Blackboard®

Trends in Digital Learning:

Building teachers' capacity and competency to create new learning experiences for students

"Whole system success requires the commitment that comes from intrinsic motivation and improved technical competencies of groups of educators working together purposefully and relentlessly."

Michael Fullan , Author, Speaker, Education Consultant

Introduction:

Education leaders are facing increased demands to not only ensure that today's students are well prepared for college and career, but to prove that their teachers have the capacity, technical competencies and willingness to address these high expectations on an ongoing basis. Parents are on the forefront of this new demand equation. Like many employers and policymakers, parents are concerned about the readiness of students to be successful beyond high school graduation. These new expectations are putting increased pressure and a new sense of urgency on principals and district administrators to think differently about teacher preparation and professional learning; in reality, to think differently about the human capacity building aspect of their education enterprise. Beyond public announcements about plans for 1:1 computing, blended learning, virtual classes, maker spaces or any of the current digital learning initiatives in vogue, education leaders are realizing that the sustainable success of these transformative initiatives is dependent upon the leadership of the teacher in the classroom. This realization is not new, but rather the stakes are higher today due to the amplified spotlight on demonstrating educational outcomes. Within this highly charged environment, the use of digital tools, content and resources holds both the promise to be an efficient and effective modality to elevate the competencies of teachers and to provide evidence and indicators of the value that technology can bring to student outcomes and college and career preparation.

New findings from the Speak Up Research Project on Digital Learning provide a unique lens for examining the current state of teacher capacity for transforming education using digital tools, and identifying promising new practices that can serve as guideposts for this journey. With this year's digital learning trends report, we focus on the readiness of teachers to use digital tools to transform teaching and learning. Using various Speak Up data points, we examine not only where teachers are on this journey today, but also what they say they need to be more effective with instructional technology, especially as it relates to preparing today's students for tomorrow. To provide additional context to this discussion, this year's report includes thought provoking insights from administrators who are on the front lines with these challenges today.

Key findings from this year's digital learning trends report:

1. Two-thirds of parents in all types of communities (urban, rural and suburban) say that the effective use of technology within the classroom provides a significant way for their child to develop college and career ready skills.
2. Technology leaders (67%) say that the greatest challenge they face in implementing digital learning or expanding technology use is motivating teachers to change their traditional instructional practices to use technology more meaningfully with students.
3. Teachers in blended learning classrooms are setting a new bar for transforming learning using technology. For example, 68% report that with the use of technology in their classroom they are better able to differentiate instruction for their students.
4. Teachers who have experienced online and blended classes for their own professional learning demonstrate advanced uses of technology with their own students, have stronger valuations on the role of technology within learning, and higher aspirations for leveraging technology to support transformed learning environments.
5. Teachers identified five essential elements that they need to effectively and efficiently integrate digital content, tools and resources into daily instruction in their classroom: planning time, access to technology in the classroom, technology support, professional development and consistent, high quality Internet connectivity.

Each year since 2003, Project Tomorrow, a global education nonprofit organization, facilitates the annual Speak Up Research Project on Digital Learning. A key aspect of the research project is to track the growth in student, educator, and parent interest in digital learning, as well as how our nation's schools and districts are addressing that interest with innovative learning experiences in and out of the classroom. Since 2007, Project Tomorrow has collaborated with Blackboard to create a series of annual reports that focus on the year-to-year trends in the use of digital learning tools to change the classroom-learning paradigm through an in-depth analysis of the latest Speak Up data findings. In this report, we will examine the trends from our analysis of the Speak Up data collected in fall 2016. More than 514,000 K-12 students, parents, educators, and community members participated in Speak Up 2016. While the perspectives of several stakeholder groups are included in this year's trends report, this report is not meant to be the consummate word on how to build teachers' readiness to use digital tools effectively to enhance learning environments. Rather, we recommend that the findings in this report and the questions we pose in the ending be used as discussion starters to stimulate new ideas on how to best leverage a school district's most powerful asset, their teachers, to ensure that today's students are well-prepared with the right skills and experiences to succeed.

What are the new demands facing education systems?

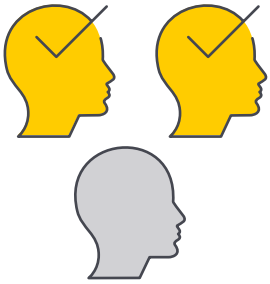
Parental perceptions and views on the quality of education, both within their local schools and as supported by national policies, is driving new demands on education systems to both reform and transform students' classroom learning experiences. As an example, when asked if they had any worries about their child's future, **56% of parents of school-aged children noted that they are concerned about their child not learning the right skills in school to be successful in a future job or in college.** Parents have a legitimate reason to voice that concern. As reported in April 2016, only 37% of high school seniors in the United States are ready to tackle college level reading and only 25% can handle college level math in the recent National Assessment of Educational Progress (NAEP) assessments. Various employer and college groups are also sounding the alarm about the lack of readiness of students to be successful with advanced course work or have the right skills for today's jobs. The National Association of Colleges and Employers recently identified the skills desired by employers in their 2016 job outlook survey. Topping the list was teamwork and collaboration skills, problem solving prowess, effective communications, leadership capabilities, and technology use. While the skills list is familiar and echoes what parents say are the skills their child should be learning in school *(Table 1),* the challenge for school and district leaders is how to infuse effectively and efficiently skill development activities within the traditional academic content areas. District administrators' long-standing prioritization on the academic content areas makes sense; those content areas, not the college and career ready skills are the basis for standardized testing and thus, school performance rankings.

While it is noteworthy that the types of skills valued by parents is universal across all grade levels, it is also particularly instructive for school and district leaders that 7 out of 10 parents see the development of technology use skills as critical for their child's future success. This strong positioning around the use of technology within learning by parents is echoed when they are asked about the best ways for their child to develop college and workplace skills.

TABLE 1:

BEYOND ACADEMICS, WHAT COLLEGE AND WORKPLACE SKILLS ARE IMPORTANT FOR YOUR CHILD TO LEARN TO BE SUCCESSFUL IN THE FUTURE?

College and workplace skills	Parents of children in grades K 5	Parents of children in grades 6 8	Parents of children in grades 9 12
Critical thinking and problem solving	85%	86%	86%
Ability to work with diverse groups of people	76%	76%	75%
Creativity	76%	75%	75%
Teamwork and collaboration	75%	75%	73%
Leadership	71%	70%	68%
Technology use	70%	70%	70%
Communications	66%	68%	68%



“Crowley ISD prides itself on its progressive approach to integrating teaching and learning technologies in our classrooms to not only help our students succeed today, but also to prepare them for future success in college and the workforce. Blackboard enables us to utilize a consistent platform that makes it easy for our teachers to deliver digital content and learning activities that students can use at school, at home and on the go.”

Jerry Allen,
Director of Technology,
Crowley ISD (TX)

Two-thirds of parents in all types of communities (urban, rural and suburban) say that the effective use of technology within the classroom provides a significant way for their child to develop these important skills.

School district administrators agree with parents on this point. They also highly endorse the idea that the effective use of technology within the classroom holds great promise in bridging the gap between academic content and workplace skill development (78% of district administrators). Their support for linking technology use and skill development however is tempered by the reality of their teachers’ readiness or lack thereof to make that connection. A majority of school principals (51%) and technology leaders (67%) say that the greatest challenge they face in implementing digital learning or expanding technology use is motivating teachers to change their traditional instructional practices to use technology more meaningfully with students.

Administrators report that they face a “willingness challenge” with their teachers. This willingness challenge does not refute the need for teacher training on how to use technology effectively, but rather it focuses on teachers’ personal beliefs and motivations to change their instructional practices. As a case point, one-third of principals state that a major obstacle to expanding blended learning in their school is finding teachers willing to try it. In realization of this challenge, more central office administrators are incorporating teacher feedback into their evaluations of the efficacy of new digital initiatives such as mobile or blended learning to understand pain points or areas in which they need to provide more support. Increasingly, administrators are also recognizing that evidence of student achievement improvements or even enhanced student engagement in learning is no longer sufficient to sustain new investments or efforts with technology in the classroom. Beyond technical competencies, we also need teachers to possess an intrinsic motivation, as Michael Fullan calls it, to see beyond what the digital tool does, and to reflect upon and value how the integration of that digital tool improves the learning experience for their students. This is especially valuable when evaluating the connection between digital learning and the students’ development of the college and workplace skills so valued by parents and employers.

Are our nation’s teachers ready to address these new expectations?

Teacher readiness to use digital tools, content and resources in the classroom encompasses three key factors:

1. Do teachers have the skills to use the technology effectively?
2. Are teachers willing to change their practices to integrate the digital resources?
3. Do teachers have the right attitudes or valuations on digital learning to sustain the changes in practice?

The Speak Up findings from over 37,000 teachers nationwide in fall 2016 provides an optimum vehicle for assessing teacher readiness. For this year’s trends report, we examined three aspects of teachers’ usage and valuation on technology to understand teacher readiness.

Teachers’ use of technology to support student learning

Many recent studies including from Project Tomorrow report that teachers are using more digital content than ever before. For example, the number of teachers who report using online videos within instruction has increased 39% over the past three years. Teachers using online curriculum has increased from 22% in 2013 to 36% in 2016. And following other well reported trends, teachers have embraced classroom cloud based tools such as the G Suite for Education and Office 365 to a much greater degree than in the past years. Similarly, teachers have transferred digital productivity practices they use in their personal lives into their school lives. Two-thirds of teachers say that they now regularly text with colleagues to support school and classroom activities.

> “Blending learning with Blackboard, every single student is engaged all the time, all day long.”
>
> **Paula Barr,**
> iNACOL Teacher of the Year, Second Grade Teacher, Lawrence Public Schools (KS)

Closer examination however of the types of digital activities undertaken by teachers, especially in support of new student learning environments, reveals that the adoption rate for more transformative activities may still be in the emergent phase. Many school districts have adopted the Substitution Augmentation Modification Redefinition (SAMR) Model to assess teacher progress in integrating technology within learning. The four levels within the model used in collaboration with the Speak Up research results provide a valuable lens for assessing teacher readiness nationwide. *Table 2* illustrates that the majority of teachers are still in the Substitution or Augmentation modes, with less than one-third of teachers reporting activities that would qualify for the Modification or Redefinition levels that require significant changes in instructional practices.

In many districts, librarians and media specialists are working closely with teachers on the adoption of digital content within instruction, providing them with a front row perspective on teachers’ readiness. While 59% of teachers indicated that they want to use digital resources that they can modify to meet their own classroom needs, librarians report that 62% of their teachers are using digital content just as it is, without modifying it to meet particular classroom needs. Like administrators, librarians report that their most significant challenge is helping teachers move from sporadic to sustained usage of digital tools, content and resources within their classroom. The research reveals that teachers’ mindset about the sustained usage and seamless integration of technology within learning is often intertwined with their personal perceptions of the value of digital learning.

TABLE 2:

HOW TEACHERS ARE USING TECHNOLOGY TO SUPPORT PROFESSIONAL TASKS IN THE CLASSROOM

Activities that demonstrate external adoption of technology but does not result in significant changes in classroom practices (Substitution or augmentation type activities)

- 66% Learn how to do something by watching a video (66%)
- 63% 45% Text with colleagues (63%) or parents of students (45%)
- 66% 61% Use G Suite for Education (66%) or Microsoft Office 365 (61%) in my classroom
- 58% Review digital reports of student achievement data to inform instruction (58%)
- 52% Read books or articles on a tablet or digital reader (52%)

Activities that demonstrate internal adaptation of technology that results in significant changes in classroom practices (Modification or redefinition type activities)

- 33% Use of online curriculum with my students (33%)
- 30% Use of digital tools to create student investigations (30%)
- 18% Create videos of lessons or labs to share with my students (18%)
- 14% Maintain a class blog or discussion board for students to share ideas (14%)
- 13% Leverage Twitter as an informal, self directed form of professional learning (13%)

“With Blackboard Classroom, we have data for making data-driven decisions. It gives us actionable data to make the program better. We’re using that data to keep refining and improving educational opportunities for students across Montana.”

Mike Agostinelli,
Montana Digital Academy
Instructional Program Director

Teachers’ valuation of the impact of technology on students’ skill development

While teachers and administrators agree that the effective use of instructional technology is important for students’ future success, teachers continue to lag behind both school site and district level administrators in rating that usage as extremely important as illustrated in *Figure A.* As noted in the figure, only 43% of teachers agreed that the use of technology was extremely important, compared to 60% of school principals and 71% of district administrators.

Underscoring the connection between using technology to transform learning and the valuation on its importance to students’ future success, teachers who have implemented blended or flipped learning, or are teaching in a fully online, virtual environment are more likely to say that technology use is “extremely important.” Over 50% of teachers in blended or flipped classroom and 67% of teachers in virtual environments rated effective instructional technology use as extremely important for student success.

