTube and other content providers monthly in their classroom. And 54% of students now say that they are also watching videos created by their teachers.

Table 2: Grade 6-12 student usage of digital tools in their classroom supporting learning activities

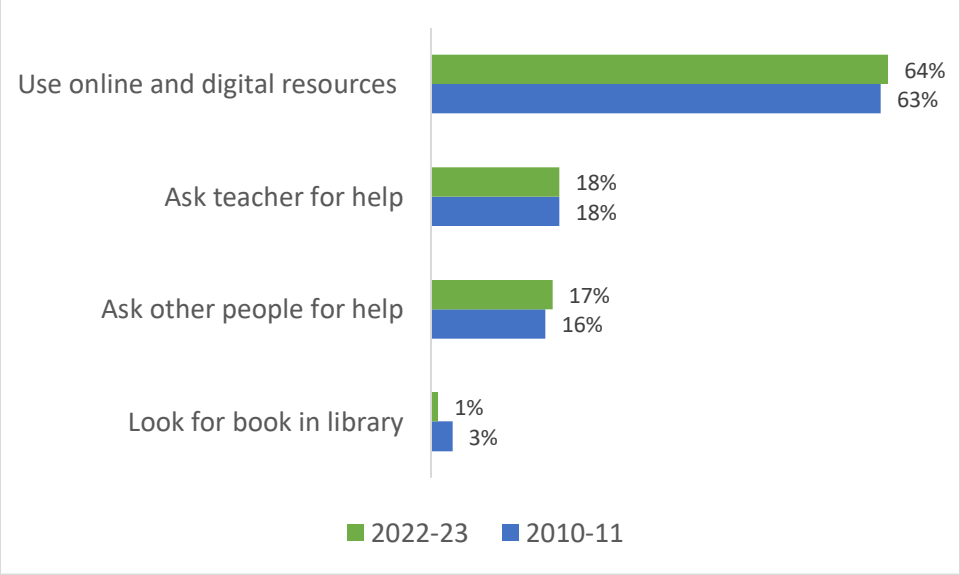
Digital tools	Use the tool at least monthly	
	% of students in grades 6-8	% of students in grades 9-12
Learning management system	81%	80%
Online videos	72%	73%
Collaboration sites that allow for digital feedback on my work	64%	67%
Videos made by my teacher	54%	54%
Email to ask my teacher questions	49%	56%
Online and digital games	48%	45%
Virtual labs	48%	42%
Digital portfolio or interactive notebook	38%	41%
Media creation tools to create content to share with others	26%	26%
Text message to ask my teacher questions	16%	13%

It is logical to understand that with increased access to technology students' personal learning behaviors would change, but in terms of the data shared in Table 2, the access to these tools is teacher-facilitated. For example, 93% of district technology leaders reported having a learning management system (LMS) in place by the 2020-21 school year. Thus, it makes sense that a high percentage of students report using an LMS this past year. The pandemic also propelled many districts to adopt Google for Education or Microsoft 365 to support document sharing and collaborative work in the classroom. The results of those adoptions are also evident in this data.

In general, however, the most frequently used digital tools today still represent use cases that support the management of classroom operations (LMS, videos, collaboration sites, digital portfolios). Tool usage that supports student-directed or initiated learning processes, such as media creation or communication with the teacher, are less frequently cited by students as regular occurrences. Despite an emphasis on creativity skills as a future-ready imperative, only one-quarter of students in grades 6-12 (26%) say that they are using multi-media creation tools in class to develop content to show what they know even on a monthly basis. Students highly value communication with their teacher; 51% of high school students and 46% of middle school students say that having two-way digital communication with their teachers is important for their school success.

