

NATIONAL REPORT ON NETDAY'S 2005 SPEAK UP EVENT

**OUR VOICES,
OUR FUTURE**



STUDENT AND TEACHER VIEWS ON SCIENCE, TECHNOLOGY & EDUCATION

PROJECT TOMORROW-NETDAY

OUR VOICES, OUR FUTURE

STUDENT AND TEACHER VIEWS ON SCIENCE,
TECHNOLOGY & EDUCATION

NATIONAL REPORT ON NETDAY'S 2005 SPEAK UP EVENT

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OUR VOICES, OUR FUTURE

STUDENT AND TEACHER VIEWS ON SCIENCE, TECHNOLOGY & EDUCATION

NETDAY'S 2005 SPEAK UP EVENT

NetDay is a national nonprofit with a ten year legacy of building local school and community capacity around technology use in education. In the fall of 2005, NetDay merged with Project Tomorrow, a regional nonprofit in Orange County, California, with a successful track record of adopting and promoting innovative approaches to science education. As a new organization, Project Tomorrow-NetDay celebrates its new focus: promoting science, math, and technology as key levers for developing 21st century skills.

Speak Up Events are annual online surveys that provide students and teachers a voice into national and local policies that impact education. In 2003 and 2004, NetDay hosted surveys for K-12 students and teachers with a special focus on their views of technology use for learning. The objectives for the 2005 survey were to continue our legacy of tracking technology use by students and teachers and to begin to explore opportunities to promote science learning.

By participating in the survey, students and teachers are contributing to local policy – each participating school and district has free online access to their own data – and to the national dialog about 21st century learning.

This report summarizes the 2005 national data collected from 185,000 student surveys and 15,000 teacher surveys. The report will be shared with decision-makers in the United States Department of Education, members of Congress, and federal, state, and local policy-making groups to inform their work. Many states have requested access to customized reports of their data. Schools and districts that participated in the Speak Up Event are already using their data for school and district technology plans, to plan new professional development strategies, or to develop ways for student and teacher voices to be included in local decision-making. Authentic student comments were used to inform a special report "Visions 2020.2" in collaboration with the U.S. Department of Commerce and the U.S. Department of Education and NetDay's "Students Speak Up to the President."

Speak Up for Students – Fall 2003, Fall 2004, Fall 2005
Speak Up for Teachers – Spring 2004, Fall 2005

Surveys

- * 562,000 K-12 students
- * 26,000 teachers
- * 7,000 schools
- * All 50 states plus Department of Defense overseas schools

The success of Speak Up reinforces the acceptance of this kind of online data collection and how the reporting of pulse point views can provide value within an education environment. NetDay is honored to have the opportunity to be a conduit for the insights and ideas of our nation's teachers and students on education technology. It is our goal to continue to foster a new national awareness on the importance of including a wide variety of stakeholder voices in such national discussions, and to stimulate new conversations around effective practices in education through our research and reports.

"Getting more teachers familiar and comfortable with programs and technology directly helps students get involved with technology and then helps us to be more successful in this technology driven world that is today and will be the future." (11th grade boy, Skokie, IL)

ABOUT THE SPEAK UP PROCESS

The Speak Up surveys are developed with input from a Student Advisory Council representing students from all across the United States, teacher and administrator advisors, as well as our network of educational non-profit partners and friends around the nation. With an eye towards trends and key issues, the surveys aim to collect stakeholders' ideas and suggestions for education decisions that impact their futures.

All schools and districts were invited to participate in the survey, receiving invitations through listservs and website postings from Project Tomorrow-NetDay and our network of over 75 Speak Up Partners and our Speak Up sponsors: BellSouth Foundation and Dell. A single school contact registered each school for participation and students and teachers accessed the surveys online from school or from home. The surveys were open between October 21 and December 1, 2005.

The surveys included three grade-appropriate online surveys for K-3, 3-6, 6-12, and a teacher survey. Each survey included 20-40 multiple choice questions and 2 open-ended responses. The survey could be completed from any Internet accessible computer and took approximately 15 minutes to complete. The surveys did not collect individual student or teacher names or email addresses, although we did ask teacher participants to provide demographic data such as age, gender, racial or cultural identity and years of teaching experience. In addition to the online surveys, Speak Up events this year included post-survey focus groups with middle and high school students in Denver, Colorado; Baltimore, Maryland; and Herndon, Virginia.

The NetDay Speak Up data is based upon a self-selected, convenience sampling of teachers and students. We have not completed any statistical significance testing on the data collected. With our convenience sampling methodology, we are aware that our data may be more representative of technologically-friendly schools. Because of this, we paid special attention this year to some of our largest participating school districts such as Newport-Mesa Unified School District in California, and Plano and Clear Creek Independent School Districts in Texas which encouraged the majority of the students in their districts to participate. Their participation included schools at various levels of technology integration, ethnic backgrounds, and affluence.

Newport-Mesa USD participation: 9,341 students, 138 teachers

Plano ISD participation: 5,896 students, 774 teachers

Clear Creek ISD participation: 7,904 students, 537 teachers

Our review of these large districts shows that while some survey data varies across states, regions, districts, and neighborhoods, many of the attitudes towards technology and common usage statistics are amazingly similar to the national results. As such, it will be interesting for local entities to review their own data and reflect on local universities, industries, or other factors which influence schools and resources in their areas. This report is a summary of our findings at a national level. After three years of surveying, this data can be used to show trends, illustrate Spotlights, and spark conversations about students, our schools, and 21st century skills. The data also provides multiple avenues for rich comparative analysis between teachers' insights and students' views over the course of three years.