In new classroom models (such as blended, flipped and virtual), teaching and learning is a fundamentally different practice because of the use of technology. It therefore follows that these teachers are more likely to have different perspectives or viewpoints on the impact of technology than teachers in more traditional classroom settings or teachers who are still at the substitution or augmentation levels in the SAMR model. The differences are evident both in how the teachers discuss the impact of technology on their practice, and the impact of technology on their students’ learning experience and skill development *(Figure B and C).*

Whereas many districts identify increased student engagement as a singular or primary indicator of effective technology use, the results from the Speak Up research may stimulate new discussions around that conventional wisdom. Within the ranks of traditional classroom

FIGURE A:

HOW IMPORTANT IS THE EFFECTIVE USE OF TECHNOLOGY FOR STUDENT SUCCESS?

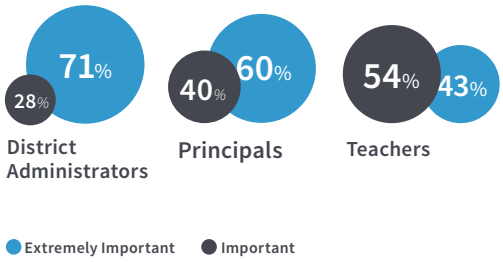


FIGURE B:

IMPACT OF TECHNOLOGY USE ON TEACHERS’ PRACTICE

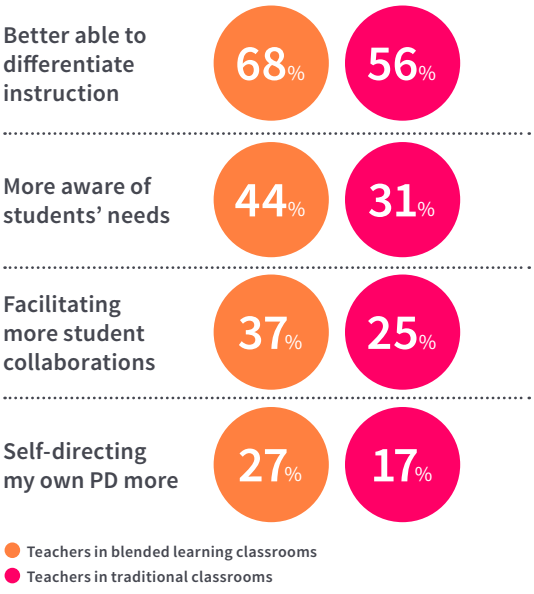
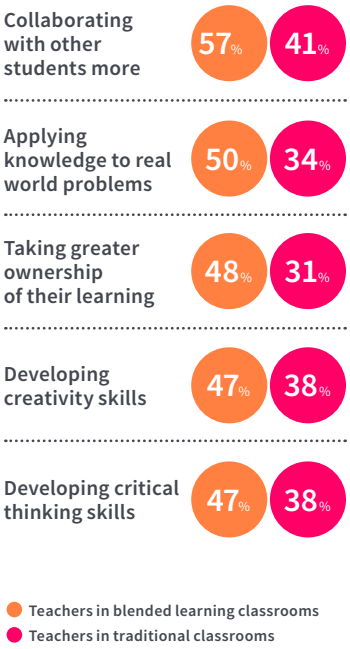


FIGURE C:

IMPACT OF TECHNOLOGY USE ON STUDENT OUTCOMES



teachers, 49% said that a result of using technology in their classroom, their students were more motivated to learn. Similarly, 49% of blended learning and flipped learning teachers said the same thing. The difference is that for the traditional teachers, the student motivation metric was their number one named outcome; for the blended and flipped learning teachers, that outcome was number four on their list. Teachers on the forefront of leveraging technology effectively to personalize and differentiate learning such as with new classroom models are more perceptive about the many benefits and outcomes of digital learning beyond just student engagement.

The students' assessment of the value of technology follows a pattern similar to views of the teachers who are using technology to transform teaching and learning. Among students, only 36% of high school students and 47% of middle school students credited increased interest in learning as a primary outcome of using technology within learning. Middle school students in particular see digital learning as serving two central purposes: to help develop highly valued college and career ready skills and transforming their learning experience so that it fits the way they learn. *Table 3* illustrates the twin ways that students value technology for learning.

As schools and districts evaluate new ways to use technology to transform teaching and learning, the student perspective on the value of digital learning can illuminate new ways of measuring outcomes and evaluating efficacy. Additionally, the student point of view can provide a roadmap for teachers to think not only about the ways they are using technology with their students, but also how they are leveraging these tools to support their own professional learning.

TABLE 3:

MIDDLE SCHOOL STUDENTS' VIEWS ON THE OUTCOMES OF USING TECHNOLOGY WITHIN INSTRUCTION

CHANGING THE LEARNING ENVIRONMENT:
% of students in grades 6-8 who agree

I am learning at my own pace	59%
I am control of my learning	53%
I am collaborating with other students more	48%
I am spending more time mastering a skill or learning something	43%
I communicate with my teacher more often	39%

DEVELOPING COLLEGE AND CAREER READY SKILLS:
% of students in grades 6-8 who agree

I am developing creativity skills	56%
I am applying knowledge learned to practical problems	50%
I am developing critical thinking and problem solving skills	47%
I am taking ownership of my own learning	43%

Teachers' use of technology to support their own professional learning

Speak Up research has long documented the connection between teachers' use of emerging technologies to support their own professional learning and their increased interest in using similar tools with their students. Thus, it is instructive to evaluate how teachers are using technology to support their own learning as an indicator of readiness to use technology in the classroom. Two types of professional learning were analyzed for this year's trends report; teachers' experiences with online or blended learning environments for professional development and their use of digital tools and media to self-direct professional learning informally.

More teachers in 2016 reported taking online course for professional development than previously noted. In 2014, only 19% of teachers said they had taken an online class for PD; in 2016, the percentage jumped to 37% of teachers. Indicating a new trend line in preservice education, 30% of first year teachers said they had taken a virtual course as part of their teacher preparation program. Teachers are also starting to experience blended learning training courses. *Figure D* illustrates the experience of teachers with online/virtual classes, blended learning classes and massively open online courses (MOOCs) based upon their years of teaching experience.

The impact of a teacher taking an online or blended course for his or her own professional learning far exceeds the value to that teacher alone. Teachers with experience in online and blended learning as a student are more likely to demonstrate more advanced uses of technology with their own students, have stronger valuations on the role of technology within learning, and higher aspirations for leveraging technology to support transformed learning environments.

FIGURE D:

TEACHERS' EXPERIENCES WITH NEW LEARNING MODELS FOR PROFESSIONAL DEVELOPMENT

(based upon years of teaching experience)

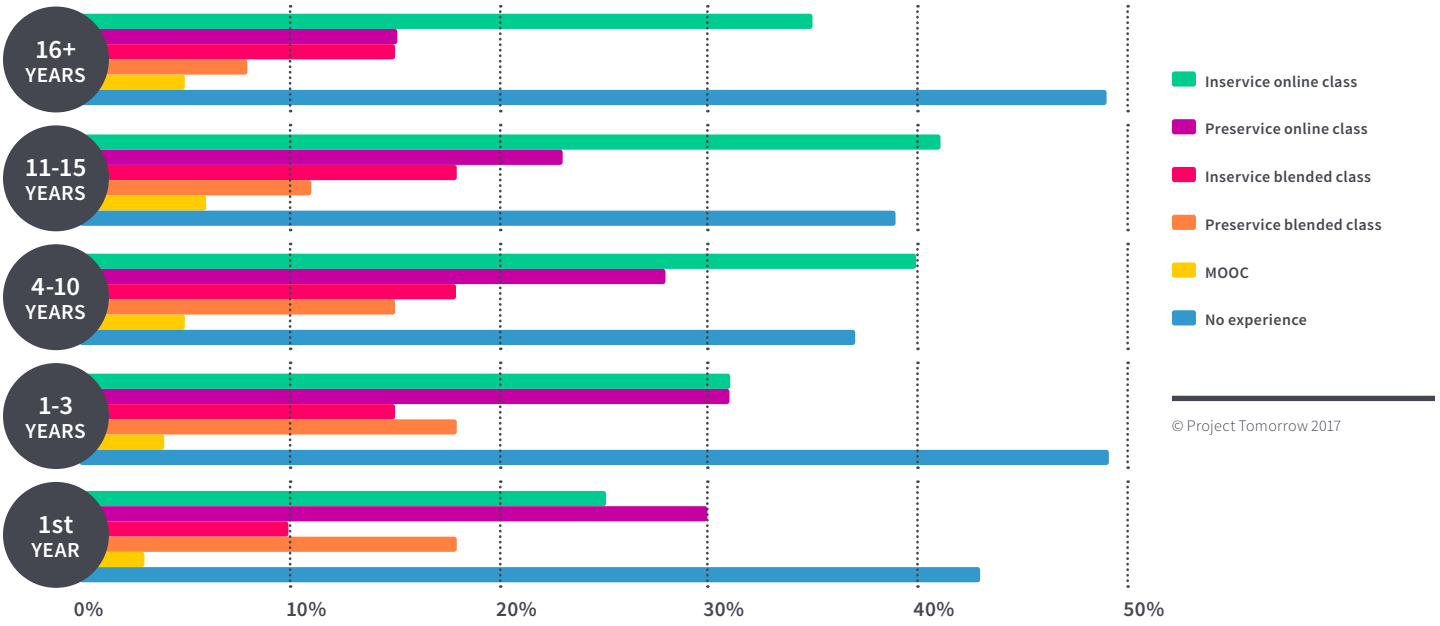
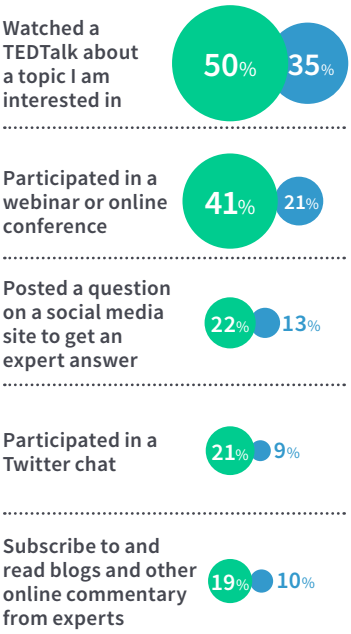


