Project
Tomorrow

www.tomorrow.org/speakup/

Speak UP

# THE NEW 3 E'S OF EDUCATION:

## Enabled
## Engaged
## Empowered

*How Today's Students are Leveraging Emerging Technologies for Learning*

## SPEAK UP 2010
### National Findings

*K-12 Students & Parents*
**APRIL 2011**

## Introduction

Each day, students of all ages, colors and backgrounds, from communities large and small, urban and rural as well as suburban, all over the United States and the world, are tapping into a wide range of technology tools and services to enhance their learning productivity as well as add real world relevancy and context to their studies. They are accessing animations on a smart phone to reinforce math problem solving techniques on the school bus ride home or working collaboratively with students around the country on a science paper about the Gulf of Mexico oil spill during an online environmental science class. Or even examining primary documents from the Lewis & Clark Expedition online at the National Archives' to gain a first hand grasp on the enormity of that adventure, and its impact on their world today.

And those are just some examples of what *6th graders* are doing today.

Yes, the world all around our 6th graders has changed dramatically in just five years and for many students, the proliferation of new technologies and increased sophistication of educators to leverage these tools has created a rich tapestry of technology-enabled learning experiences, especially compared to what 6th graders told us in 2005.

- In 2005, half of the 6th graders said they had a cell phone. Today, that statistic still holds true plus an additional one-third say they now have a smart phone.

- Almost 73 percent of 6th graders have an MP3 player today – compared to one-third in 2005.

- In 2005, the 6th graders complained about internet at their school being too slow; today, their number one complaint is that school filters and firewalls block websites they need for their schoolwork.

- Half of all 6th graders take tests online today and three times as many have taken an online class as in 2005.

- 25 percent of today's 6th graders are already using an e-textbook.

- And in 2010, almost half of all 6th grade girls and over a third of 6th grade boys are regularly updating their social networking site, an increase of over 125 percent since 2005. All of this despite the fact that many of those 6th graders are not old enough to legally register on many social networking sites.

In many ways, today's 6th graders are much more technology savvy and fluent with the emerging technologies than even their older siblings in high school. Twenty-two percent regularly participate in 3D virtual reality worlds as compared to 15 percent of high school students. And 47 percent are already tapping into the transformative power of educational games within learning, both in school and out of school. Only 29 percent of their high school peers are doing the same.

Some students rely on their teachers or schools to facilitate these enhanced digital learning opportunities. While other students, those we call *Free Agent Learners*, seek out such online learning resources on their own, following a passion for a topic or subject not fully explored through their coursework or to self-remediate when they feel they need additional help or support.

*Given the rapidness of these changes, what will 6th grade look like five years from now in 2015?* Will today's emerging technologies such as mobile learning, online classes or e-textbooks be commonplace in our nation's classrooms? What new, yet to be invented technology tools and services will those 6th grade students be adapting to meet their learning needs, far ahead of the inclusion of those tools by their teachers in the classroom? What will be the expectations of today's 6th graders for using these new technologies within learning in 2015 when they are in 11th grade? What unforeseen demands will they have in 2015 for their high school (and ultimately college and/or workplace) to ensure personal productivity and 24/7 learning?

Most importantly, what can we learn today about the students' aspirations, adoption and adaption of emerging technologies for learning that can help us plan for the future?

For the past eight years, the Speak Up National Research Project has endeavored to stimulate new discussions around these kinds of questions and to provide a context to help education, parent, policy and business leaders think beyond today and envision tomorrow. As first described by Project Tomorrow (2010) in the report "*Creating our Future: Students Speak Up about their Vision for 21st Century Learning*," today's students have their own vision for how technology should be used effectively within learning. But don't be fooled into thinking that our students are waiting for the rest of us to catch up to their vision! Students are already very effectively implementing this student vision of socially-based, un-tethered and digitally-rich learning on their own, in and out of school, with or without the assistance and support of their teachers or schools. This uniquely student vision strongly complements the US Department of Education's National Education Technology Plan but also can provide valuable new insights into new paradigms for teaching and learning. The examination, therefore, of how students are adopting and adapting a host of different technologies to meet their learning needs is, in fact, a very good representation of how they want to approach learning in general.

This report is the first in a two part series to document the key national findings from Speak Up 2010. In this report "*The New 3E's of Education: Enabled, Engaged, Empowered - How Today's Students are Leveraging Emerging Technologies for Learning,*" we are building upon that student vision and focusing on three specific key trends that have generated significant interest this past year at conferences, in policy discussions and within our schools and districts: **mobile learning, online and blended learning and e-textbooks.** Each of these trends include the essential components of the student vision of socially-based, un-tethered and digitally rich learning, but they also directly address the three new "E's of Education" – enable, engage and empower.

- **Enabling** students to reach their potential through increased access to educational resources and experts that extend learning beyond the capacities or limitations of their school or community.

- **Engaging** students in rich, compelling learning experiences that develop deeper knowledge and skill development especially the problem-solving, creativity and critical thinking skills so highly desired for our world today.

- **Empowering** students to take responsibility for their own educational destinies and to explore knowledge with an unfettered curiosity, thus creating a new generation of life long learners.

In this report we will share the authentic, unfiltered views of K-12 students on these key trends and document their aspirations for fully leveraging the technologies supporting these trends to transform their learning lives. Additionally, we will examine the students' continuing frustration with technology use at their school. This persistent digital disconnect between the tech-intensive lives of students outside of school, and the unsatisfactory experiences provided by many schools to use technology meaningfully, continues to be a headline story for our nation's students.

We also highlight a new nascent development from the parents of our K-12 students, the emergence of Parental Digital Choice. Parents' increasing sophistication with using technology tools themselves coupled with their concerns over the quality of their child's education is fueling a new movement amongst parents to more fully leverage many of the emerging technologies noted in this report to supplement or in some cases replace traditional classroom instruction. Parents are more than ever enabling, engaging and empowering their children's educational lives by providing additional home based access to online resources and digital content. That parents are making these "digital choices" for their children should be a wake up call to many schools and districts (even policymakers) because the effective use of technology within learning is no longer a "nice to have" but a key essential – just as the students already believe.

### About the Speak Up National Research Project and Speak Up 2010

Speak Up is a national initiative of Project Tomorrow, the nation's leading education nonprofit organization dedicated to the empowerment of student voices in education. The Speak Up National Research Project annually polls K-12 students, parents and educators 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 fall 2003, over 2.2 million K-12 students, parents, teachers, librarians, principals, technology leaders and district administrators have shared their views and ideas through Speak Up. K-12 educators, higher education faculty, business and policy leaders report they regularly use the Speak Up data to inform federal, state and local education programs.

### Demographics of reporting sample

In fall 2010, Project Tomorrow surveyed 294,399 K-12 students, 42,267 parents, 35,525 teachers, 2,125 librarians, 3,578 school/district administrators and 1,391 technology leaders representing 6,541 public and private schools from 1,340 districts. Schools from urban (34 percent), suburban (29 percent) and rural (37 percent) communities are represented. Over one-half of the schools that participated in Speak Up 2010 are Title I eligible (an indicator of student population poverty) and 34 percent have more than 50 percent minority population attending. The Speak Up 2010 surveys were available online for input between October 18, 2010 and January 21st, 2011.

