



BEYOND ENGAGEMENT:

Using Technology to Enable New Learning Experiences and Empower Educational Effectiveness

Briefing Paper: The Educational Equity Imperative

*The Educational Equity Imperative:
Leveraging Technology to Empower Learning for All*

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*Knowledge is power. Information is liberating.
Education is the premise of progress, in every society, in every family.*

*Kofi Annan
Secretary-General of the United Nations (1997-2006)*

Introduction

It is becoming increasingly evident that equitable access to high quality learning environments is the social justice issue of our time. The educational equity imperative demands that schools and educators provide all students, regardless of color, creed, cultural or ethnic identity, community, family structure, gender identification and/or learning differences or interests, with appropriate access to instruction and support that will help them reach their full potential as well as meet or exceed common standards for achievement. The issue of inequity in educational opportunities has received additional attention within the past few years with the increased emphasis on student development of college and career ready skills in school. It is commonly accepted now that for students to be able to successfully compete and contribute in a global information-intensive economy and society after graduation, they must be fluent in new essential workplace skills including critical thinking, collaboration, creativity and communications. However, disparities in community or school resources, teacher quality, administrator leadership, and family and community engagement levels have too often resulted in an uneven patchwork of learning experiences or environments for children with longstanding implications. While technology use in school has long held the promise of leveling the education playing field for all students, and especially for students in challenged or under-resourced communities, some educators, parents and policymakers would argue that this promise is still unmet in many communities.

For the past fifteen years, Project Tomorrow's® annual Speak Up Research Project for Digital Learning has provided schools and districts nationwide and around the globe with illuminating insights into the expectations of students for new learning environments by reporting on the authentic, unfiltered ideas of students themselves. Additional perspectives from teachers, librarians, administrators, community members and parents have illustrated the challenges as well as benefits of education technology usage. Our goal since the launch of this project in 2003 has been to help build the capacity of local schools and districts to address the promise of technology as a stimulus for both innovation and equity in education. Each year, education, policy, research and business leaders leverage the Speak Up findings to understand how schools and communities can better serve the learning needs of today's digital learners,

and to support teachers, administrators and parents in their quest to ensure that our students are well-prepared for future success. To support this important work, we are providing a series of briefing papers based upon the Speak Up 2017 findings to address key topics in the effective use of technology to enable new learning experiences and empower educational effectiveness. It is our hope that the briefing papers will stimulate new discussions, and possibly instigate the development of new solutions or approaches to many of the challenges that continue to plague education and stymie innovation in our schools.

This Speak Up briefing paper examines the role of technology use in school as an enabler of equitable learning environments. Two use cases for technology are investigated in this brief. First, we examine data from principals who have implemented a 1:1 program where their students are assigned a laptop, tablet or Chromebook to use in school to support learning. Such programs aim to level the playing field by providing all students with the same access to technology tools and content. Within that use case, we also report on the learning experiences and outcomes of the students using these devices in school. In the second use case, we evaluate the role of digital content usage by the teacher and its application to students' development of college and career ready skills. The development of essential workplace skills is an important outcome for education in general, but it is especially important that all students have such learning experiences so that there is no inherent discrimination in potential career or college readiness. Through the examination of these two technology use cases, the Speak Up findings provide new insights into how digital tools, content and resources can create more equitable learning environments. This discussion, however, is too important for a single briefing paper. We encourage schools, districts and communities to use this paper and our other briefs as starting points for follow-on local discussions. To help stimulate those critical conversations, we have included a list of thought-provoking questions at the end of this brief to jumpstart your new conversations about educational equity.