NATIONAL SPEAK UP PARTICIPATION: STUDENT AND TEACHER PROFILES

Geography: All 50 states, DC, Puerto Rico, Guam, and Department of Defense schools world wide

Top 10 states: TX, CA, IL, MD, PA, AZ, MO, NC, CO, MA

Major cities: Baltimore, Chicago, Denver, Houston

Total Participation: 185,000 students, 15,000 teachers, 2,082 schools

STUDENTS	TEACHERS
<p data-bbox="370 768 604 800">Grade Distribution</p> <ul data-bbox="321 804 493 930" style="list-style-type: none"><li data-bbox="321 804 493 835">■ K-2 (11%)<li data-bbox="321 835 493 867">■ 3-5 (30%)<li data-bbox="321 867 493 898">■ 6-8 (33%)<li data-bbox="321 898 493 930">■ 9-12 (26%) <p data-bbox="370 963 626 995">Gender Distribution:</p> <ul data-bbox="321 999 526 1062" style="list-style-type: none"><li data-bbox="321 999 526 1031">■ Female (50%)<li data-bbox="321 1031 526 1062">■ Male (50%) <p data-bbox="370 1096 651 1127">School Characteristics *</p> <ul data-bbox="321 1131 776 1299" style="list-style-type: none"><li data-bbox="321 1131 516 1163">■ Urban (38%)<li data-bbox="321 1163 553 1194">■ Suburban (35%)<li data-bbox="321 1194 505 1226">■ Rural (28%)<li data-bbox="321 1226 602 1257">■ Title I eligible (44%)<li data-bbox="321 1257 776 1299">■ Majority Minority Population (36%)	<p data-bbox="1049 768 1282 800">Grade Assignment</p> <ul data-bbox="951 804 1172 898" style="list-style-type: none"><li data-bbox="951 804 1123 835">■ K-5 (34%)<li data-bbox="951 835 1159 867">■ Gr. 6-8 (22%)<li data-bbox="951 867 1172 898">■ Gr. 9-12 (27%) <p data-bbox="1049 932 1295 963">Gender distribution</p> <ul data-bbox="951 968 1159 1031" style="list-style-type: none"><li data-bbox="951 968 1159 999">■ Female (80%)<li data-bbox="951 999 1159 1031">■ Male (20%) <p data-bbox="1049 1064 1252 1096">Age distribution</p> <ul data-bbox="951 1100 1179 1226" style="list-style-type: none"><li data-bbox="951 1100 1179 1131">■ under 29 (15%)<li data-bbox="951 1131 1143 1163">■ 30-39 (24%)<li data-bbox="951 1163 1143 1194">■ 40-49 (27%)<li data-bbox="951 1194 1127 1226">■ 50+ (33%) <p data-bbox="1049 1260 1317 1291">Teaching Experience</p> <ul data-bbox="951 1295 1182 1421" style="list-style-type: none"><li data-bbox="951 1295 1154 1327">■ 1-3 yrs (14%)<li data-bbox="951 1327 1170 1358">■ 4-10 yrs (31%)<li data-bbox="951 1358 1182 1390">■ 11-15 yrs (16%)<li data-bbox="951 1390 1159 1421">■ 16+yrs (39%)

* Data retrieved from NCES Common Core of Data Public Elementary/Secondary School Universe Survey: School Year 2003-04, (NCES 2006-324). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

ORGANIZING THEMES FOR NETDAY'S 2005 SPEAK UP SURVEY

- What technology products and Internet tools are students and teachers using, and how are they using them?
- What new trends are evident in student use of technology at school and at home?
- What obstacles and issues are students and teachers facing in using technology for teaching and learning?
- How are our nation's schools encouraging science learning and innovative science practices?
- What else can our nation's schools do to encourage student achievement through technology or otherwise?

MAJOR THEMES OF NATIONAL FINDINGS

- Students are setting trends with their use of technology both in school and out of school. They are innovative users of technology, adopting new technologies to support their learning and their lifestyles.
- Communication is a key motivator for students and drives their use of technology for learning and for personal use. The result is an explosion of communications tool use and the desire to transcend communications obstacles. Sixth grade is the tipping point when students begin to show their enthusiasm for using technology for communication.
- Younger students are continuing to adopt more sophisticated technologies in the footsteps of their older siblings. Their use of devices designed for specific purposes suggest increased availability as well as increased sophistication of young students.
- Students and teachers want access to up-to-date technology tools at school and they want it to be available when they need it. Their main frustrations result from restrictions to technology use for learning tasks.
- Teachers' professional use of technology is approaching a comfort level but is not keeping up with the advances in how kids are using technology. Despite conventional wisdom, our data does not show significant differences between how younger teachers and older teachers are approaching their technology use.
- Students are strong believers in the power of technology to enrich their learning experiences. They have ideas about their futures that include using technology tools for learning and preparing themselves for a competitive job market.

FINDINGS: TECHNOLOGY DEVICES & INTERNET TOOLS

Our nation's students don't think they're doing anything special. They're going about their business using the tools available to them. Our survey data provides the opportunity to take a quantitative look at what the students are doing with the tools they have. Most adults will be impressed, some will be surprised.

We asked students and teachers to tell us about the technology, Internet, and communication tools that they use both for school and out of school. Our findings show that both students and teachers have become accustomed to using technology for research, for personal projects, for entertainment, and most-importantly, for communication. Students are indeed the trendsetters leaving even the more tech-savvy teachers to catch up with their innovative uses of technology.

Top technology products shared by both teachers and students include the desktop computer, the cell phone, and the DVD or CD burner. Game playing is still very popular with the personal game player ranked third for students in each grade level. When looking back to our 2003 and 2004 data, we also see a tremendous increase in cell phone use by students in the older grades.

The **Internet and communication tools** frequently used both by teachers and by students include email, bookmarked websites, search engines, and research sites. NetDay has its eye on student and teacher use of Internet tools that facilitate communication, that encourage online communities, and that shape the way they are interacting with their peers in local and global settings. This year we've continued to follow the rise in student popularity of Instant Messenger, even over its older cousin email. And, we've started watching the emergence of Web logs (blogs) and the use of personal websites, such as MySpace.com.

WHICH OF THESE TECHNOLOGY PRODUCTS DO YOU USE ON A WEEKLY BASIS?	K-3	3-6	6-12	TEACHER
Desktop computer	63%	60%	82%	93%
Laptop computer	21%	28%	35%	39%
Cell Phone	39%	49%	75%	60%
Hand-held device (PDA)	n/a	14%	16%	11%
Digital camera	21%	25%	43%	36%
Video camera	14%	16%	22%	9%
Scanner	8%	8%	21%	20%
DVD or CD burner	24%	31%	59%	32%
MP3 player or iPod	12%	22%	46%	6%
Video game player	53%	55%	61%	3%
Smart Board	n/a	n/a	n/a	10%
None of the above	n/a	5%	1%	1%

GRADES K-3

Top technology products Students in grades K-3 are having fun with technology but clearly using it with all seriousness. Over 50% of K-3 students reported using a desktop computer, a cell phone, and a video game in the past week. Close to one-fifth of students reported using a digital camera, a laptop, an electronic book (like a Leap Pad) or a DVD or CD burner. 73% of K-3 students say they have a computer they can use at home.

Internet and communication tools As evidence that younger students are approaching technology with increasingly more ease and sophistication, our 2005 data reveals that 30% of K-3 students have their own email accounts, primarily emailing their friends, parents, and other family members. 14% have an Instant Messenger (IM) screen name, with 49% of K-3 students who know what Instant Messaging is. The home telephone is still their favorite communication tool, but this is closely followed by the preferred mode of their older peers: the cell phone. Take note of our young emailers: Already by grade 3, one-fifth of students say their favorite communication tool is email.

Outside of School 73% of K-3 students use computers in their free time. They play games (60%); visit favorite websites (40%); listen to music (32%); use software to draw pictures, make cards, or movies (32%); talk or email with friends or family (21%); and use a search engine to look for information (20%).

GRADES 3-6

Top technology products Like their younger peers, students in grades 3-6 are using a wide range of technology devices. Between 50-60% of students in this group responded that they had used a desktop computer, cell phone, or video game player in the past week. When looking back to 2003 and 2004, we see some a notable increase in additional technology products these students are using regularly. Use of the digital camera, DVD or CD burner, and MP3 player (like an iPod) each jumped to close to one-quarter of students. The increased use of devices for specific purposes suggests both increased availability as well as increased sophistication of students younger than grade 6.

Internet and communication tools While it might not surprise some that the most popular Internet tool among this age group is using online game sites, it might surprise others that over one-quarter of students say that they have used a search engine in the past week, and over 40% have visited a favorite website. By 6th grade, over a third of students report using email or IM on a weekly basis, primarily emailing their friends, parents, and family. The message we're getting is that for these students, using computers and the Internet for playing, for researching, and for communicating on a regular basis is commonplace and important in their lives.

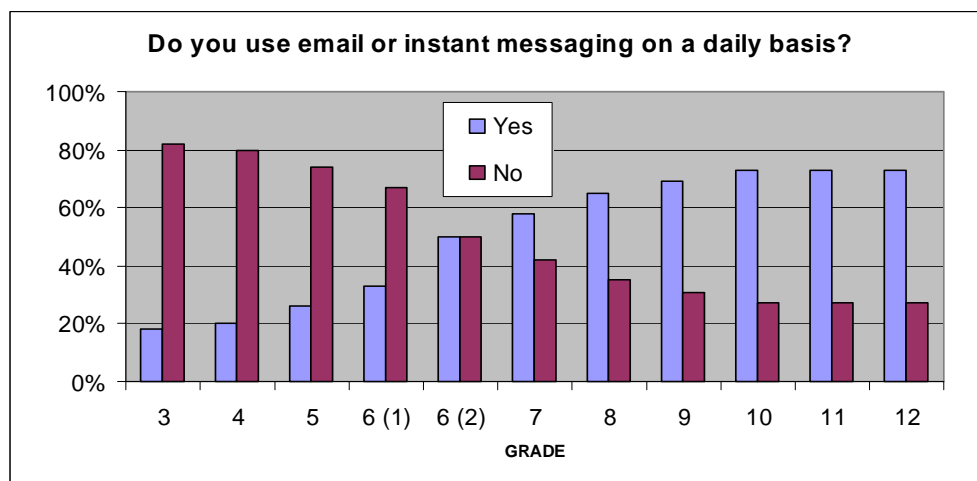
Outside of School 94% of students in grades 3-6 say they use computers in their free time. They play games just as much as their older peers (79%); visit favorite websites (40%); listen to music (41%); talk or email with friends or family (35%); and use software to draw pictures, make cards, or movies (25%).

GRADES 6-12

Top Technology Products Students in grades 6-12 are ahead of the game with their use of technology products, with 30% of students saying they use a desktop computer, cell phone, DVD or CD burner, **and** a video game player on a weekly basis. The big story here is that when comparing the same responses to 2004, most categories jumped over 10% including digital camera, video camera, laptop computer, and MP3 player. Students in this age group are using more kinds of technology, and they're using it more regularly.

Internet and Communication Tools Our nation's middle and high school students are the trendsetters and groundbreakers in terms of using the Internet for communication. Communication is a key technology and learning driver for students resulting in an explosion of communications tool use and the desire to transcend communications barriers. The cell phone is their favorite communication tool, followed by Instant Messenger (IM).

- Cell phones, email, and IM are not the only tools students are using to communicate. They are sharing, joining, and meeting up on personal websites, such as MySpace. A third of students in grades 6-12 report updating their personal websites on a regular basis with this number increasing as students get older.
- Our students are also using the Internet to stay informed with over a third of 12th grade students saying they access news websites for information. We're also keeping an eye on weblogs and podcasts as a new way for students to receive and share information.
- Today's students are surpassing their teachers in using technology for communication. While 95% of teachers now comfortably use email, students are moving on to more specialized forms of communication depending on the task at hand.
- Take note of the popularity of IM: When we look specifically at the 65% of students who say they use email and IM on daily basis, they overwhelmingly prefer IM to email. In our post-survey focus groups, students were asked to comment on email vs. IM. Most students responded that they use email to keep track of messages and documents they need to keep. For general communication with other students, they are much more likely to use IM. Educators will likely be looking into how they can tap into this trend to communicate with their students.
- Sixth grade is the tipping point when students begin to show their enthusiasm for using technology for communication. By 6th grade (in our middle schools) 50% of 6th graders say they use email or instant messaging on a daily basis.



Outside of School If our middle and high school students are the trendsetters at school, it's important to also look at how they're using technology at home.

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- The top three activities students do at home include listening to music (79%), playing games (79%), and talking or emailing with friends or family (75%). This paints a picture of the typical activities we expect of teens and pre-teens.
- Students are big game players. This trend is not going away. Adults might take note of how students are using these tools socially, interacting with each other, and problem solving in virtual worlds.
- Where students are surprising us is in the other activities selected by over 50% of students in grades 6-12: Students are getting information about events, activities, or hobbies (64%); they're going online for news, sports, weather, and entertainment updates (54%); using graphics, design, photo, video editing or music editing software (51%); conducting personal research (47%); and yes, they're shopping (43%). These activities paint a picture of an active tech user: using online tools to inform, learn, and grow.

TEACHERS

Top Technology Products 62% of the teachers we surveyed depicted themselves as average or beginner tech users. If their self-depictions are accurate, we can positively report that the average teacher in our nation's schools is now using technology tools and their schools or districts are providing them with many of the tools that they need.

- Over 90% of teachers say that their school provides them with a computer for classroom use with little variation across urban, suburban, and rural schools and between Title I and non-Title I designated schools.
- With very little difference by age of teacher or years experience teaching, teachers are using desktop computers (93%), cell phones (60%), laptops (39%), and digital cameras (36%) for professional activities.
- Schools are also providing teachers with other supporting technologies including tools to create websites (47%) and class management software, like Blackboard (28%). A trend to watch is the opportunity for schools to offer employee discounts for computer purchases to their teachers (17%).

Internet and Communication Tools In a profession that was once noted for its isolation, it's a great boon for the profession to see the use of email for broadening the teacher professional community. Teachers now use email even more than students (97% of teachers say they email on a weekly basis). Email is widely used by teachers to communicate with colleagues, administrators, support staff, professional organizations, and parents of their students. 35% of teachers say they use email to communicate with their students and although only 9% say they are using Instant Messenger for school purposes, we anticipate both of these numbers to rise in the next year to catch up with student demand. Teachers are also using the Internet for research and lesson planning. (84% say they use a search engine weekly for work and 82% say they use specific websites they have previously bookmarked.)

Outside of School As evidence to their catching up to students in the technology realm, 98% of teachers report using technology during their free time. Their personal use of technology is not all that different from that of their students: They talk or email with friends and family members (89%); get information about events, activities, or hobbies (85%); find out about current events, sports, or weather (75%); and of course, they shop (66%)! While teachers don't play games (36%) or listen to music online (37%) as frequently as their students do, some teachers clearly share some of the same interests.

FINDINGS: TECHNOLOGY FOR LEARNING AND TEACHING

Students are using technology tools for research, for completing school projects, and for checking up on their grades. Teachers are using technology tools for lesson preparation, record keeping, communication, and research. Our questions in this category focus on how students and teachers are learning to use technology, how they feel it helps them in their studies, and what teachers are doing to support their use of technology. Our data showcases students using technology naturally for their needs; their biggest frustrations center around not being able to use the tools they need, how they want, when they want, and where they want.

WHICH SUBJECT WOULD YOU LIKE BETTER IF YOU COULD USE MORE TECHNOLOGY?	K-2	3-6	6-12
Math	19%	28%	20%
English, Reading and Writing	15%	12%	16%
Social Studies	9%	10%	18%
Science	15%	16%	17%
Art	16%	10%	6%
Music	10%	8%	8%
P.E. or Gym	11%	15%	7%

Students in all grades surveyed responded that they would like Math better if they could use technology more. In grades K-2, the runners-up were Art and Reading and Writing. In grades 3-6 the runners up were Science and P.E./Gym. In grades 6-12 the runners up were Social Studies and Science.

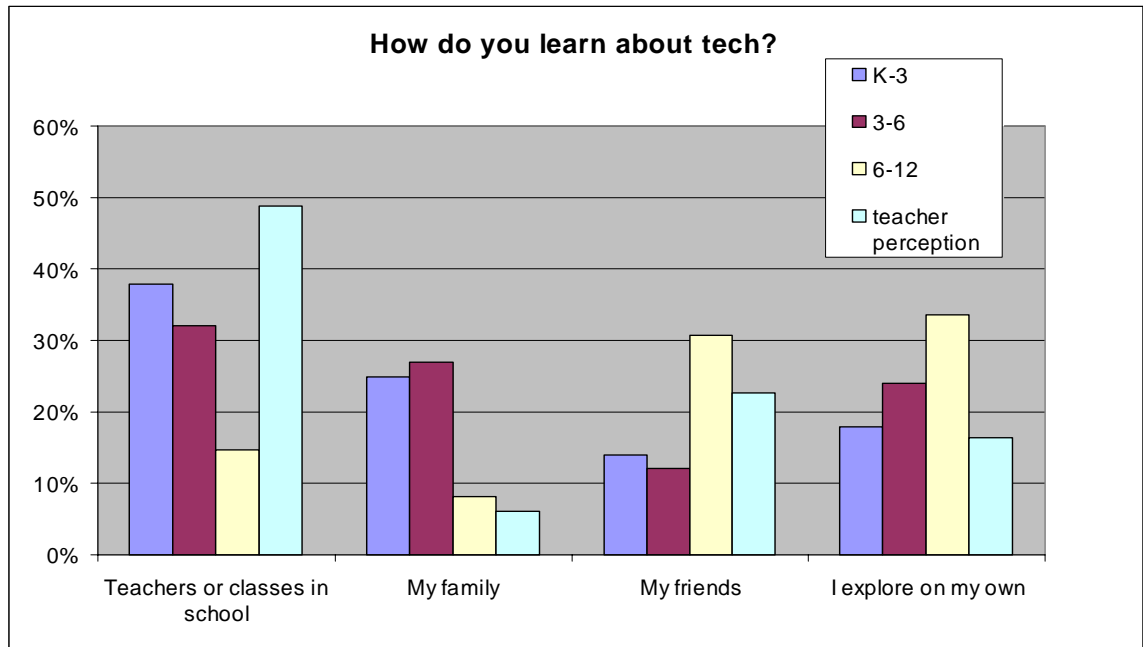
GRADES K-3

K-3 students learn about technology and websites from their teachers and from their families. 18% also say that they explore on their own. They say that they using technology are because "it's more fun", they "learn more," and they "can work more quickly." Compared with 2004 year data, the K-3 graders in 2005 report an increase of technology use for school-related projects: Three-quarters of students surveyed say they use technology for schoolwork, with over half reporting using computers to play learning games, practice spelling or reading, practice numbers or math, and to make pictures. Other school-related tasks that ranked high in this category include learning songs; creating a web page, movie, or slide show; and using an online book.

GRADES 3-6

Like their younger peers, students in grades 3-6 still report learning about technology and websites from their teachers and from their families, but at this age 24% report exploring on their own. Starting in grade 3 and continuing as students get older, data shows that they are much more likely to learn about technology through their peers and by exploring on their own, and less from their families and teachers. Students who rate themselves as advanced tech users are also more likely to explore on their own.

- As with previous years' data, teachers' perception of how their students are learning about tech does not match up with student data. Many more teachers believe that their students are learning about technology at school. This disconnect is evident in grades 3-6 and even more so in grades 6-12.



- Students in grades 3-6 say that they like using technology for school because "it's more fun" (59%), they "learn more" (44%), they "get the best information online" (43%) and "they can work more quickly" (40%).
- For students in grades 3-6 their most common use of technology for schoolwork is using the Internet for assignments. About one-quarter of students also report visiting a school or class website; taking tests online; checking on their grades, and creating a web page, movie, or slide show.

GRADES 6-12

In response to the question: "**Which of these activities do you expect to do online this year?**" every single school activity showed an increase for grades 6-12 since 2004. The only category that showed a decrease is "none of the above." There are three notables from these findings:

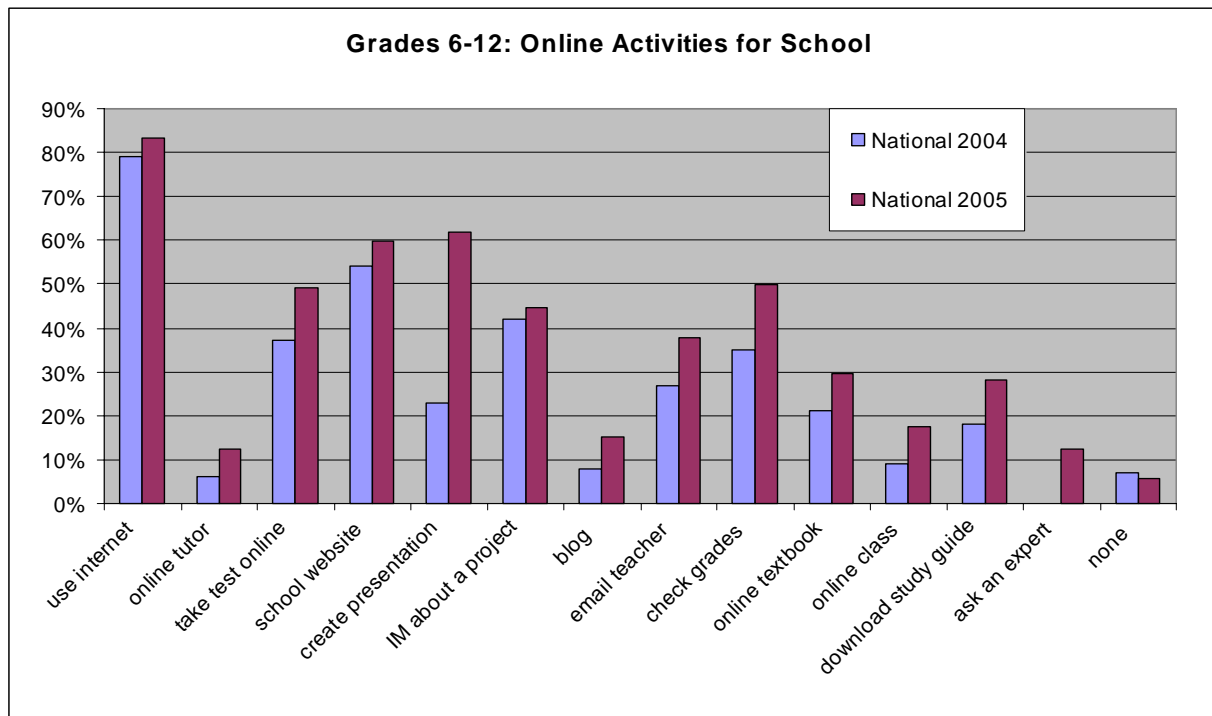
1. Students are increasingly using the Internet to research information.
2. Students are increasingly using technology to create presentations, web pages, slide shows and movies to report on what they are learning.
3. Students are using technology in new ways to manage their learning, such as emailing teachers, checking grades, downloading study guides, taking tests online, using online textbooks, and instant messaging with peers about projects.

It's easy for upper grade students to articulate the benefits of using technology for schoolwork.

- The number one response is "I can get assignments done more efficiently" (69%), followed by "I can get the most accurate and up-to-date information online" (68%), and "It's more fun" (66%)

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- Other responses to this question that received positive responses from over 50% of students included "I can do multiple things at once" and "I make fewer errors." These responses show students understanding the benefits of technology to their success in school and support their desire for access.



TEACHERS

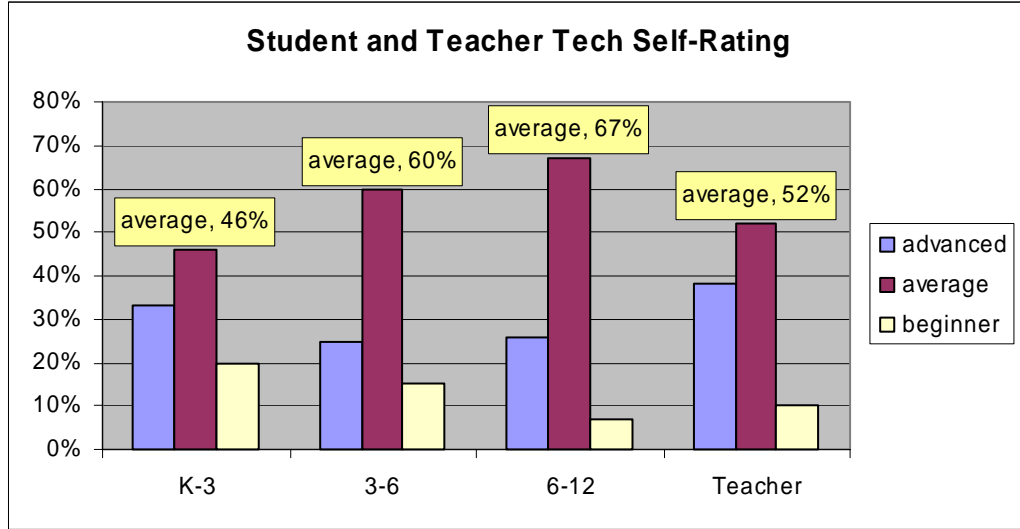
Technology is an important part of teaching for teachers these days, for lesson planning as well as for administrative tasks, communications, and data accountability. For teachers and technology, there's also an element of learning – they are learning along with their students. And, like many students in grades 6-12, teachers learn about new technology from their peers (23%). They also take advantage of learning through their district technology staff (15%) and professional development opportunities (13%). Only 1% of teachers say that they learn from their students.

Teachers across the nation and without regard to years of experience in the classroom chose the same responses to the question: **"In which areas of your professional responsibilities has technology had the biggest impact?"**

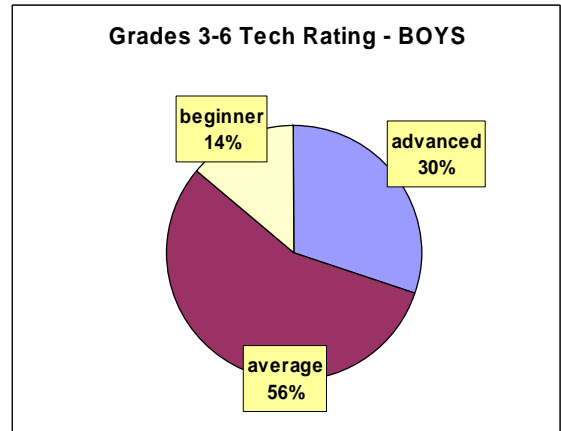
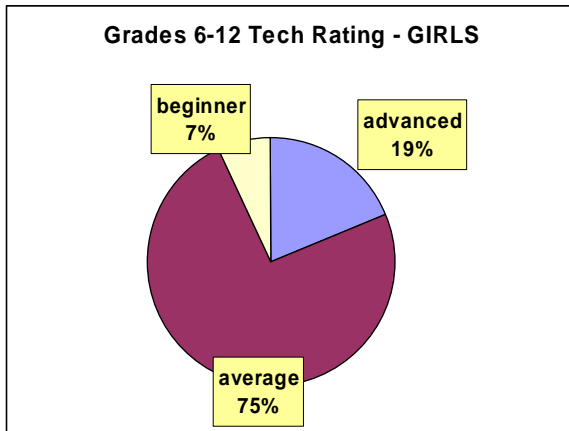
- Teaching and instructional support: research, preparation, presentation of lessons (47%)
- Communications: emails, newsletters, or class websites (18%)
- Student data & accountability: reporting grades, progress, and test scores to school, district, or parents (15%)
- Classroom management activities: tracking attendance, creating worksheets or calendars

SPOTLIGHT: TECHNOLOGY SELF-RATING AND GENDER

Are boys and girls experiencing technology equally? We asked students to rate themselves in comparison to their peers. Overall, students and teachers are most likely to rate themselves as average tech users. This has not changed significantly in the three years of Speak Up events.



Looking at the same information by gender, however shows a notable difference between our boys and our girls. In grades 6-12, girls are 15% less likely than boys to rate themselves as technologically advanced. Our data shows consistently across grades a higher percentage of boys rating themselves as advanced and a higher percentage of girls rating themselves as average. Would this same gender difference show up if we asked girls and boys to rate their skills in math, science, or reading and writing? Or, is this difference specific to technology? NetDay plans to continue to explore this issue in future Speak Up surveys and focus groups.

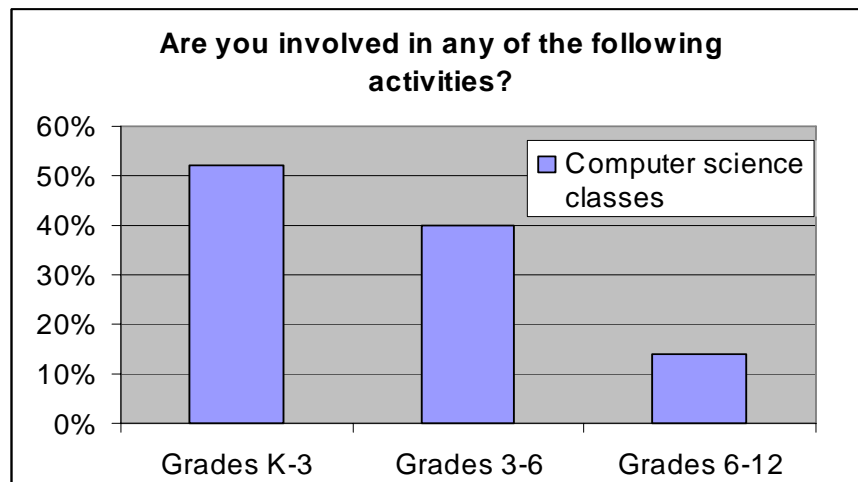


SPOTLIGHT: TECHNOLOGY OPPORTUNITIES AT SCHOOL

With one of the biggest issues in technology use in schools today related to accessibility to computer resources, NetDay was interested in finding out what tools and special services are available to our nation's schools and what, if any, equity issues are involved.

We asked students in grades 6-12 to report on which technology services were available at their schools:

- Some of the results are encouraging; for example over 70% of students say that their school provides a useful school website. A quarter of students also say that their schools provide lap tops for use at school, offer use of a photo or video lab, and provide students with email accounts.
- Other results, in our opinion, are a call to action to our nation's schools. Only 32% of students in grades 6-12 reported that their schools offer computer science classes. (58% of students in grades 3-6 say their school has computer classes.) And, while over 50% of students in grades K-3 and 3-6 are learning how to use computers in schools, by the older grades, less than 15% are taking computer classes. If schools want to keep up with our national goals to create a competitive workforce in math, science, and engineering fields, they will want to consider how they are preparing students with the 21st century skills they need.



- It is interesting to note that schools' offerings of technology services do not seem to vary between urban, suburban, and rural schools, nor between Title I eligible and non-eligible schools.

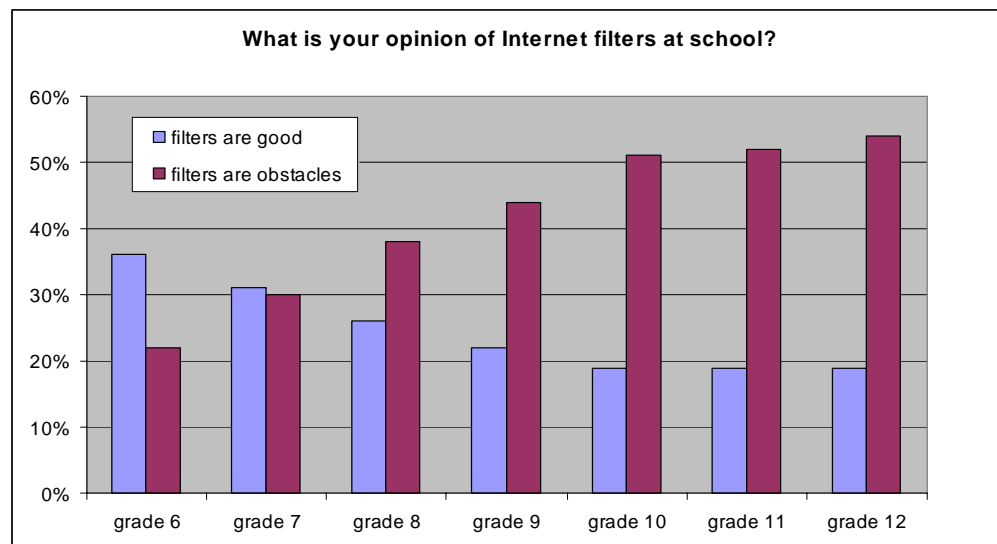
SPOTLIGHT: OPINIONS ABOUT CELL PHONES AND FILTERS

Middle school and high school students have some strong messages for decision-makers about how they feel about accessibility to technology during school hours. Prompted by open-ended responses we gathered from the 2004 Speak Up survey, NetDay added several questions to the 2005 survey about the freedom to use communications technologies during school hours.

Cell Phones at School With over three-quarters of middle and high school students saying they use a cell phone on a weekly basis, we have been hearing from students since last year about wanting to be able to use their phones at school. We've also been seeing a wide range of responses and potential solutions from schools around the nation. Administrators considering this issue can consider this: Student responses show that 75% think that cell phones should be allowed at school with a third of these students agreeing to emergency use only. Only 6% of students think cell phones should not be used at all during school hours.

When students were given a choice of ten things they would change at the school if they were principal, allowing students to use cell phones, IM, and email at school is the second most popular answer (22%) – almost tied with providing laptops to all students (23%).

Internet Filters: This topic also showed up continuously in the open-ended responses from 2004. Students voiced their frustration with Internet filters, saying that filters block access to information they need for school work. Overall this year, 40% of students in grades 6-12 said "Filters are obstacles. They prevent me from finding the information that I need for my schoolwork." With closer examination, we see that the percentage of students who find filters to be an obstacle rises steadily from a fifth of students in grade 6 to over half of students in grade 12. We also see that students who rate themselves as advanced tech users are more likely than beginners to say that filters are obstacles.



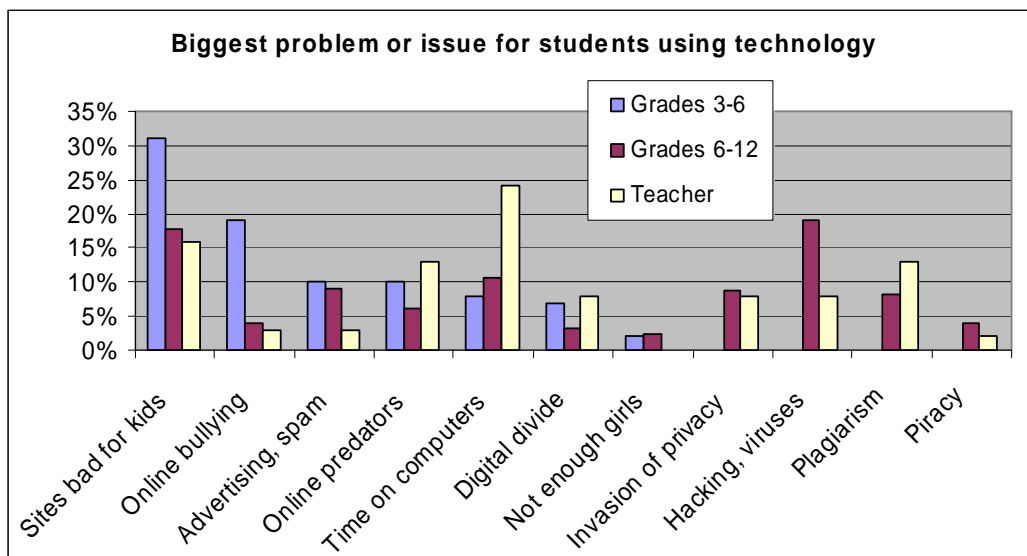
"The Internet is a great way to spread information about the challenges we face, but the filters restrict our use of certain websites. Some online newspapers (The New York Times I believe is one) require an email registration which we do not have access to at school." (10th grade boy, Hurst, TX)

FINDINGS: ISSUES FOR STUDENTS USING TECHNOLOGY

From month to month, the news stories trumpeting the dangers of technology change. One day the big story is cyber-bullies are more menacing than any playground bully. The next day the big worry is too much time on the computer is seen as a cause of childhood obesity. And, another day parents are warned about the online predators preying on students on the MySpace website. This year NetDay took these issues to students and teachers to find out what they see as the biggest problem or issue: **"What is the biggest problem or issue for students using technology?"**

- The top problem noted by students in grades 3-6 are "websites that are bad for children" (31%) followed by online bullying (19%), online safety (10%), and too many ads (10%). 12% of students answered "None of the above."
- In grades 6-12, students' biggest worries include hacking and viruses (19%) and pornography (18%), followed by the issue of kids spending too much time on computers and not getting enough physical activity (11%).
- Teachers share the worry that kids are spending too much time in front of the machine (24%) followed by pornography (16%), plagiarism (13%), and safety from online predators (13%).

Surprisingly, despite much discussion about unequal access to computers (Digital Divide) and the availability of opportunities for girls, these issues did not show up as main concerns for any age group. It's likely however, that issues such as child safety, appropriate resources, and health overshadow these other important issues.



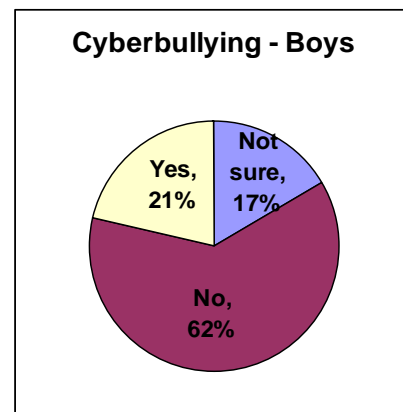
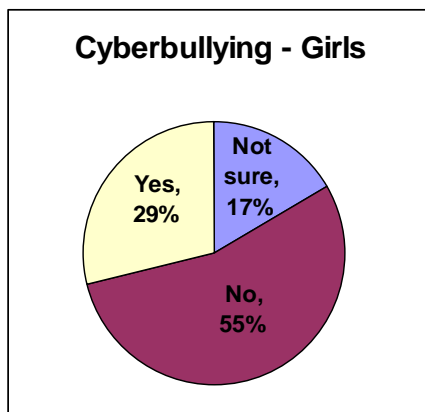
NetDay was also curious about how different groups of students responded to this question. First we compared the answers in the 6-12 group for girls and boys. Their responses were practically identical. We then looked at students in this same group and how they responded to the question that asked them to rate themselves as beginning, average, or advanced tech users. