



90 DAYS THAT CHANGED K-12 TEACHING & LEARNING: THE SHIFT TO DIGITAL LEARNING



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“The 90 days of change led to teachers rising to meet the challenge presented by the pandemic. We saw teachers coupling creativity with technology to foster student learning during this time. However, the experience of Spring 2020 cannot be merely an experiment. It must be the beginning of an evolution of learning where we can redefine what engagement looks like starting this fall.”

Lesley Bruinton, APR, Public Relations Coordinator
Tuscaloosa City Schools

INTRODUCTION

Across the country on March 6, 2020, most of our nation’s K-12 students were engaged with learning in a traditional classroom setting in their local schools. The images from that day may have looked like this:

- First graders huddled together elbow to elbow in their class reading nook listening intently with wide-open eyes as their teacher reads aloud a favorite story from her iPad.
- In a math class, sixth grade students working together to identify all the ways to divide a 12-inch pizza into equal slices while their classmates watched online videos about finding the area of different geometric shapes.
- High school students in a senior level government class practicing their debate arguments about animal testing, while simultaneously texting each other about who was going to win tonight’s championship basketball game, their team or the crosstown rival.

And while the use of digital tools, content and resources have become commonplace in the American classroom, the role of those technologies has generally been as a supporting cast member, not the primary vehicle for learning as illustrated by these examples and many others.

By May 6, 2020, however, 48 of 50 states had either closed their schools or recommended that all schools in their state be closed, thus dramatically impacting the learning environment for 55.1 million K-12 students. The cavalcade of school closures caused by the COVID-19 pandemic resulted in the sudden and unplanned shift in the delivery mechanism for instruction, from primarily face-to-face, in-classroom instruction to digital learning facilitated over the Internet from home. Almost overnight, technology tools became the principal instrument for enabling the continuity of learning for students across the country. First graders now listened to that favorite story read aloud to them through their own iPad while sitting in their kitchen with Grandma. Math teachers set up playlists of online videos and tutorials for students to use at home for mostly self-directed learning using their school assigned Chromebook. High school debate class was facilitated through a virtual classroom as was high school graduation and prom, but school baseball teams across the country never took the field.

As the school year comes to a close, and the process of reflection starts on what was learned during this shift to digital learning, it is important to call out the herculean effort of teachers, parents and student to enable the continuity of learning during this period. And while the jury may still be out about the efficacy of various e-learning approaches, especially relative to learning loss, it also goes without saying that the roughly 90 days of school closures most likely forever changed our expectations for teaching and learning in K-12 education, and most certainly has shone a new spotlight on the role of digital tools, content and resources within the learning experience. In this new series of four executive briefs from Project Tomorrow® and Blackboard, we will address four key considerations emerging already from this shift to digital learning:

- The changing views of digital learning because of the increased use of the technology tools during school closures
- The increasingly critical nature of understanding and addressing equity considerations in K-12 learning
- The importance of effective student–teacher communications to the learning process
- The long overdue need to change our thinking about student ownership of learning

Each executive brief in the series leverages new data findings from Project Tomorrow’s Speak Up Research Project with a goal to not only inform but also to stimulate new local reflections and discussions on the experiences of our stakeholders with remote e-learning and how to most effectively prepare for the uncertainty of the next school year and beyond. Consequently, each brief includes a short list of thought-provoking questions that school and district leaders can use to jumpstart these new conversations within their communities.

Key highlights from this first in the series of executive briefs on the changing views on digital learning:

- **The pandemic and resulting school closures has resulted in a new awareness and appreciation for the value of digital tools, content and resources to support more personalized learning.** This is evident in the priorities that education leaders have for additional funding to support digital learning, and the types of professional learning that teachers say they want and need to be successful in the classroom. We do not believe that this sudden and unplanned shift to digital learning is a passing fad, but rather the type of seismic event needed to re-invent and re-vitalize teaching and learning to be more student centered.
- **The shift to digital learning also revealed that despite prior investments in technology training, most of our K-12 teachers were not comfortable with new instructional practices that leveraged digital tools.** Through heroic efforts during their school closures, many teachers quickly developed greater competency and comfort in using online resources within their lessons, but more work is needed to ensure that every teacher is proficient with these new essential tools for learning. Additionally, as a factor of providing all students with equitable learning opportunities, it is imperative that school and district leaders take to heart the needs of every teacher for more personalized professional learning. Teacher quality and proficiency with new learning models and tools is a critical component of ensuring equity of learning for all students.
- **While unintended, the school closures this spring have resulted in new discoveries about what is needed to transform education and opened our collective eyes to new potential solutions.** With the realization that too many students were not connected to the Internet to support their remote learning, our education leaders and others have a new understanding of equity of access that needs to be addressed with larger scale policy and programmatic solutions. Out of the need for increased communications from school-to-parent and teacher-to-student, we have developed a keener interest in the efficacy of various communications tools, especially for students. And as remote e-learning put a stronger focus on students' self-directed learning, our schools are more ready than ever for new conversations around changing instructional practices to support more student ownership of the learning process. This crisis has provided a unique opportunity for reflection, re-invention and re-imagination.



WHAT WAS THE STATE OF DIGITAL LEARNING BEFORE SCHOOL CLOSURES?

The past ten years have seen a rapid increase in the use of digital tools, content and resources by students and teachers in the K-12 classroom. For example, in 2010, 28% of classroom teachers said they used an online curriculum regularly with their students. Using data collected from teachers during this school year but before the closures, 60% of teachers say they used an online curriculum at least weekly with their students. The increase in the use of technology resources in the classroom has been fueled by two key factors; the proliferation of mobile devices enabling student access to digital content in the classroom, and the recognition that effective technology usage can drive student readiness for college or career success.

With the introduction of lower cost, Internet-ready devices (commonly called Chromebooks) for schools in 2011, many districts saw a unique opportunity to put computing power in the hands of every student. As demonstrated in Table 1, Chromebooks have become the device of choice in most districts over the past five years. Given the attractive price point and pre-existing student-teacher familiarity with Chromebooks, it made sense that school districts adopt these types of devices to send home with students for e-learning during the school closure period. Reflecting that new reality, eight in 10 middle school students reported in April-May 2020 that they were using a school assigned Chromebook to support their continued learning while their physical school was closed, an increase of 43% since the first six months of the school year. Correspondingly, 65% of high school students and 82% of students in grades 3-5 also say they were using a school assigned Chromebook during remote learning.

Table 1: Increase in Student Access to Chromebooks 2015-2020

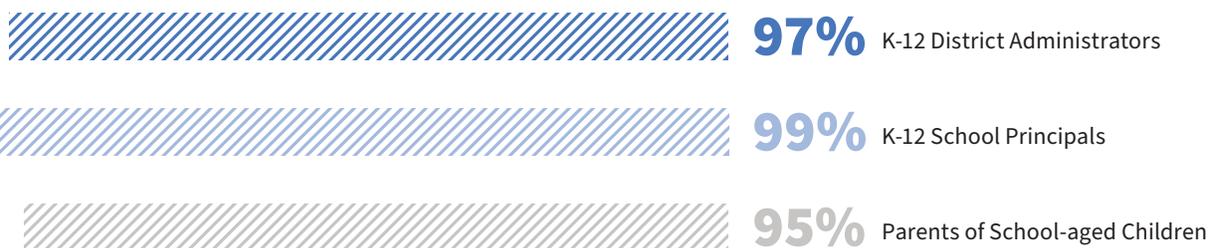
STUDENTS REPORT BEING ASSIGNED A CHROMEBOOK TO USE AT SCHOOL		
SCHOOL YEAR REPORTING	% OF STUDENTS IN GRADES 6-8	% OF STUDENTS IN GRADES 9-12
2015-16	33%	21%
2017-18	45%	45%
2019-20 (before school closures)	56%	35%
2019-20 (during school closures)	80%	65%

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With so many more students having a device to use in class, teachers were more likely this school year than ever before to use digital content and resources within their lessons and class activities. Based upon data collected from teachers prior to school closures, 56% more teachers reported using animations (like BrainPOP movies or Khan Academy tutorials) and simulations (such as the stock market game, online frog dissections and the iCivics games) in their classroom than in the 2017-18 school year. Correspondingly, digital content subscriptions increased by 30% and teacher usage of online videos in the classroom grew by 20%.

The concept that the effective use of technology within learning can support students' readiness for college and career success has significantly gained traction with parents, school principals and district leaders during this school year as well. The data below shows almost universal agreement now with this connection.

**Administrators and Parents Strongly Agree:
The Effective Use of Technology Is Important for Students' Future Success**



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But valuation and usage do not tell the full story. As schools were beginning to close in April 2020, 54% of school and district administrators polled by Project Tomorrow admitted that teacher readiness for teaching in a remote or virtual environment was a major concern. Their concern was not unfounded. Despite increased usage of digital tools within their classroom, most teachers still do not feel adequately comfortable implementing new digital learning models or instructional practices within their classroom (see Table 2).

Project Tomorrow has long reported on the relationship between teachers' comfort and confidence using technology tools and their competencies with the integration of digital tools within everyday instruction. The percentage of teachers who reported being very comfortable with these new practices is not statistically different than what was reported in the 2017-18 school year, indicating no real developmental growth. It is also noteworthy that there is very little differentiation in the number of teachers identifying themselves as very comfortable based upon grade level assignment.

Table 2: Teachers' Comfort With New Digital Learning Models and Instructional Practices (as reported prior to school closures)

NEW DIGITAL LEARNING MODELS AND INSTRUCTIONAL PRACTICES	PERCENTAGE OF TEACHERS WHO IDENTIFIED THEMSELVES AS "VERY COMFORTABLE"		
	ELEMENTARY SCHOOL TEACHERS	MIDDLE SCHOOL TEACHERS	HIGH SCHOOL TEACHERS
Integrating mobile devices within instruction	14%	18%	22%
Facilitating student collaborations using digital tools	15%	24%	25%
Leveraging technology to differentiate instruction	18%	23%	21%
Personalizing learning for each student	21%	20%	20%
Using data to inform and enhance instructional practices	25%	27%	25%
Using online or digital games in the classroom	31%	33%	28%

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With only 18% of middle school teachers indicating a high level of comfort integrating mobile devices within instruction, it is no wonder why school and district leaders were concerned about the implementation of remote e-learning in their community. As noted earlier, to enable the continuity of learning, many districts distributed mobile devices to students to use at home. However, teachers' admission of their lack of skills or confidence in how to effectively use these tools (and others) to support learning when in a physical classroom created a very challenging environment for effective learning to take place remotely.

For many teachers, remote e-learning mandated the quick development of a brand-new set of skills and capacities using technology tools to support their own teaching effectiveness and their students' learning experiences. For many administrators, this sudden shift to digital learning brought new realization that it was important for them to understand not only how often digital tools were used in the classroom, but also to examine the efficacy of that usage and the overall readiness of their teachers for transformative digital learning.

WHAT DID WE LEARN FROM THE SCHOOL CLOSURE EXPERIENCE?

It is often said that necessity is the mother of invention. In the case of the COVID-19 precipitated school closures, that proverb can be extended to say necessity was the mother of re-invention and re-imagining the use of digital tools, content and resources in remote e-learning. In the face of having to adapt to remote teaching, our teachers re-invented and re-imagined instructional processes using technology tools. And in the process, they realized new benefits from the effective use of technology and identified new priorities for professional learning.

With the shift to remote learning, both students and teachers reported greater use of a variety of online content and resources. This was to be expected. What is more significant, however, are the ways in which teachers adjusted their instructional practices to meet the new parameters of e-learning. For example, before school closures, only 20% of teachers said there were regularly creating videos of class lessons or labs for their students to watch outside of school. Despite reporting that students regularly use videos to self-remediate, teachers for the most part have been reluctant to create videos either because of a lack of skill or clarity about the value. However, since school closures started in mid-March, 45% of K-12 teachers now say they are creating teaching videos to share with students and families. These new competencies will inevitably carry over to the new school year and provide a foundation for potentially implementing blended or flipped learning environments even when schools are not physically closed.

As an important lesson learned from this experience, more teachers are now realizing the potential of technology to support the personalization of the learning experience for their students. Table 3 documents the change in teachers' perceptions about the benefits of digital learning in creating more student-centered learning environments. As a result of their remote e-learning experience, over two-thirds (69%) of teachers say that a benefit of digital learning is the ability for their students to learn at their own pace.

Table 3: Benefits of Digital Learning: Comparing Teachers’ Perceptions Before and During School Closures

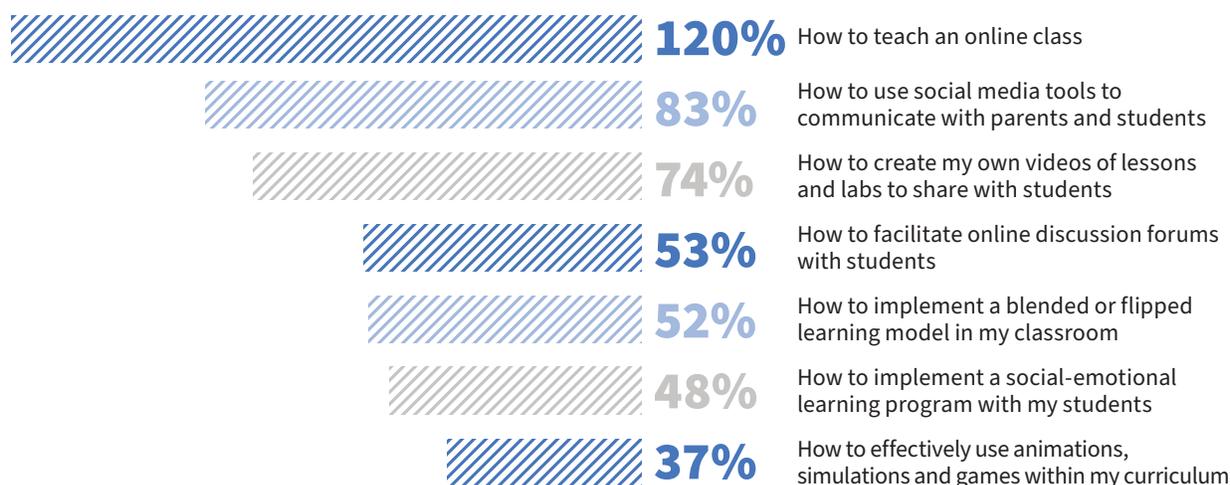
BENEFITS OF DIGITAL LEARNING FOR PERSONALIZATION OF THE LEARNING PROCESS	PERCENTAGE OF K-12 TEACHERS WHO IDENTIFIED THESE BENEFITS	
	TEACHERS—BEFORE SCHOOL CLOSURES	TEACHERS—DURING SCHOOL CLOSURES
Students are learning at their own pace	56%	69%
Students are in control of the learning process	46%	55%
Learning fits the students’ personal learning approach	44%	52%
Facilitation of more student-centered learning	43%	51%
Students are developing greater personal ownership of the learning process	38%	47%

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It follows that as teachers re-invented and re-imagined their classrooms in this unprecedented virtual space they also began to identify new needs for professional learning. As school districts begin to assess teacher needs for professional development programs for the next school year, this re-imagined wish list from teachers is an important input.

Teachers’ Re-imagined Wish List for Professional Learning After Teaching in a Remote E-Learning Environment

Percentages of growth in the number of teachers asking for these specific learning needs from before school closure to during school closure



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At the time of writing this executive brief, school and district leaders alongside city mayors and state governors are still debating what school would like for the 2020-21 school year. While most are acknowledging the need to be prepared for more potential school closures in the fall, many others are also starting to develop a set of contingency plans that will allow them to abide by the recommended health guidelines. At the center of most of those plans is a continuation and/or expansion of remote e-learning enabled by the effective use of digital tools, content and resources in the hands of teachers and students.

Almost three-quarters of school and district administrators (73%) polled in April 2020, recognize that their teachers will need more professional learning to get ready for this new school year and that their district will need either new funding to support these training programs or will have to re-allocate existing resources to cover that budget line item. Similarly, school and district leaders have identified other needs for the new school year that most probably will also require new funding. The additional new budget items include tools to support student access to the Internet outside of school, digital resources and content to enable a more effective and efficient implementation of e-learning, and tools that will empower stronger school to home communications with parents and families (Table 4).

Table 4: Budget Line Items Needed to Support Remote E-Learning

REMOTE E-LEARNING BUDGET LINE ITEMS	PERCENTAGE OF SCHOOL AND DISTRICT ADMINISTRATORS WHO IDENTIFIED THIS NEED IN APRIL 2020
Wifi hotspots for students to use at home	84%
Teacher professional learning	73%
Increased district bandwidth	69%
Wifi hotspots for teachers to use at home	67%
Assessment tools that support virtual learning environments	67%
Online curriculum for core content areas	65%
Learning management system	62%
Parent communication tools	61%

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“The COVID-19 pandemic, while a shock to the system, has made apparent the need for all educators to quickly embrace new technologies to meet the needs of today’s learners. The numbers don’t lie. Our students were ready and able to successfully move to new ways of learning. We must move just as quickly so we don’t hold them back.”

Justin Elbert, Assistant Director of Communications
Klein ISD

WHAT ARE THE KEY TAKEAWAYS FROM THIS SHIFT TO DIGITAL LEARNING THAT HAS CHANGED K-12 TEACHING AND LEARNING?

School and district leaders traditionally use the summer recess period to evaluate the success of the prior school year and reflect on changes that they may want to make to increase the effectiveness of their staff and/or programs in the upcoming school year. The 2020 summer recess period will include an additional consideration: what have we learned from this unplanned remote e-learning journey that can potentially be the stimulus for transforming teaching and learning in our schools? How have these past 90 days changed the future of education?

To support those critical discussions, our next three executive briefs in this new series will explore key takeaways from this shift to digital learning that we believe should be part of this reflection process in every school and district. It is our hope that the data-informed insights shared through these briefs will inform local discussions on these issues, and potentially stimulate new questions and solutions.

- **90 Days That Changed K-12 Teaching and Learning: Spotlight on Equity in Learning**

The sudden and unplanned move to remote e-learning resulted in a spotlight on the challenges to ensure that every student has appropriate, safe and consistent access to digital tools and resources to support learning outside of school. But creating equity in learning environments is about more than provisioning a Chromebook and a Wifi hotspot to a family. Equity in access to quality teaching and learning matters too.

- **90 Days That Changed K-12 Teaching and Learning: Strengthening the Bonds of Communications**

While schools have long championed the importance of school-to-home communications and encouraged family engagement with local schools, the remote e-learning environment has promoted effective communications from important to absolutely imperative. But what does effective communications mean in this new era, especially relative to the dialogue between teacher and student?

- **90 Days That Changed K-12 Teaching and Learning: Sponsoring Student Ownership of Learning**

School closures and remote e-learning has presented an unprecedented opportunity for education leaders to think constructively about the purpose of school and the role of the student in the learning process. These critical discussions have the potential to lead to new discoveries around student engagement, how to create contextually relevant learning experiences, and empowering greater student ownership of the learning process.

ENDING THOUGHTS

The overarching goal of each executive brief in the series is to stimulate new local reflections and discussions on the experiences of our K-12 stakeholders with remote e-learning and how to most effectively prepare for the uncertainty of the next school year and beyond. To assist education leaders with realizing that goal, here is a short list of thoughtful questions that can be used to jumpstart new conversations within your communities. Share your thoughts on these questions or how you have used them to support your planning efforts with your stakeholders on Twitter using this hashtag: *#90DaysOfK12Change*

1. Reflecting on this remote e-learning experience, what best practices in instruction, operations or communications will we bring forward to the new school year whether we are in our physical classrooms or our virtual spaces, and what strategies will we strategically abandon?
2. How will we re-invent professional learning in 2020-21 to not only meet the evolving needs of our teachers and leaders, but also to be effective and efficient within a variety of different back-to-school formats?
3. Now that we have started down a road of re-imagining education, what do we need to do to sustain innovation in our learning processes and to engage with more stakeholders on this journey?

In our next brief, we place on spotlight on equity and how the 90 days of school closures has heightened our collective perspective on the criticality of equitable learning experiences for all students. Beyond differences in technology access within some communities, we also explore the social and emotional well-being of our students relative to their learning experiences with a focus on institutional bias and injustice. **Is it acceptable that students in majority minority schools are less likely to say that their school cares about them as individuals than students in majority white schools?**

ABOUT PROJECT TOMORROW

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 voice on digital learning. Since 2003, almost 6 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.

ABOUT BLACKBOARD

Blackboard's unique approach to K-12 education focuses on creating a seamless and engaging experience for each learner. Our platform provides a way for students to learn in a safe, connected, and technologically savvy environment by focusing in advancing personalized learning and engaging and informing the entire community.

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