Technology use in school and educational equity

Parents of school-aged children share a common concern: *Is my child learning the right skills in school to be successful in college and/or in a future job?* With this goal in mind, parents equate the effective use of technology within instruction with their child's preparation for future success. More than 8 in 10 parents (83%) say the use of technology in school is important for their child's future. **Additionally, two-thirds of parents (66%) endorse the idea that regular usage of digital tools, content and resources by their child in his/her classroom helps develop essential workplace or college ready skills.** This high valuation on technology usage, which is shared universally by parents in rural, urban and suburban communities, is met too often by the harsh reality that teacher usage of technology is not always effective or equitable. Parents report that their largest concern about technology usage at their child's school is not student data privacy (24%) or even teachers' lack of skills using digital tools (18%), **but that technology use varies too much from teacher to teacher, class to class, subject to subject (51%).** The percentage of parents concerned about inequitable

technology usage at school has risen significantly in the past five years; in 2013, only 32% of parents expressed this concern.

School site principals understand this concern about the variability of teacher usage of technology. Half of principals (46%) say that motivating teachers to change their instructional practices to use digital tools within their lessons and class activities is the primary obstacle to more effective technology usage in class. And they understand the critical connection of teacher effectiveness to educational equity, especially if their school is a Title 1 school, or in an under-resourced community. Many principals as well as district administrators believe in the potential of technology to effectively level the playing field for all students, and increasingly they are putting those beliefs into action in their schools. For example, **43% of school site administrators state that the implementation of digital content is an effective tool for enabling equity across classrooms, throughout the school and within their district.** To activate that belief, a majority of school principals report that instruction in their classrooms regularly includes the use of digital games, online textbooks and online videos, animations and simulations. Table 1 demonstrates the relative parity of these implementations across community types and within Title 1 schools. The use of digital media such as videos, animations and simulations are as prevalent now in urban and Title 1 schools as in suburban schools.

Table 1: Principals report on the implementations of digital content usage in their classrooms

Digital Content	% of principals in Title 1 schools	% of principals in urban schools	% of principals in rural schools	% of principals in suburban schools
Videos, animations, simulations	78%	80%	75%	80%
Digital games	50%	54%	49%	51%
Online textbooks	49%	52%	46%	58%

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Increasingly, administrators are also providing their students with assigned access to a laptop, tablet or Chromebook during the school day to achieve a similar effect of ensuring equity in access to technology and enhanced learning experiences. **From our latest findings, 60% of school principals now say that their school has adopted a 1:1 mobile device program for in-school usage, an increase of 9 percentage points in just one year.** Principals with such programs at their schools are more likely than other principals to report that technology use is effective in core academic subjects (Table 2). For example, 53% of principals with a 1:1 program report that technology is used effectively in math classes at their school with resulting academic benefits. Only 43% of all principals say the same about technology usage in their math classrooms.

Table 2: In what subject areas or classes is technology being used effectively to support student outcomes?

Subject area or class	Principals in schools where students are assigned a mobile device to use in class: % that identify technology use as effective	All principals: % that identify technology use as effective
Reading and literacy development	54%	42%
Math	53%	43%
Science	50%	40%
English	49%	41%
Social studies/history	46%	36%
Special education	40%	32%

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As a result of leveling the playing field by providing every student with the same access to technology and the Internet through a mobile device, these schools are not providing equity but enabling their students to realize the benefits of more effective technology usage in school. This is reflected in the students' reporting of their own outcomes from these technology-enhanced experiences. High school students with assigned access to a laptop or Chromebook are more likely to use those devices to personalize their learning process, to stay organized with their schoolwork and to leverage technology for more enhanced learning experiences than their peers with no access or only sporadic access (Table 3).

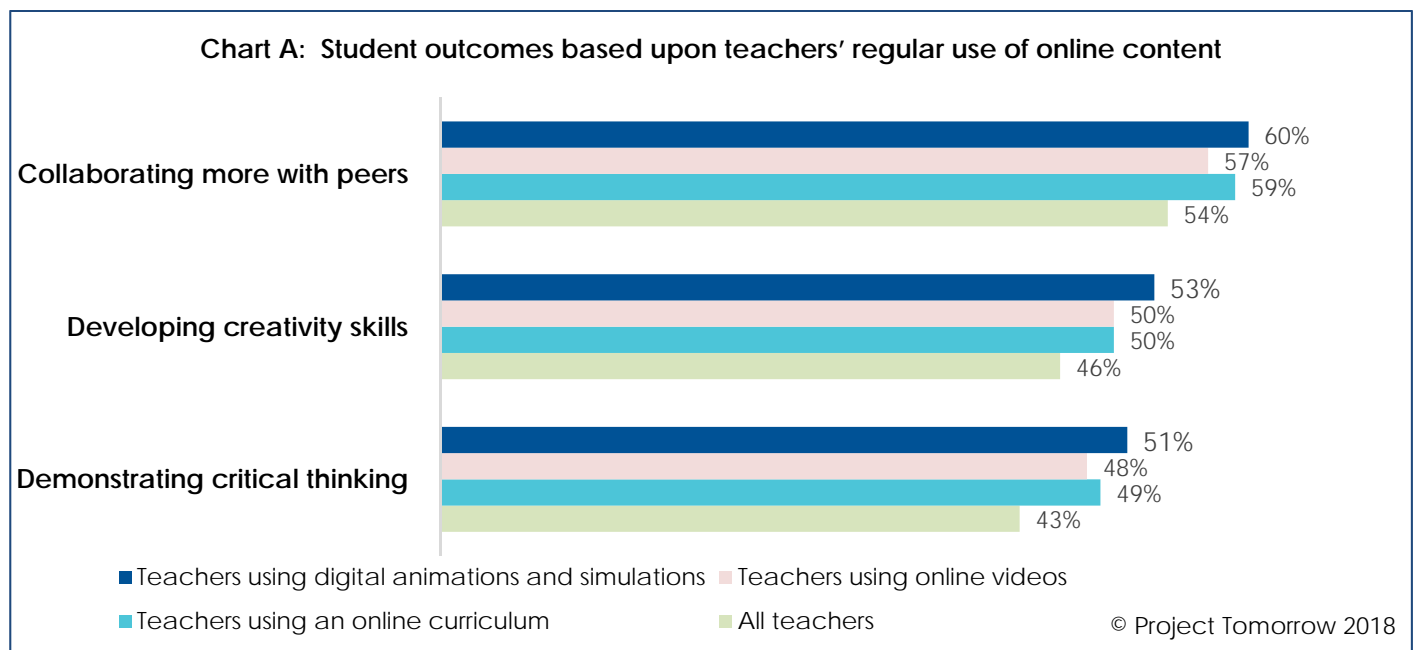
Table 3: Students' schoolwork tasks differentiated by their access to laptops and Chromebooks in school

Types of schoolwork tasks	High school students with an assigned laptop or Chromebook to use at school	High school students with no regular access to a mobile device to use at school
Schoolwork organization		
Checking grades	89%	76%
Getting reminders about tests or homework due dates	53%	39%
Personalizing learning process		
Emailing teacher with questions	60%	42%
Taking notes in class	46%	31%
Enhanced learning experiences		
Doing Internet research	78%	65%
Creating documents to share	64%	46%
Collaborating with peers on projects	47%	33%

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Besides using their assigned devices to enable new learning experiences, students with an assigned laptop or Chromebook are also more likely to report that they believe doing well in school is important for their future (83%) compared to their peers without such access (72%). Correspondingly, 49% of these mobile-using students say the skills they are learning in school are important for their future; only 39% of students without a mobile device hold that view. The investments, therefore, that schools and districts are making in mobile devices and in particular, their decisions to assign these devices to individual students, may result in additional benefits beyond equity. Device access appears to increase student self-efficacy as a learner and help to develop new sustainable mindsets for learning.

In our second use case, we examine how teachers are using online content and tools to support instruction in their classroom. The Speak Up findings provide us with a comparative view of teachers who regularly use videos, animations and simulations and an online curriculum with all other teachers. The teachers using digital content report higher levels of student outcomes than teachers who are not using these tools. This is especially true for student outcomes that are associated with the development of college or career ready skills as illustrated in Chart A. **For example, 51% of teachers who use digital animations and simulations to illustrate abstract concepts to students report that their students demonstrate critical thinking and problem-solving skills as a result of how they are using technology in their classroom.** Only 43% of all teachers say that their technology usage is resulting in critical thinking skill development.



This analysis provides interesting new insights relative to the challenge identified by principals about motivating their teachers to use more technology in their class, and thus mitigate the impact of any inequity in technology access in school or at home. Given the importance of students' development of college and career ready skills, these findings document a connection between the use of online content and skill

development. School and district leaders should examine similar connections and use those findings to build their own value proposition with their teachers on more effective technology usage.

Ending thoughts to stimulate follow-on discussions

The purpose of this Speak Up briefing paper was to examine the role of technology use in school as it applies to the enabling of equitable learning environments, and through the findings to simulate follow-on local discussions around this topic. The key findings from this special examination of the 2017 Speak Up Research Project for Digital Learning data include:

1. School principals value the use of technology within learning as an agent for both empowering learning and addressing the educational inequities inherent in the education enterprise today.
2. Programs that provide students with an assigned laptop, tablet or Chromebook are not only leveling the playing field for students' technology access at school, but they are also enhancing the learning experience for those students, as reported by both principals and students.
3. Teachers' use of digital content, tools and resources in the classroom helps students develop the types of workplace and college ready skills they all need to be successful in the future and thus, the effective use of those tools is enabling more equitable learning experiences at school also.

Given the importance of educational equity and its increasing identification as a social justice issue, we recommend that schools, districts and communities use these key findings as a jumpstart to local discussions. Here are some thought-provoking questions to include in critical conversations with stakeholders and to inform your planning processes:

- o Are our technology resources distributed equitably across our schools or within our classrooms so that every student can use those resources to address their own learning needs?
- o How are we helping our teachers understand the connection between the effective use of digital tools, content and resources, and the development of college and career ready skills by our students?
- o Are we articulating a priority for educational equity to our parent community in our messaging around the use of technology in our classrooms?
- o How are we engaging with our students to ensure that their voice is included in this important discussion around technology usage to support their learning?
- o Does our district or school mission statement or vision include a commitment to educational equity?

About Project Tomorrow and the 2017-18 Speak Up Research Project for Digital Learning

Speak Up is an initiative of Project Tomorrow®, the leading global education nonprofit organization dedicated to the empowerment of student voices in education. Each year, the Speak Up Research Project polls K-12 students, parents, and educators about the role of technology for learning in and out of school. Speak Up represents the largest collection of authentic, unfiltered stakeholder voices on digital learning. Since fall 2003, over 5.4 million K-12 students, parents, teachers, librarians, principals, technology leaders, district administrators, communications officers, and members of the community have shared their views and ideas through Speak Up. K-12 educators, higher education faculty, business, and policy leaders report that they regularly use the Speak Up data to inform federal, state, and local education programs.

In fall 2017, Project Tomorrow received input from 340,927 K-12 students, 34,833 teachers and librarians, 3,249 administrators, 23,159 parents and 4,611 community members representing over 10,600 public and private schools and 3,200 districts. Schools from urban (29%), suburban (37%), and rural (34%) communities were represented in the analyzed data. Just over one-half of the schools (57%) that participated in Speak Up 2017-18 were Title I eligible schools (an indicator of student population poverty). The Speak Up 2017-18 Project was open for input from K-12 stakeholders between October 16, 2017 and January 26, 2018. To learn more about the Speak Up research questions, our methodology or analytical processes, please visit us at https://tomorrow.org/speakup/about_SU.html.

Project Tomorrow's goal with our research is to help build the capacity of education leaders to create new learning experiences that prepare today's students to compete and contribute to the global economy and society. To share the Speak Up 2017-18 national findings, Project Tomorrow is creating a series of briefing papers and infographics to address key topics in the effective use of technology to enable new learning experiences and empower educational effectiveness. These publications can be downloaded from <https://tomorrow.org/publications/publications.html>.



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Project Tomorrow® is the leading global education nonprofit organization dedicated to the empowerment of student voices in education. With 22 years of experience in the K-12 education sector, Project Tomorrow regularly provides consulting and research support about key trends in K-12 science, math and technology education to school districts, government agencies, business and higher education.

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