Interestingly, student digital learning behaviors in the classroom when the activity is more self-directed are not dramatically different today than in the past. In the most recent Speak Up surveys, we asked students a question that was a copy of what we had asked in the 2010-2011 school year: *If you had to write a research paper or report about a topic that you knew little or nothing about, what would you do first?* We categorized the results into four general pathways, including a) ask teacher for help, b) ask other people including family members and friends for help, c) look for a library book, and d) use technology and online resources to seek information. As depicted in Chart B, nearly two-thirds of high school students in both 2010-2011 (63%) and 2022-23 (64%) said they would go first to a technology resource for assistance, including doing an online search using keywords, using known websites, searching for information on social media channels, and using Wikipedia. While we celebrate the increased usage of digital tools in the classroom, it is important to note that student behaviors have long favored technology resources to support efficient and effective learning processes.

Chart B: Grade 9-12 students report on how they would approach writing a report for schoolwork



In our discussion about use cases for technology within learning, it is important to further underscore that students are self-directing learning using digital tools even when it is not for homework or other school-initiated assignments. Six-in-10 students in grades 6-12 (60%) say that they use technology tools monthly to learn about an academic interest or passion, on their own, beyond teacher sponsorship; 43% are doing that type of self-

directed, purposeful learning weekly. Project Tomorrow's Speak Up reports have documented the pervasiveness of these self-directed, digitally enabled learning behaviors by students since 2007. The recent book, *Free Agent Learning: Leveraging Students' Self-Directed Learning to Transform K-12 Education*, by Project Tomorrow's Chief Executive Officer, provides a comprehensive analysis of this phenomenon using data from over 2.5 million students and shares key insights to help education leaders adopt Free Agent Learning behaviors for classroom usage to support greater student agency and choice within learning.[ii] Free Agent Learning activities by students are highly purposeful and support self-remediation, exploration around careers and colleges, learning how to do things, and supporting curiosity about their world and key trends. What differentiates Free Agent Learning from classroom-based digital learning activities is the self-determination of the student who is free to use their own personal tools to pursue highly personalized academic interests at their own pace and in their own time. Examples of Free Agent Learning behaviors as shared by students this past year include:

- Watching an online video to learn how to do something or to learn about other people's ideas or research work.
- Using online tools to gain feedback from a greater audience to improve one's writing skills.
- Doing research on a topic of interest or curiosity.
- Taking an online class or accessing online tutorials to improve academic skills or performance.
- Leveraging social media channels to identify others who share interests in different academic topics.
- Playing online games or virtual simulation activities to develop future-ready skills – including watching others play games as well.
- Reading news stories or reports about important trends or events in the world.

This realization that students have an inherent interest in their own education destiny and are using digital tools to support these types of self-directed learning is still in its nascency. But as noted in the quote from the National Education Technology Plan of 2004, students' views do have the ability to drive greater awareness, not only about technology use but about their preferences for learning experiences. Additionally, more education leaders are recognizing the need for students to develop agency and self-efficacy for learning on their own. The students agree. In the most recent Speak Up survey from the 2022-23 school year, 59% of students in grades 6-12 said that they like learning when they can be in control of when and how they learn, and 48% note that they wish that their teachers provided them with more choice about learning modalities and experiences in the classroom. In short, the students want learning experiences in the classroom to replicate the types of highly engaging and purposeful learning they are doing on their own beyond the classroom.

- **A New Value Proposition for Digital Learning**

In contrast to the views of many adults, including educators and parents, students view technology as simply a utility for supporting more efficient learning. Students connect the dots more easily than adults between future-ready skills and digital learning experiences. For today's students, technology use is not about increasing engagement. Rather it is about creating more effective learning experiences that support skill development. The Speak Up research findings from students about the relationship between future-ready skills and technology usage provide a foundation for developing that new value proposition for digital learning.

Over the years, the Speak Up surveys have asked both adults and students to identify the types of skills that all students should develop to be successful in the future. The student list of the top skills they perceive as most

important today focuses strongly on student-initiated learning, learning with others, and developing personal creativity and critical thinking skills (Table 3). Whether echoing their at-home self-directed learning or their virtual learning experiences from the pandemic, it is noteworthy that 78% of middle school students and 83% of high school students say that developing proficiency with learning on one's own is the top skill needed for their future success. As will be discussed in a future report, 70% of parents of school-aged children agree with the students about the importance of that skill.