The Speak Up surveys included foundation questions about the use of technology for learning, 21st century skills and schools of the future, as well as emerging technologies (online learning, mobile devices and digital content), science instruction and STEM career exploration. In addition, educators shared the challenges they encounter integrating technology into their schools and districts.

The data results are a convenience sample; schools and districts self-select to participate and facilitate the survey-taking process for their students, educators and parents. Any school or school district in the United States is eligible to participate in Speak Up. In preparation for data analysis, the survey results are matched with school level demographic information, such as Title I, school locale (urban, rural and suburban), and ethnicity selected from the Core of Common Data compiled by the National Center for Education Statistics (http://nces.ed.gov/). The data is analyzed using standard cross-tab analysis and key variables (such as internet and device access) are tested for statistical significance.

To minimize bias in the survey results, Project Tomorrow conducts significant outreach to ensure adequate regional, socio-economic and racial/ethnic/cultural distribution. To participate in Speak Up, organizations register to participate, promote the survey to their constituents and schedule time for their stakeholders to take the 15 to 20 minute online survey. Starting in February 2011, all participating organizations receive free, online access to their data with comparative national benchmarks. Staff from Project Tomorrow summarize, analyze, and verify the national data through a series of focus groups and interviews with representative groups of students, educators and parents.

### Key Trend 1: Mobile Learning

Within the past year, we have seen a huge increase in interest across the education sector in mobile learning – the leveraging of small, portable devices to facilitate anytime, anywhere, un-tethered learning. Some of this interest, especially on the part of education leaders, has been fueled by the desire to replicate the benefits of laptop/netbook one-to-one programs that have been implemented in some schools and districts, but without the significant price tag typically associated with those initiatives. Additionally, as educators and parents have become mobile device users themselves, some have started to creatively envision the potential of these devices within instruction. The proliferation of a wide range of mobile devices in students' pockets and backpacks has also been a catalyst for this new interest area within education circles.

As we have done for the past eight years, the Speak Up surveys poll students on their personal access to various electronic devices (Table 1). In regards specifically to mobile devices, the results are significant in two areas. First, smart phone access for middle and high school students jumped 42 percent from 2009 to 2010. Second, when the data for middle and high school students is analyzed for differences based upon school demographics such as qualification for Title 1 funding (as an indication of community poverty) or community type (urban, rural or suburban) there is relatively little or no difference in the data results. For example, 44 percent of high school students in Title 1 schools as well as in rural or urban schools in the Speak Up participant group say that they now have a smart phone; same percentage for students in suburban, non-Title 1 schools. At least on access to mobile devices, the traditional interpretation of the digital divide appears to be no longer relevant.

| Table 1: Personal Access to Mobile Devices | | | | |
|---|---|---|---|---|
| **Device** | **K-2** | **Gr 3-5** | **Gr 6-8** | **Gr 9-12** |
| Cell phone (without internet access) | 21% | 29% | 51% | 56% |
| Smart phone | 16% | 19% | 34% | 44% |
| Laptop | 37% | 42% | 60% | 67% |
| MP3 | 37% | 55% | 79% | 85% |
| Tablet device (iPad) | 10% | 8% | 13% | 10% |

And while the story about increased access is both interesting and a stimulant for new conversations about leveraging mobile computing, the more meaningful discussion needs to be around how these types of devices can change the learning paradigm. How can mobile learning enable, engage and empower today's students as learners?

A first place to examine the potential benefits of mobile learning is to see how the students themselves envision using these devices and then to examine what is needed to translate the students' aspirations into reality. In their ultimate school, students see using mobile devices to both increase the effectiveness of their learning process, and also provide expanded opportunities for learning.

In terms of streamlining or increasing the effectiveness of their traditional school processes, high school students say that they would use their mobile device at school:

- to check grades (74 percent)
- take notes in class (59 percent)
- use the calendar (50 percent)
- access online textbooks (44 percent)
- send an email (44 percent)
- learn about school activities (40 percent)

Additionally, though, the students see the potential for these devices to transform and transcend that current learning model by tapping into some of the unique features of the devices.
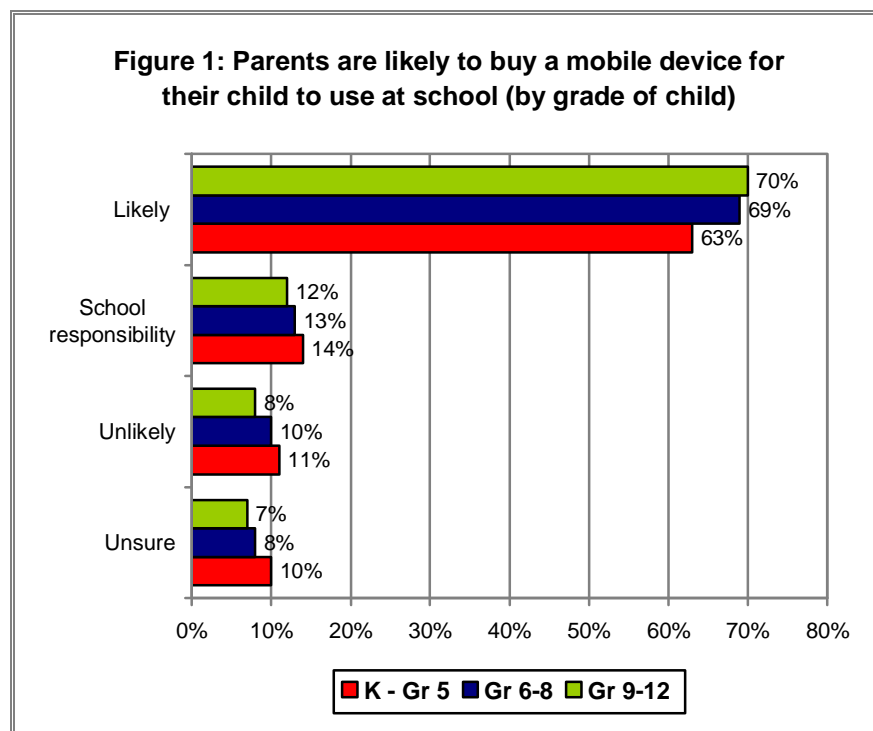
- Wifi or 3G/4G capabilities allow students to **do internet research (68 percent) anytime**, anywhere and without the need to be tethered to the school network or the physical space of school.
- Students could leverage the **communications capabilities to collaborate** with peers, teachers and even subject content experts on schoolwork using **instant messaging or text messaging (53 percent).**
- The video and audio features allow students to **create and share documents, videos or podcasts (37 percent)** and **record lectures or experiments to review again later (35 percent).**
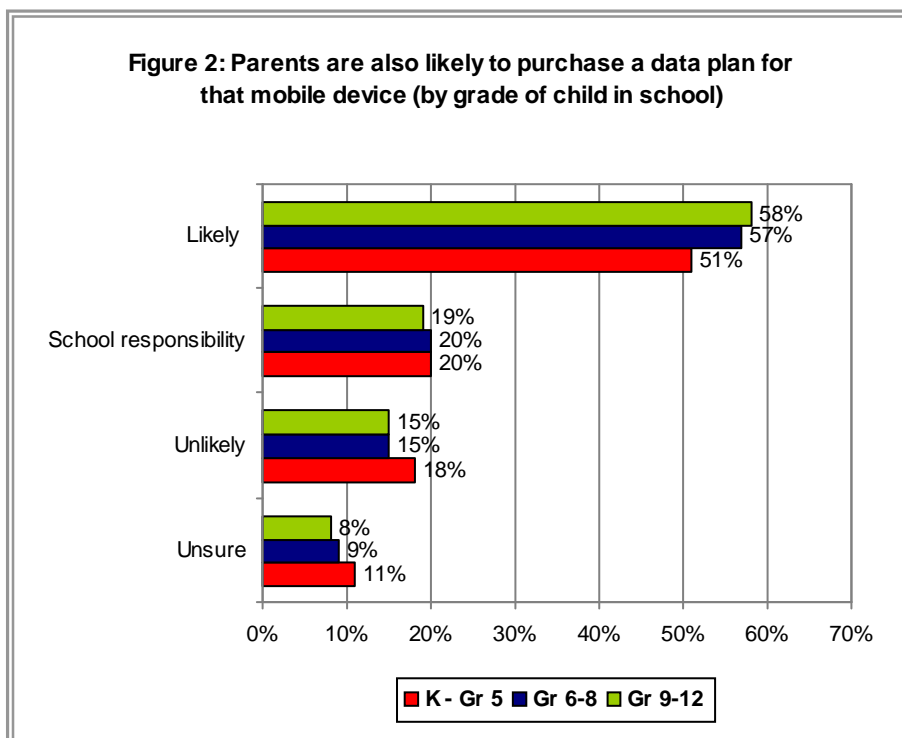
The students' adaptation of the mobile device features for schoolwork provides good models for expanded classroom use. And the students' strong value proposition around the potential for mobile learning also helps to explain why 53 percent of middle and high school students say that the largest obstacle they face in using technology in their school today is their inability to use their own cell phone, smart phone or MP3 player. The students definitely have a clear vision about the potential of mobile learning to enable, engage, and empower them as 21st century learners.