FIGURE E:

SELF-DIRECTED PROFESSIONAL LEARNING EXPERIENCES OF TEACHERS

Types of digitally-based self-directed professional learning



Teachers' experiences with online or blended professional learning are also more likely to embrace self-directed learning experiences, many of which are facilitated through social and digital media. Project Tomorrow has long documented how middle and high school students are increasingly tapping into social and digital media to learn more about their educational topics of interest beyond the sponsorship or facilitation by their teachers. This practice of moving from passive to active learning that is self-initiated and directed appears to be emerging amongst teachers as well. The leaders of this emergent trend are teachers who have experienced online learning within their professional development. *Figure E* documents the self-directed learning behaviors of new sub-cohorts of teachers, those with online course experience specifically and those without any online professional learning experience.

Interestingly this change in mindset about professional learning transcends technology. The teachers who had taken an online course were also 42% more likely to say that they had attended a face-to-face education conference on their own (not district sponsored) than teachers who lacked all online learning experience. The move from being a passive participant in the traditional once or twice a year district facilitated professional development day to a more self-directed, active and independent contributor in the continuous sourcing, evaluating and consuming of professional learning experiences from many different venues is an important indicator of teacher readiness to support student digital learning. Teachers that "walk the talk" of self-directing their own learning using digital tools have a better understanding of the value of those experiences for their students.

What do teachers need on their journey to increased capacity and competency?

For many teachers, the process of integrating digital tools, content and resources effectively within their teaching practice is a difficult and often scary journey. As Michael Fullan points out, school or school district success using technology to transform teaching and learning however is truly a team sport that requires all members of the team to develop certain competencies and be willing to change the way we define and implement "school." Understanding what teachers say they need to do this is a good first step.

On the 2016 Speak Up surveys, teachers nationwide identified five essential elements that they need to effectively and efficiently integrate digital content, tools and resources into daily instruction in their classroom.

1. Planning time to work with colleagues

2. Classroom set of laptops, tablets or Chromebooks for student use

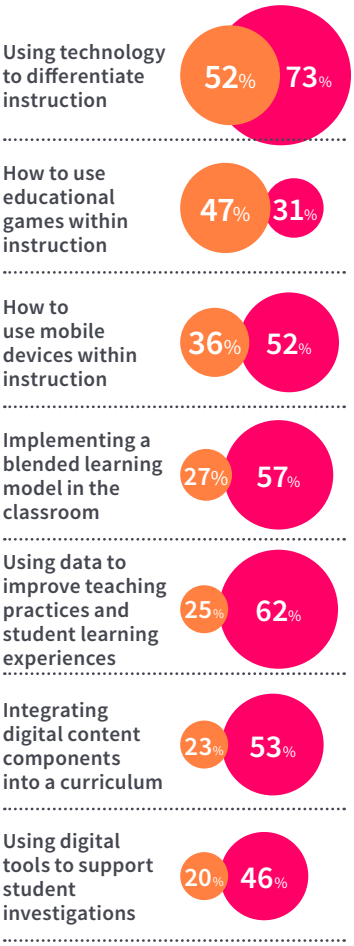
3. Technology support available when needed