Table 3: Students identify the skills needed for their future success

Skills needed for success	% that agree	
	Gr 6-8 Students	Gr 9-12 Students
How to learn on one's own	78%	83%
Learning to work with different types of people	75%	79%
Teamwork and collaboration skills	71%	72%
Creativity skills	70%	65%
Critical thinking and problem-solving skills	68%	75%
Time management and organization	65%	70%

Understanding the students' perceptions of what skills constitute future-ready skills is essential for appreciating the benefits that students derive from effective technology use within their learning lives. Students are asked annually on the Speak Up surveys to identify the benefits to them when technology is used effectively within their classroom learning. The students' position about those benefits of technology has proven to be highly stable over time, including before, during, and after the pandemic. The top benefits identified by students on the Speak Up surveys in 2016-17, 2019-20 and 2022-23 represent the same prioritized outcomes and at similar levels of agreement (Table 4). And those outcomes tie directly to the skills students identify as most important for their future success. For example, 7-in-10 students said that teamwork and collaboration skills are important skills for them to develop, and 50% of students said that using technology effectively within learning provides them with more collaborative learning experiences. Many of these same benefits are also identified by students in grades 3-5. For those younger students, technology use within learning enables them to learn at their own pace (61%), develop creativity skills (56%), provides ways for them to be in control of their own learning (44%), and supports critical thinking and problem-solving skill development (44%).

Table 4: Students identify the benefits of using technology within learning

Benefits from technology use within learning	% of Grade 6-12 students that agree		
	2016-17	2019-20	2022-23
Learning at my own pace	55%	58%	55%
In control of my learning	47%	51%	52%
Collaborating with others more	48%	52%	50%
Developing creativity skills	51%	52%	50%
Communicating with my teacher(s) more	40%	40%	45%
Developing critical thinking and problem-solving skills	44%	45%	45%
Applying knowledge to practical problems	48%	47%	44%

It makes sense, therefore, given how students are making the connection between future-ready skills and technology outcomes that they also value learning about how to use technology effectively.

Knowing how to use technology effectively is an important skill that will help me in the future.

- 56% of students in grades 3-5 agree
- 52% of students in grades 6-8 agree
- 52% of students in grades 9-12 agree

From Today to Tomorrow: Ideas to Inspire Innovation

- **Re-framing Digital Access as an Equity Imperative**

In the first year of the Speak Up Research Project, the phrase "digital divide" almost exclusively referred to the situation where some students did not have access to technology outside of school, including lacking computers and Internet connectivity at home. Using research that identified this digital gap between haves and have nots, policies and programs were put in place to close the digital divide and thus level the playing field for more equitable learning experiences for all students. Digital access today is still about equity, but a re-framing is taking place to broaden the discussion to include school access as well as home access, and to think beyond the binary access metrics of have and have not to now include inherent divides associated with technology usage and the design of learning experiences in school.

Long before the pandemic and the sudden shift to virtual learning put a spotlight on students' home technology and Internet access, Federal Communication Commission Chairperson Jessica Rosenworcel was talking about the Homework Gap as a significant equity issue. The Speak Up surveys have asked students for the past twenty years

about their home Internet access. But starting in 2015, we asked a specific question to reveal if their lack of home technology access was impacting their ability to complete homework assignments. In 2015, 20% of students in grades 6-12 reported that they sometimes were impacted by the "Homework Gap" and not able to do digitally based schoolwork outside of the classroom. In our most recent polling, 13% of students in grades 6-8 and 11% of students in grades 9-12 still report being Homework Gap impacted even with the recent procurements of devices to students to use at home and in school, and the national push for low-cost Internet connectivity plans. **We are therefore identifying closing the Homework Gap as unfinished business.** But today we realize that for out-of-school technology access to be appropriate to support students' learning activities, it is not as simple as the binary metric of having Internet connectivity or not. If that was the case, providing every student in the nation with a Chromebook and a mobile hotspot would fix the problem. Doing homework using McDonald's Wi-Fi should not be acceptable for anyone. Rather, every student needs digital access outside of school that meets the following criteria:

- Access to technology that is in a safe location to support an effective learning process and experience.
- Consistent access to learning tools and computing devices that are not shared with siblings or have limited availability for student use.
- High-quality Internet connectivity with adequate bandwidth that supports interactive and participatory learning.
- Usage of appropriate devices for all kinds of learning experiences.

Besides supporting at-home connectivity for school-directed learning, it is an equity imperative that every student can use technology tools to also pursue self-directed learning around their areas of academic interest and passion. Every student should have access to digital resources to be a Free Agent Learner. The equity imperative today with digital access outside of school is about more than mere connectivity. It requires that we think creativity about how to support students' 24/7 learning lives with appropriate digital resources and tools. Many school districts are doing the hard work already of thinking creatively about sustainably expanding Internet connectivity for their students. An example of this out-of-the-box thinking is the implementation of Wi-Fi on school buses. In 2015, only 2% of districts had implemented Wi-Fi on their buses. In 2022, 26% of districts report that they have implemented a Wi-Fi on school bus program to provide their students, especially in rural communities with long bus rides, access to the Internet for schoolwork activities.

But digital access as an equity imperative is not limited to only home or out-of-school access. Having adequate bandwidth and access to digital tools in the classroom is also a critical equity consideration today. As noted above in the introduction for this report, 53% of students in grades 6-12 identify slow or inconsistent classroom Internet access as a deterrent in their quest to use technology to support their learning. Three-quarters of students (75%) in urban schools cite that same obstacle. This is not a new issue, however. In 2003, in the first year of the Speak Up survey, high school students complained at that time that Internet connectivity in their classrooms was insufficient to support meaningful digital learning. **Internet connectivity in the classroom therefore also qualifies as unfinished business that needs attention to support effective learning experiences for all students, regardless of community resources.** In addition to classroom connectivity issues, students also identify other obstacles or barriers that impact their abilities to use technology effectively to support their learning. As noted in Table 5, students believe that over-active Internet and content filters stifle their learning potential, in addition to not being able to use their own mobile devices. Since 2003, students have also

expressed a belief that there are simply too many rules against technology use in school to provide an effective or participatory learning experience for them. As noted with the classroom connectivity issue, students in urban schools appear to be the most affected by these obstacles.

Table 5: Students report on the obstacles they face using technology at school

Obstacles to tech use in school	% of students in grades 6-12 who agree		
	Urban communities	Suburban communities	Rural communities
Internet is too slow or inconsistent	75%	55%	48%
School blocks websites I need for schoolwork	48%	45%	46%
Not allowed to use my mobile devices at school	46%	30%	39%
Too many rules against using technology in school	39%	29%	32%
School's internet filter blocks searches of keywords for classes	23%	26%	27%

- Designing for More Effective Digital Usage in the Classroom

Over the past year, Project Tomorrow has been part of a consortium of organizations working closely with the U.S. Department of Education on a refresh of the most recent National Educational Technology Plan from 2017. In the 2017 plan, much discussion was focused on the need to move from passive to active use with technology within learning environments. The 2017 plan identified the "digital use divide" as the situation when some learners are using technology in active, creative ways to support their learning and other students are using technology for more passive content consumption. As noted in the first section of this report, the Speak Up findings document a significant increase in technology usage in classrooms over the past few years. A closer examination of Table 2 on page 5 however, indicates that we have more work to do to ensure that students have access to digital tools that can support the types of active and participatory learning experiences first envisioned in that 2017 National Education Technology Plan.

To support a goal of designing for more effective digital usage in the classroom to support student learning, not just classroom operational efficiencies, the Speak Up Research findings about what student value in learning experiences is helpful. Speak Up annual reports have long provided evidence that students have their own vision for what constitutes effective learning today. The Student Vision for Effective Learning is based upon students' perceptions of what works in their school-based learning experiences combined with how they are personally experiencing self-directed learning outside of school. Technology is an enabler of these learning experiences but by itself is not the driving force for the Student Vision. Rather, the Student Vision for Effective Learning is defined by these four essential elements or components within learning environments or experiences:

- **Social-based learning** – students want to leverage communication and collaboration tools to create and personalize networks of experts to inform their education process and to support shared problem-solving experiences.

- **Un-tethered learning**— students envision learning experiences that transcend the classroom walls to expand their access to knowledge and experts so that their education is not limited by resource constraints, traditional funding streams, geography, local community assets, or even the knowledge or skills of their teachers.

- **Contextualized learning** – students desire stronger connections between academic content and real-world issues and events, with a goal to drive learning productivity as well as the development of the college, career, and citizenry skills they need for future success.

- **Self-directed learning** – students believe that the types of learning experiences where they can control (at least to some degree) the what, where, how, and why of the experience will help them develop agency and efficacy as a life-long learner.[iii]

Speak Up research continues to provide evidence about the importance of these four essential conditions within a students' learning environment. Students' belief statements about how they learn best should be important inputs as educators and school leaders think about designing learning experiences for more effective usage of technology in the classroom. **The unfinished business, therefore, is not just about designing active and participatory learning experiences for all students but designing those experiences with the Student Vision in mind.**

- I learn best when I can do projects with my classmates
  - 60% of students in grades 6-8 agree
  - 49% of students in grades 9-12 agree

- I like learning when I can be in control of when and how I learn
  - 59% of students in grades 6-8 agree
  - 59% of students in grades 9-12 agree

- I am a better student when I can use online and digital tools to support my learning
  - 51% of students in grades 6-8 agree
  - 54% of students in grades 9-12 agree

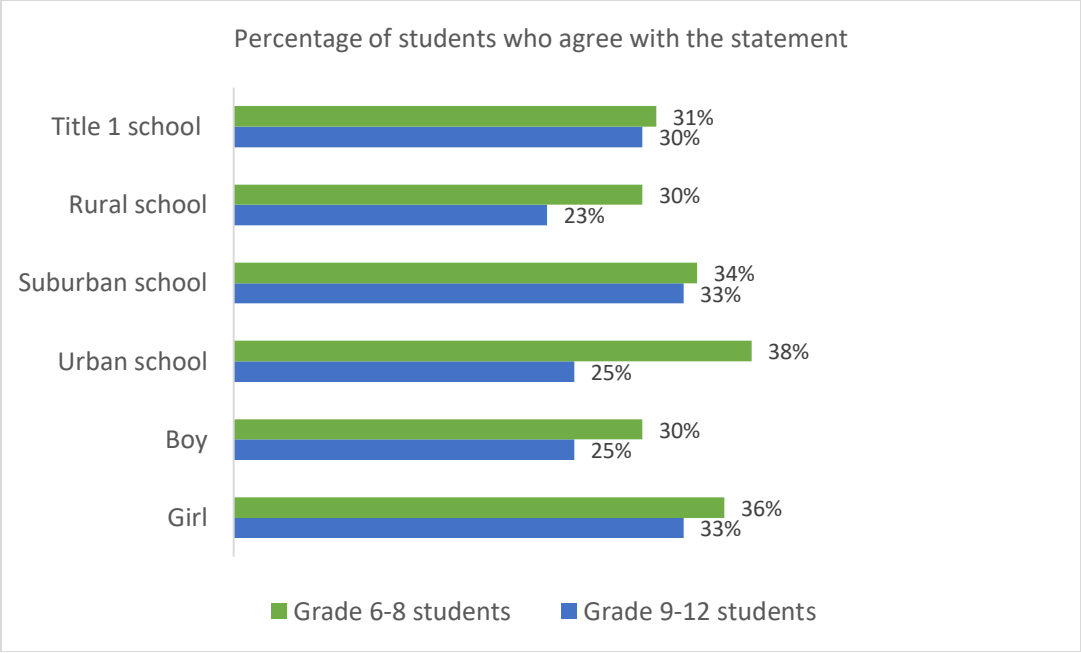
- I learn best when I can do projects that engage me in solving a real-world problem
  - 47% of students in grades 6-8 agree
  - 45% of students in grades 9-12 agree

- I wish my school provided ways for me to learn more about future jobs
  - 39% of students in grades 6-8 agree
  - 45% of students in grades 9-12 agree

The imperative for why a new design for learning experiences is so important most likely differs by school and community. However, a constant in the Speak Up Research over the past few years has been that students do not believe that their classroom learning experiences enable them to be successful. Based upon data from the 2022-23 Speak Up surveys, only 32% of students in grades 6-8 and 28% of students in grades 9-12 say that the classroom environment at their school allows them to do their best work. Disaggregated by various environmental factors, there are slight differences, for example between girls and boys on this valuation and

some differences in the views of students in urban vs. suburban schools (Chart C). But the bottom line is the same. Less than one-third of our nation's students in grades 6-12 believe that their classroom learning experiences are helping them prepare for future success.

Chart C: "My classroom environment at my school allows me to do my best work"



- Envisioning the School of the Future

Just as students have their own vision for what constitutes effective learning, they also have strong ideas about the types of learning tools and digital resources that can empower their learning potential. Since 2003, the Speak Up Research Project has annually asked students to select the technologies or learning models that they think would result in more successful learning for all students. This same question is also asked of parents, teachers, and administrators to provide school districts with a comparative analysis of stakeholder views. Districts that participate in Speak Up also utilize this data as inspiration for new initiatives within their district and to develop a justification for supporting teachers' adoption and adaptation of these tools within their learning practices.

A. Students have a long-standing legacy of supporting the premise that every student should have their own digital learning device to use in school (Table 5).

Table 5: Students' agreement that every student should have a digital learning device provided by their school

Grade levels of students	% of students who agree			
	2022-23	2019-20	2014-15	2009-2010
Gr 6-8 students	83%	82%	63%	57%
Gr 9-12 students	80%	74%	47%	56%

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B. Students see the use of online, video, and digital games as highly supportive of a more participatory and interactive learning environment in their classrooms.

- Middle school students are particularly interested in games as part of their learning experience in school - 53% say games in the classroom would be part of their ultimate school vision.

- 47% of students in grades 3-12 say they are already playing learning games regularly as part of their classroom instruction.

C. Students are enthusiastic about the use of digital or online content including textbooks, databases, and videos because they believe that these resources support their vision for un-tethered learning. In many ways, they believe that the use of digital or online content within their curriculum is an insurance policy so that their education is not limited by resource constraints, traditional funding streams, geography, local community assets, or even the knowledge or skills of their teachers.

- Students have long valued digital or online content within their learning experience:
    - In 2009, 58% said online textbooks were a top wish item
    - In 2022, videos and online databases are the preference for over 50% of students

- 1/3 of students in grades 3-12 say they learn more from watching a video than reading a book (38%)

D. Students want to be content producers, not just content consumers. They see the future-ready skill of effective communication, including the ability to create content and present that content to new audiences for commentary and feedback.

- 65% of students in grades 6-12 say developing creativity skills is important for their future success.
- And 50% say that using technology within their learning process helps them develop creativity skills.
- 48% see having access to tools to help students create media projects with video and audio as a must for their ultimate school.

E. Through the Speak Up surveys, students have often been out in front of their parents, teachers, and school leaders in terms of seeing how new and emerging technologies can result in a positive impact on their classroom learning outcomes. The Speak Up 2023 Ultimate School List again this year includes several digital solutions that are not yet on the radar of adults.

- Collaboration tools to use in projects
    - Selected by 60% of students in grades 6-12 as essential for a new ultimate school.

- Project-based learning experiences that address real-world issues
    - Selected by 59% of students in grades 6-12 as essential for a new ultimate school.

- Tools to help facilitate student-teacher communication
    - Selected by 50% of students in grades 6-12 as essential for a new ultimate school.

- Coding and computer programming resources
    - Selected by 47% of students in grades 6-12 as essential for a new ultimate school.

- Online tutors
    - Selected by 45% of students in grades 6-12 as essential for a new ultimate school.

- Virtual reality experiences and hardware
    - Selected by 35% of students in grades 6-12 as essential for a new ultimate school.

Ending Thoughts: Five Questions to Consider Today

At the heart of the Speak Up Research Project is a strong, unwavering belief in the power of listening to K-12 students' views and ideas about their educational experiences. We believe that the voices of all K-12 stakeholders, but most notably students, can be an important asset and input into decision-making about the future of America's schools if used effectively. We understand that collecting and understanding the views of students can be tricky business. That is why we developed Speak Up, to provide a no-cost, easy and efficient way for school and district leaders to gain a fresh perspective on the expectations and aspirations of their most important client, their students. Having a few students on a student advisory council or a student member on your school board is a good step forward, but those opportunities are insufficient inputs for those big decisions when you could hear from all your students through the implementation of a Speak Up survey. We believe that the imperative for creating new ways for school and district leaders to appreciate the views of their students is more important today than ever before. As usual, we lean into the Speak Up Research to build that case.

For the past several years, we have asked middle school and high school students the following question on the Speak Up survey:

> *Agree or disagree: Administrators and teachers at our school are sincerely interested in listening to and acting upon ideas from students about how to improve school and our education.*

Last year, only 17% of students in grades 6-8 and 13% of students in grades 9-12 strongly agreed with this statement. To provide a comparative, in the 2018-19 school year, 16% of students in grades 6-8 and 11% of students in grades 9-12 agreed with the statement. Despite public commitments to the value of student voice, and implementation of various ways for students to share their views on their education, we still have unfinished business to ensure that even when we are listening, we are also responding and acting upon those student-generated ideas in some capacity. Our students understand the value of a good education in helping them be prepared for future success. But for too many students, as noted in the research findings shared in this report, we are not yet meeting the mark in terms of supporting their needs or paying attention to their aspirations. We can do better.

To support your local discussions about the future of education and the role of student voices in those conversations, here are **Five Big Questions** for your consideration.

1. How are you expanding your definition of digital access equity beyond home Internet access to include the considerations for effective remote learning, extended self-directed learning by students, and learning capacities within your classrooms?

2. How are you integrating the Student Vision for Effective Learning and your own students' ideas into your efforts to design more effective learning experiences using technology tools, and then to evaluate the efficacy of those classroom practices today?

3. Given an inherent bias to think first about operational considerations with technology tool integration, how are you developing a new growth mindset within your school and community for understanding the value proposition and benefits that students articulate when technology is used effectively to support their learning, and incorporating those types of outcomes within your strategic plans?

4. How are you reframing your discussions about using digital tools to enable the implementation of new learning models in the classroom around the critical twin goals today of developing and nurturing student agency and each student's self-efficacy as a learner?

5. Considering the research shared and the insights of your own students, what is the real purpose of school today in your community and what are you doing to ensure that your stated purpose is aligned with the goals of your community, the parents of your students, and the students themselves?

About Project Tomorrow and the Speak Up Research Project

Project Tomorrow's nonprofit mission is to support the effective implementation of research-based learning experiences for students in K-12 schools. Project Tomorrow is particularly interested in the role of digital tools, content, and resources in supporting students' development of college and career ready skills. The organization's landmark research is the Speak Up Research Project, which annually polls K-12 students, parents, educators, and community members about the impact of technology resources on learning experiences both in school and out of school, and represents the largest collection of authentic, unfiltered stakeholder voices on digital learning. Since 2003, over 6.2 million K-12 students, parents, teachers, librarians, principals, technology leaders, district administrators, and members of the community have shared their views and ideas through the Speak Up Project. Learn more at www.tomorrow.org.

Endnotes:

[i] U.S. Department of Education. "Toward a New Golden Age in American Education: How the Internet, the Law, and Today's Students Are Revolutionizing Expectations." National Education Technology Plan 2004. U.S. Government Printing Office, 2004 [https://files.eric.ed.gov/fulltext/ED484046.pdf]
[ii] Evans, J. A. Free Agent Learning: Leveraging Students' Self-directed Learning to Transform K-12 Education. John Wiley & Sons, 2022. [https://www.tomorrow.org/publications/free-agent-learning/]
[iii] Evans, Free Agent Learning: Leveraging Students' Self-directed Learning to Transform K-12 Education.

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