A majority of administrators, teachers and parents agree that the most significant benefit of using mobile devices within instruction is the potential to increase student engagement in the learning process. And while there are still areas of concern around how to effectively use mobile devices, some innovative educators are exploring the idea of allowing students to bring their own devices to school for use in the classroom, a new "Bring Your Own Device" (BYOD) model. The BYOD model can potentially help educators bridge their plans for personalized connectivity and computing with budget challenges.

The education leaders on the forefront of the discussion to use student owned devices (we call them Mobile Learning Explorers) are still a small, courageous group at this point, however. When we asked administrators about the likelihood of them allowing their students to use their own mobile devices for instructional purposes at school this year, a resounding 65 percent of principals said "no way!"   And even within the cohort of administrators that use a smart phone themselves, only one-quarter of them said they are likely to allow students to use their own mobile devices this year.

This hardened stance by the administrators stands in vivid contrast to the views of parents on the value of mobile devices within learning. This value proposition by the parents is best illustrated by their willingness to vote with their wallets on this issue – both in terms of buying a mobile device for their child to use at school, and buying a data plan to provide internet access through that device (Figure 1 and 2). What is most significant here is the absence of any real difference in opinion across different profiles of parents. Parents of elementary aged children are only slightly less likely to purchase a mobile device and data plan for their child than their peers with high school aged children. Additionally, community type (urban, rural or suburban) and school type (Title 1 or not) did not have any impact on the parents' likelihood of procuring a device or the data plan.
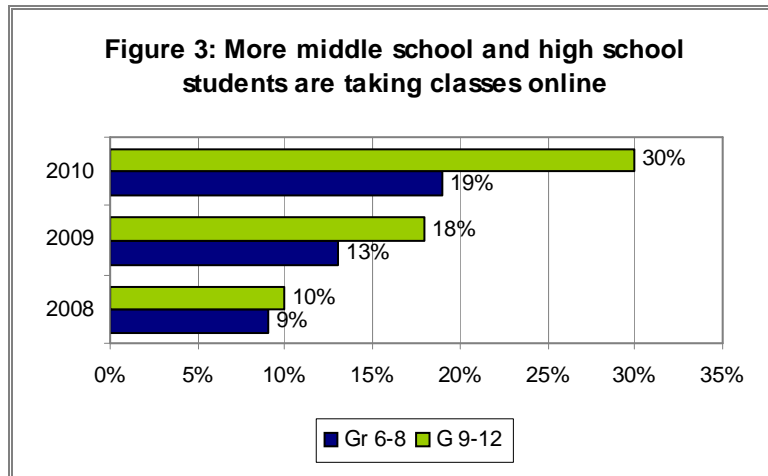


Figure 1: Parents are likely to buy a mobile device for their child to use at school (by grade of child)

**Figure 2: Parents are also likely to purchase a data plan for that mobile device (by grade of child in school)**

| Category | K - Gr 5 | Gr 6-8 | Gr 9-12 |
|---|---|---|---|
| Likely | 51% | 57% | 58% |
| School responsibility | 20% | 20% | 19% |
| Unlikely | 18% | 15% | 15% |
| Unsure | 11% | 9% | 8% |

Legend: ■ K - Gr 5  ■ Gr 6-8  ■ Gr 9-12

**Bottom line for Trend 1:** Educational experiences that are enabled by mobile devices and applications provide a multitude of un-tethered opportunities for students to be more engaged in learning and extend the learning process beyond the classroom.
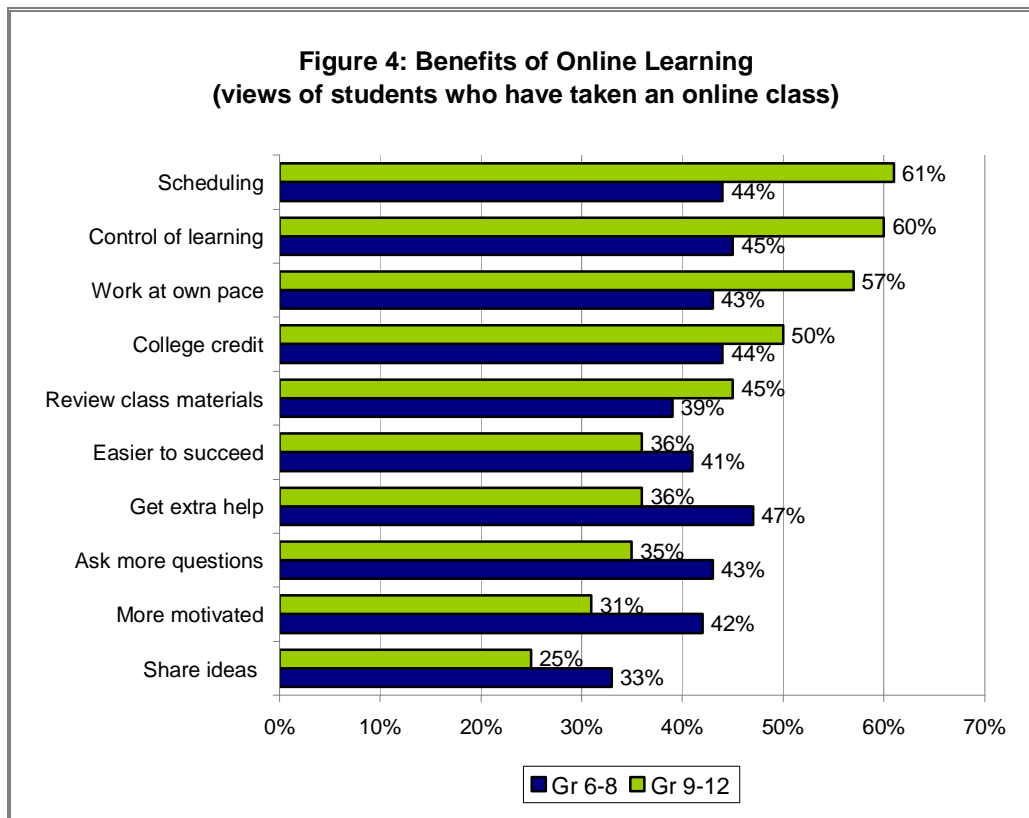
### Key Trend 2: Online and Blended Learning