4. Professional development

5. Internet access that is consistent, reliable and can support high bandwidth digital resources

FIGURE F:

TEACHERS' WISH LIST FOR PD COMPARED WITH DISTRICT ADMINISTRATORS' PRIORITIES FOR PD



These essentials cover the basics of building teacher capacity and competency: access to the right tools, training and support on how to use those tools, and collaborations with peers to sustain the efforts. For some teachers with a solid foundation in the basics, a new list of needs is just emerging. District and school leaders should not lose sight of these new requirements either:

6. In school coaching on how to find and use high quality digital resources
7. Curated set of resources organized by grade level and content area
8. Online tools that help organize and keep track of classroom digital resources
9. Information about classroom management strategies using digital resources
10. Rubrics for evaluating quality and appropriateness of digital resources

To support the further development of teachers' competencies, districts generally prioritize professional development to support new initiatives and policies, or to facilitate usage of new resources. This is the case also with the development of competencies to use technology within learning. For the most part, however, district leaders are out in front of their teachers in their prioritization or interest in various types of training as illustrated in *Figure F.*

A district leader's priority list for their teachers' professional development provides a unique window into their priorities for instruction within their education enterprise. It can also provide insight into how the administrator views the importance of helping his or her teachers build their capacity alongside competency in using technology within their practice. This focus on building teacher capacity or agency is a new cultural benchmark in many districts. It signals how a district is re-thinking about supporting their teachers. The Speak Up data findings provide new evidence to support this cultural shift with our focus on leaders who have a commitment to new classroom models. Among district administrators with successful blended learning implementations, 63% say they have also established professional learning communities where educators solve problems collaboratively and share responsibility for student success, and 50% say they have restructured the school day giving educators time to collaborate with colleagues to improve teaching and learning. When we think about building teacher capacity and competency for creating new learning experiences for students, the process always starts with effective and visionary leadership in the school or central office.

Ending Thoughts: Consider these new questions

As discussed in the introduction to this year's Digital Learning Trends report, we recommend that education leaders from the classroom to the school board reflect on the insights and findings shared in this year's report and use those reflections to fuel new conversations or commitments for digital learning. The following thought provoking questions can help to jumpstart that process in your school or district:

1. How well is your school or district leveraging digital tools, content or resources to support students in the development of the types of college/career/citizenry skills they will need to be successful in the future? How would your students or their parents answer that question?
2. Is there consistency or resiliency in the implementations of digital learning in you classrooms? Are students having similar experiences in math class as in the science lab? Or is the foundation of your digital learning capabilities still resident in a cohort of "tech hero" teachers only, not within your entire professional community?
3. What do your teachers really need to be able to implement digital learning effectively? How are you using classroom observations and other metrics to understand teachers' readiness, and at the same time using that data to inform and prioritize professional development opportunities?
4. How well are you tapping into exemplars and best practices from students and teachers to inform your digital learning plans? How are you leveraging digital resources to develop your own professional capacities as a leader?
5. What are you doing every day to develop a new sustainable culture within your school or district that empowers innovation at all levels? Do your teachers feel that they have the agency to experiment with new classroom models, new forms of digital content and new instructional delivery modes to personalize learning for every student? Do your students feel that they have a voice in their education?

About Project Tomorrow

Project Tomorrow is a global education nonprofit organization dedicated to the empowerment of student voices in education. With 20 years of experience in education, Project Tomorrow regularly provides consulting and research support around key trends in K-12 science, math, and technology education to school districts, government agencies, business, and higher education.

The Speak Up Research Project annually polls K-12 students, parents, educators and community members about the role of technology for learning in and out of school, and represents the largest collection of authentic, unfiltered stakeholder voice on digital learning. Since 2003, over 5 million K-12 students, parents, teachers, librarians, principals, technology leaders, district administrators and members of the community have shared their views and ideas through Speak Up.

For more information visit:
http://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 on the three main foundational challenges districts face: • Advancing personalized, competency-based learning. • Engaging and informing the entire community • Maintaining a safe and secure space for academic achievement

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