In much the same way and for similar reasons as mobile learning, interest in online learning has grown significantly in popularity over the past few years amongst students, educators, parents and policymakers. In fact, 39 percent more administrators and five times as many parents would incorporate online classes into their vision for the ultimate school in 2010 than in 2008.

This strong interest in leveraging the power of online learning through self study online courses, teacher-led online classes as well as blended/hybrid learning environments has translated into more online learning experiences than ever before for middle and high school students as noted in the this year's Speak Up results (Figure 3).

**Figure 3: More middle school and high school students are taking classes online**

| Year | Gr 6-8 | G 9-12 |
|------|--------|--------|
| 2010 | 19% | 30% |
| 2009 | 13% | 18% |
| 2008 | 9% | 10% |

This increased access to online learning also provides a very fertile playing field for better understanding the benefits of online learning from the vantage point of the online learning student. As we can see in Figure 4 the value proposition of middle school and high school students about their online learning experiences varies by focus and intensity. The middle school students place a higher value on how the online classroom facilitates a different kind of learning process for them – getting extra help from the teacher, being more comfortable asking questions in class, becoming more personally motivated to learn the subject matter, and being able to share ideas with other students. And while girls showed slightly more interest in taking an online class than boys (a six percentage point difference), the idea of leveraging online classes to collaborate and share ideas with other students does not have a gender bias, whether or not a student has taken an online class, underscoring the value of technology-enabled, social-based learning for both girls and boys.

**Figure 4: Benefits of Online Learning (views of students who have taken an online class)**

| Benefit | Gr 6-8 | Gr 9-12 |
|---------|--------|---------|
| Scheduling | 44% | 61% |
| Control of learning | 45% | 60% |
| Work at own pace | 43% | 57% |
| College credit | 44% | 50% |
| Review class materials | 39% | 45% |
| Easier to succeed | 41% | 36% |
| Get extra help | 47% | 36% |
| Ask more questions | 43% | 35% |
| More motivated | 42% | 31% |
| Share ideas | 33% | 25% |

The student vision about the benefits of socially-based learning plays out through several different technologies as well. Forty-seven of high school students say they would like to use an online environment where they can be linked to their classmates and teacher for collaboration on school projects. Correspondingly, 46 percent of high school students also told us this year that they regularly leverage their social networking site to collaborate with classmates on school projects. Additionally, a quarter of both middle school and high school students are using web tools such as Google Docs™ to write collaboratively with others – in most cases, outside of school. Students are even starting to jump on the Twitter bandwagon though in small numbers; 9 percent of high school students say that they tweet or microblog for schoolwork. With all of these opportunities to leverage technology to drive social based learning, it should not be surprising, therefore to learn that 51 percent of students in grades 6-8 and 44 percent of students in grades 9-12 say that working with other students on projects is the best way for them to learn science.

Given the increase in online learning, there is a corresponding increased interest in ensuring that today's students have a solid foundation in key information and media literacy skills. However, we see that teachers and students are not on the same page when it comes to evaluating the relative importance of particular skills (Table 2). For example, it is striking that while 40 percent of high school students place a high value on the ability to produce digital media such as blogs, vlogs, podcasts, digital storytelling and video reports, only 29 percent of their teachers share that same view. Almost two-thirds of teachers however place a very high value on students' abilities to prepare written or verbal reports on research. As with the role of emerging technologies in education, we may need to re-calibrate our value system around helping students develop the 21$^{st}$ century skills needed to meet the demands of their future workplace.

| Table 2: Teachers and Students differ on the relative importance of developing information and media literacy skills | | |
|---|---|---|
| **Information and Media Literacy Skill** | **Teachers** | **High School Students** |
| Ability to identify information sources for research | 74% | 55% |
| Ability to prepare written/verbal research reports | 64% | 55% |
| Ability to produce digital media reports | 29% | 40% |
| Know how to analyze and interpret media stories | 48% | 51% |
| Know how to detect bias in resources | 54% | 46% |
| Understand how to evaluate the authenticity of resources | **69%** | 47% |

**Bottom line for Trend 2:** Online and blended learning enables a greater personalization of the learning process and facilitates opportunities for students to collaborate with peers and experts, thus empowering a new sense of personal ownership of the learning process by the student.
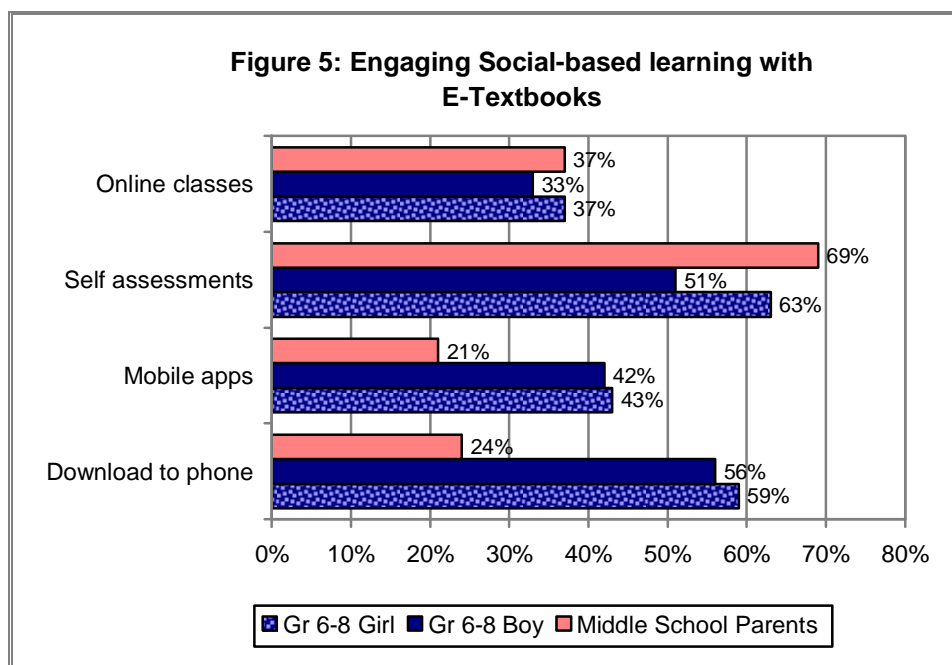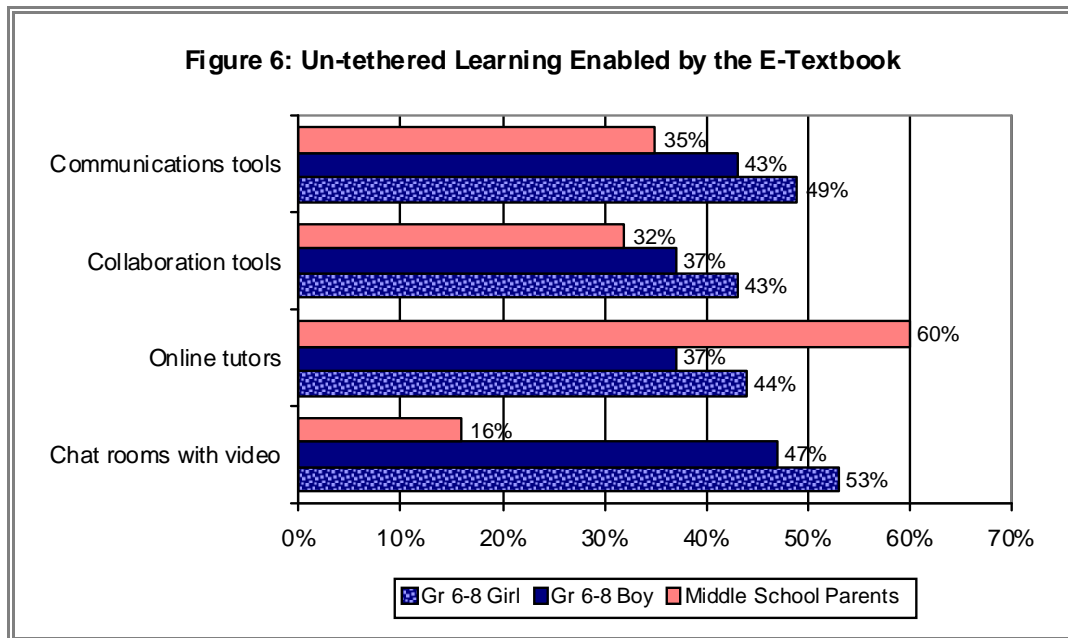
### *Key Trend 3: E-textbooks*

From legislative assembly rooms to district administrative offices to family living rooms, everyone seems excited about the prospect of digital or e-textbooks for a variety of reasons. Policymakers and administrators are intrigued with the twin objectives of leveraging existing technology and lowering (or even eliminating) the costs associated with traditional textbooks. Parents are motivated by their concerns about the ever increasing weight of student backpacks and idea of increasing student engagement and achievement. And students envision this new kind of textbook as the gateway to a rich and interactive set of digital content and resources - exactly what is called for in the student vision.

Despite all of this attention and interest, the actual use of digital or e-textbooks is still an emerging trend in most schools and communities. According to the Speak Up 2010 results, only about a quarter of middle school

students (27 percent) and a third of high school students (35 percent) say that they are currently using online textbooks or other online curriculum as part of their regular schoolwork. Students' aspirations around using e-textbooks continue to be a key component, however, of the student vision with almost a majority of students in grades three through twelve voting for digital textbooks as essential in their ultimate school (Gr 3-5: 48 percent, Gr 6-8: 53 percent, Gr 9-12: 55 percent).

Again this year, the Speak Up surveys polled students and parents on their preferred set of features and functionality for this new kind of textbook and the results help to point a clear path for thinking differently about the learning process. The e-textbook in many ways is a good proxy for exploring new paradigms of learning since the potential features address all three components of the student vision – socially-based learning, un-tethered learning and digitally rich content. Figures 5, 6 and 7 provide a snapshot of the features middle school students and parents would design in the ultimate e-textbook. While we see some gender differences between girls and boys about their desired features, what is more interesting is the disconnect between parents and students regarding the priority of different interactive activities. For example, the parents are more bullish than the students on features such as animations and simulations (67percent), links to real time data (59 percent), quizzes and self-assessment tests to evaluate progress (67 percent) and online tutors (57 percent). The middle school students, however, place a higher premium than their parents on using communications and collaboration applications (40 percent), access to 3D content (36 percent) and anything that sniffs of a mobile application or capability (50 percent).



**Figure 5: Engaging Social-based learning with E-Textbooks**

**Figure 6: Un-tethered Learning Enabled by the E-Textbook**

| Category | Gr 6-8 Girl | Gr 6-8 Boy | Middle School Parents |
|---|---|---|---|
| Communications tools | 49% | 43% | 35% |
| Collaboration tools | 43% | 37% | 32% |
| Online tutors | 44% | 37% | 60% |
| Chat rooms with video | 53% | 47% | 16% |

Despite the increasing national call for more digital learning environments, today's students continue to be frustrated by the way technology is used currently in their classrooms. In particular, a significant obstacle voiced by students (55 percent of high school students and 44 percent of middle school students) is the school filters and firewalls, which block the websites they say they need for their schoolwork. It is worth noting that after years of internet safety instruction, a very similar percentage of students (48 percent of high school students and 44 percent of middle school students) say that they know how to be safe and protect themselves when on line. When asked what their school could do to make it easier to use technology, the number one response from the students is for their school to allow greater access to the websites they need (71 percent of high school students and 62 percent of middle school students). This issue of schools limiting access to digital content and resources is in many ways the new watershed for students. It also explains why today's students are so enthusiastic about the potential of digital textbooks to be the sanctioned, school approved gateway for their access to rich digital content and resources.

Students tell us that it is in their English/Language Arts classes where they are using technology most regularly to enhance learning (60 percent). That corresponds to the over three-quarters of students who say that they use technology tools to help complete writing assignments. Science is the class ranked second by the students in terms of using of technology within instruction (48 percent). Students' ideas for making science lessons more interesting, engaging and relevant include several opportunities for digital content and resources such as using animations to visualize difficult concepts (43 percent), using online data bases for research (33 percent), practicing what I have learned through interactive simulations (36 percent) and creating multi-media presentations of my scientific findings (34 percent). It should be noted that only 21 percent of the students felt that the traditional science textbook is the best way to increase their engagement in science.

**Figure 7: Empowering Digitally-rich Content through the E-Textbook**
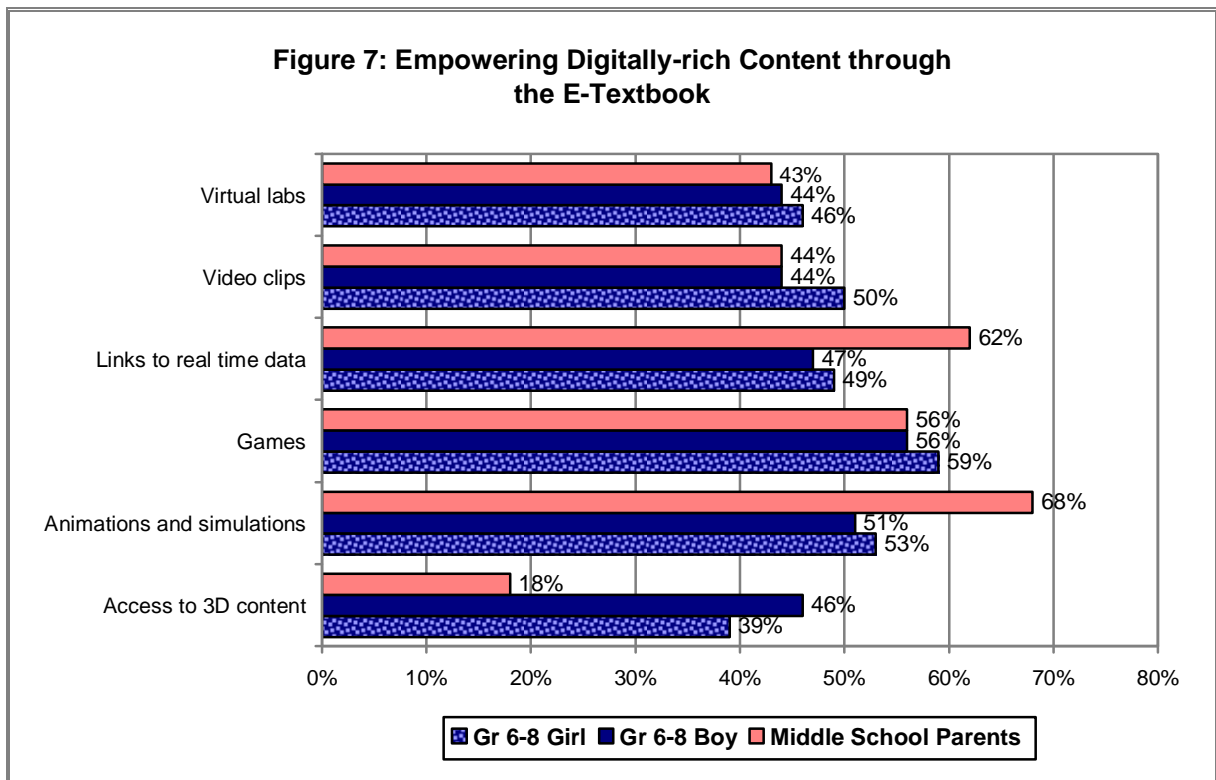


**Bottom line for Trend 3:** The use of e-textbooks and other digitally rich content engages students by providing a real world context for the learning process and allowing learning to extend beyond the classroom walls.

## New Trend: Parental Digital Choice

As we have seen with all three of the key educational technology trends reviewed in this report, parents are not only supportive of the student vision, but also in many ways are both enabling and empowering the use of these emerging technologies by their children. From the strong statements about their willingness to purchase a mobile device for their child to use at school to their increased interest in online learning, we believe that today's parents are looking for new ways to supplement or even in some cases, replace the traditional classroom instruction by leveraging some of these new technology tools and services.

- 67 percent of parents would purchase a mobile device for their child to use for schoolwork, if the school allowed it (and 54 percent would purchase a data plan to allow internet connectivity)

- A majority of parents believe that mobile devices can help extend learning beyond the school day; 61 percent like the idea of students using mobile devices to access online textbooks

- Parents are five times more likely to recommend online classes for the ultimate school than in 2008

- 53 percent of parents support online tutors and tools to help their children organize their schoolwork

- Two-thirds of parents would include brain-teasers and advanced topics in e-textbooks to extend their child's learning.

This nascent trend is, in fact, a form of education choice, similar in some ways to how some parents opt for their children to attend a private or parochial school and others purchase tutoring services for their children. Parents are exercising their new "digital choices" to tap into a wide range of technology-enabled education solutions to more directly influence their children's educational outcomes, all from their own home computer. With these

choices, parents are increasingly leveraging technology to enable and empower their child's educational destinies.

The foundation for parents' interest in these digital choices is the higher value that parents place today on the effective implementation of technology within learning. Fifty-two percent of parents consider instructional technology to be ***extremely important*** for their child's success, as compared to 37 percent of teachers. As consumers, employees and advocates in today's technology-infused economy, parents from all types of communities and backgrounds are increasingly familiar and fluent with the transformative potential of technology to personalize everything from book sales to medical care. These parents are often users of the emerging technologies, and thus, have first hand knowledge and appreciation for the impact of technology on efficiency and new opportunities for personalized learning. For example, 58 percent of parents have a smart phone, 38 percent say they have taken online class, and 57 percent are using discussion boards, social networking sites and chat rooms to interact and collaborate with others. And yet, in many schools, parents today see only a "one size fits all" model of education and too often, that one size may not fit their particular child's needs. In short, parents want their local schools to leverage technology to create personalized learning experiences for their child in the same way that Netflix® has personalized their home movie watching experiences.

This familiarity with the potential impact of technology coupled with their concerns about the quality of the education process has resulted in parents' making new demands on their local schools for digital information, content and tools. The static school website with minimal content changes month to month is no longer acceptable. To better understand the needs of today's parents we asked them to help design the ultimate school portal for their child's school. Table 3 illustrates how today's parents are putting a much higher premium on having an interactive, collaborative relationship with their child's teacher which affords them the opportunity to potentially personalize the learning process for their child. They want information that helps them take on the new role of co-teacher at home; a role that is much more curriculum and instructionally based and less focused simply on homework supervision. These desired features also provide a way for parents to better understand how well the current course or curriculum materials are engaging their child. Parents have a solid understanding about the value of student engagement in the learning process. For example, "course materials that are not engaging my child" is one of the top 5 concerns that parents have about their child's school this year.

| Table 3: Parents value a interactive, collaborative relationship with their child's teacher(s) | |
| --- | --- |
| **Desired features for the ultimate online school portal** | **Parents** |
| Access to curriculum materials and online textbooks that we can use at home | 74% |
| Information updated daily on my child's homework assignments, projects and upcoming tests | 62% |
| Information updated daily about my child's grades and progress in school | 53% |
| Special alerts when my child is missing assignments, has low grades or is failing a class | 51% |
| Updates from the teacher about current class activities and topics studied | 42% |
| Tools to facilitate collaboration and communications between my child, their teacher and me | 32% |
| Videos and podcasts of lectures from my child's teacher | 22% |

Additionally, many parents are interested in leveraging digital content to support, enhance or augment their child's learning outcomes and achievement levels. We noted earlier the functionality that parents would like to see in digital or e-textbooks. Parents are also searching for high-quality computer-based games, websites and online classes for their children. And when seeking such tools, parents are most interested in ensuring that these products are aligned to sound educational goals. The level of their child's engagement is still important for the parents, but so is the educational content supporting the experience or interaction. Table 4 identifies the top 10 factors (besides cost of the product) that parents consider most important when evaluating the quality of educational computer-based games, websites and online classes.

| Table 4: Parents' top 10 factors for evaluating the quality of computer based games, websites or online classes | |
|---|---|
| **Quality Factors** | **Parents** |
| My child finds the tools engaging | 64% |
| Aligned to my child's curriculum | 62% |
| My child's teacher is using the same tools in the classroom | 53% |
| Recommended by my child's teacher, school librarian or other educator | 48% |
| My child is doing better in school after using similar tools | 48% |
| Aligned to content standards (state or national) | 41% |
| Our school purchased a license for the tools and allows home access | 38% |
| Developed by an organization with expertise in the field | 38% |
| Student achievement results | 36% |
| Developed by a classroom teacher | 35% |

**Bottom line on this new trend:** Parents have always been allies and advocates for their children in the traditional school environment. With new digital choices, today's parents are now enabling greater educational opportunities for their children, both in and out of school, and at the same time, empowering a new paradigm for the role of parents in education.
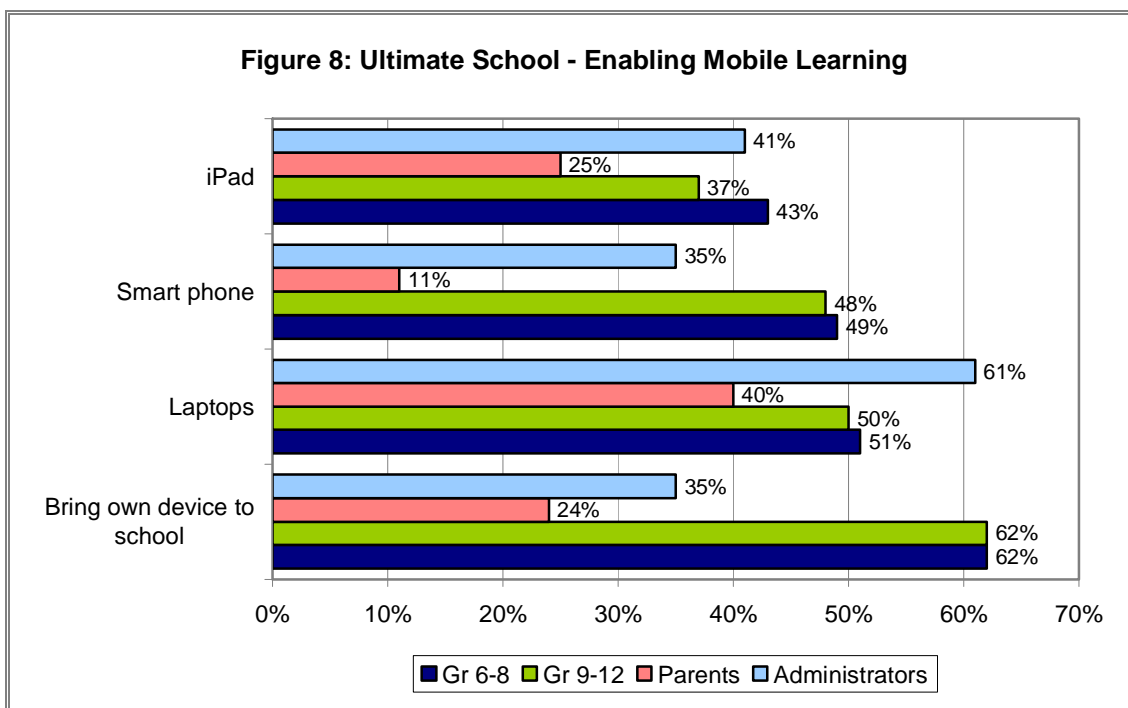
## Ending Thoughts

*The role of emerging technologies in the ultimate school: do we have a shared vision?*
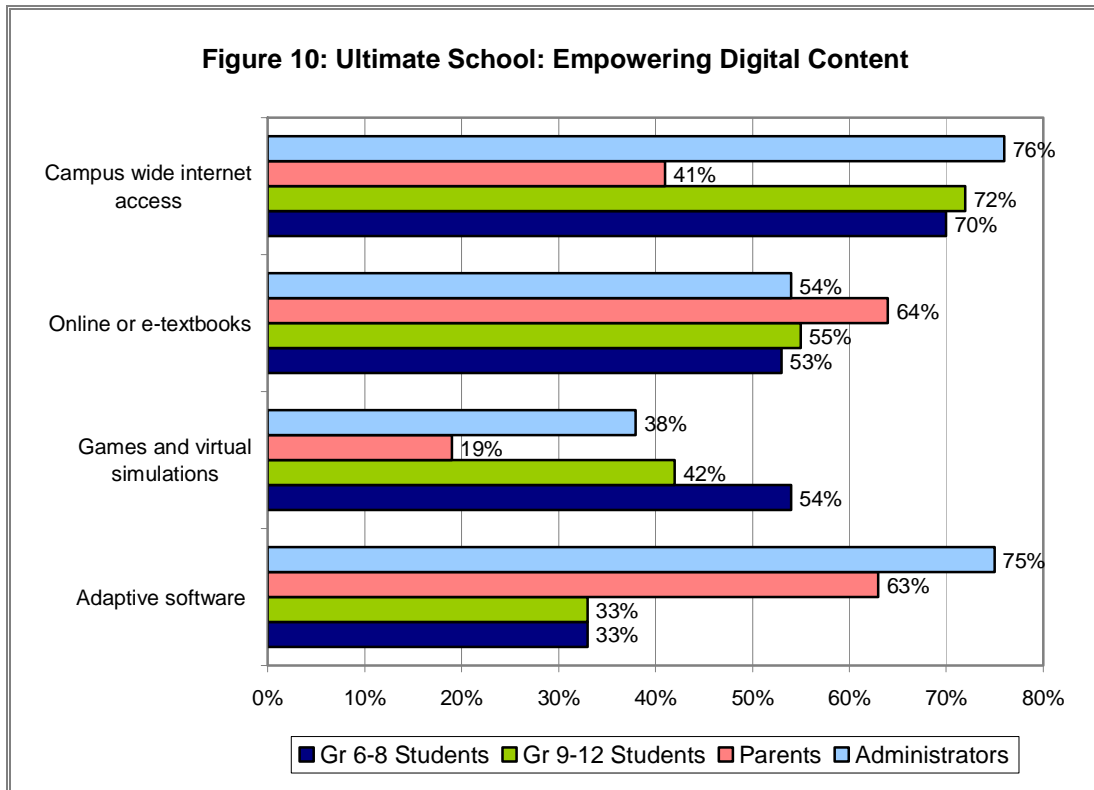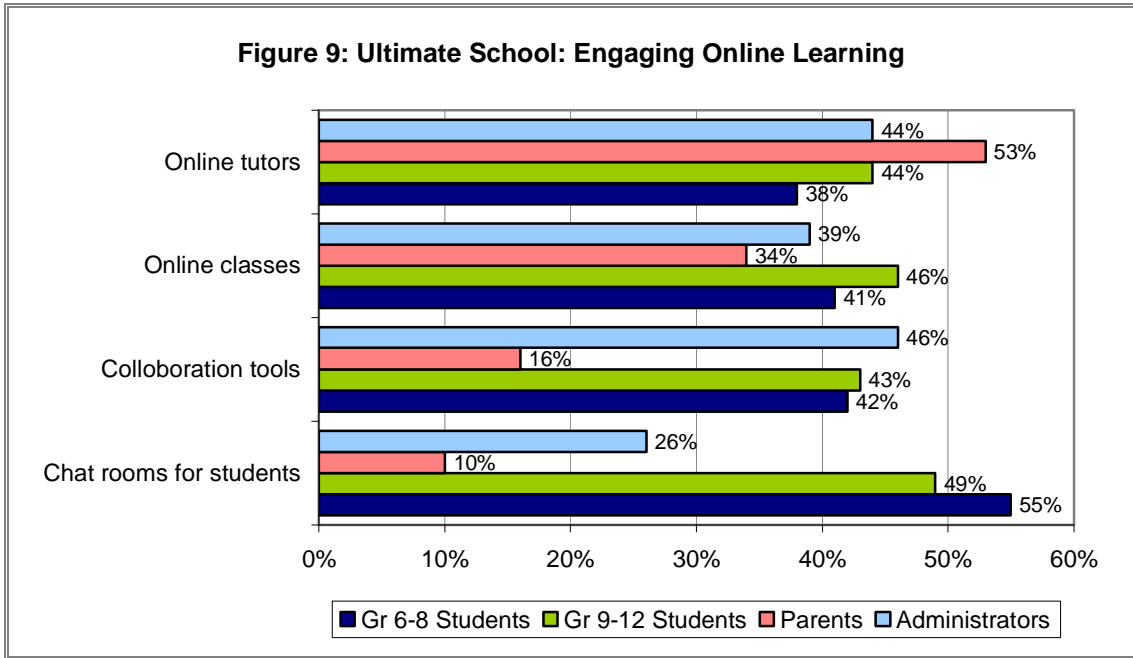
**Enabled. Engaged. Empowered.** These new three E's of education paint a picture of the learning process for students that is visually and structurally very different than what most students encounter in school today. Within the enabled, engaged and empowered learning scenario, students have access to a rich and varied set of digital tools and resources that provide them with gateways to new learning experiences that are not bound by their classroom walls or even the boundary lines of their town or city; the world is now their school. These digitally enabled learning experiences are so engaging and compelling that they ignite a new, insatiable curiosity for more and more knowledge; a curiosity that is fueled by the real world context of the experience and the opportunity to collaborate with peers and experts. And each learning experience is carefully tailored to meet the specific needs of the learner; the personalization potential of technology is realized. This ability to learn how to effectively leverage a wide range of technology tools and services to drive one's own educational destiny empowers our students for a new world where as, Toffler states "it will be more important to learn how to unlearn and relearn than to learn." In short, our students will be enabled, engaged and empowered not only for learning, but for their future.

*Are our schools effectively tapping into all of the potential of these emerging technologies to create this kind of new learning experience for our students?* While some innovative schools and communities are certainly adopting trends such as mobile learning, online learning and e-textbooks to address the needs of learners, many others are still struggling with how to effectively harness all of that potential while also juggling a wide range of traditional challenges in education. The goal of the Speak Up process and reports is therefore to provide guidance and support to schools, districts and communities on this journey to create new learning environments for their students.

To better understand the reality of how well schools are currently leveraging technology to enhance learning, we went directly to each of the stakeholder groups (students, parents and educators) and asked them this simple but pointed question: **"Is your school doing a good job using technology to enhance learning and/or student achievement?"** The results are unsettling, especially at the high school level. **While 74 percent of high school teachers, 72 percent of high school principals and 62 percent of parents of high school aged children said yes to that question, only 47 percent of high school students agreed.** Very clearly we see that the digital disconnect between the perceptions of students and adults on the value of their technology experiences in school today is no longer a gap, but a chasm. As we discussed in our 2009 national report, today's students have a very clear vision for how emerging technologies can enhance their learning and achievement levels. They have a sophisticated view that the real potential of the technologies we have today, and those that will be invented tomorrow, is to transform their learning experiences and to create environments that are engaging and empowering. Quite simply, we are still not living up to their expectations yet.

To help inform national policies as well as local school plans, we ask the stakeholders to envision the ultimate school and to identify the technology tools and services that they believe would have the greatest impact on learning and achievement. While it is instructive to review these results to better understand the individual priorities of students, parents and educators, it is also important to use this data to evaluate these key questions: do we have a shared vision for the future, are we on the same page, how do we get there? As is evident by Figures 8, 9 and 10, regarding the key trends discussed in this report, we have some more work to do on creating that shared vision for the ultimate school for our students.



Figure 8: Ultimate School - Enabling Mobile Learning

**Figure 9: Ultimate School: Engaging Online Learning**



Figure 9 bar chart showing percentages by group (Gr 6-8 Students, Gr 9-12 Students, Parents, Administrators):

- Online tutors: Administrators 44%, Parents 53%, Gr 9-12 Students 44%, Gr 6-8 Students 38%
- Online classes: Administrators 39%, Parents 34%, Gr 9-12 Students 46%, Gr 6-8 Students 41%
- Colloboration tools: Administrators 46%, Parents 16%, Gr 9-12 Students 43%, Gr 6-8 Students 42%
- Chat rooms for students: Administrators 26%, Parents 10%, Gr 9-12 Students 49%, Gr 6-8 Students 55%

**Figure 10: Ultimate School: Empowering Digital Content**



Figure 10 bar chart showing percentages by group (Gr 6-8 Students, Gr 9-12 Students, Parents, Administrators):

- Campus wide internet access: Administrators 76%, Parents 41%, Gr 9-12 Students 72%, Gr 6-8 Students 70%
- Online or e-textbooks: Administrators 54%, Parents 64%, Gr 9-12 Students 55%, Gr 6-8 Students 53%
- Games and virtual simulations: Administrators 38%, Parents 19%, Gr 9-12 Students 42%, Gr 6-8 Students 54%
- Adaptive software: Administrators 75%, Parents 63%, Gr 9-12 Students 33%, Gr 6-8 Students 33%

Today's students are in fact, functioning as a Digital Advance Team for the rest of us, scouting out these new technologies, adopting them for use in their personal lives and then effectively adapting them for education purposes to enhance their learning experiences and increase productivity. While many adults are talking about leveraging these technologies in the future, the students are already paving a path for us today. In this report we provided a snapshot of the views of today's students around three key trends, mobile learning, online and blended learning and e-textbooks, and how students, if they were in charge, would envision their ultimate school.

Additionally, we shared a new trend that we see on the horizon, the idea of parents tapping into digital tools and resources as a form of educational choice to support their children's learning experiences. The Speak Up 2010 companion report, *The New 3 E's of Education: Enabled, Engaged and Empowered -How Today's Educators are Advancing a New Vision for Teaching and Learning,* focuses on both the well-intended aspirations of teachers, librarians and administrators to address the student vision for technology enabled and empowered learning and the key challenges and realities of effectively leveraging these emerging technologies for student achievement.

Learning that is enabled, engaged and empowered. This is certainly a vision that we all can share and an excellent starting point for transforming education.

## Special THANKS to our Speak Up 2010 sponsors...

Blackboard® K-12

CDW·G®

k¹²™

HOUGHTON MIFFLIN HARCOURT

schoolwires®
come together
AROUND SUCCESS

SMART™
Technologies

15707 Rockfield Blvd., Suite 250, Irvine, CA 92618 · **949-609-4660**
To download the report, please visit:
www.tomorrow.org/speakup/pdfs/ SU10_3EofEducation(Students).pdf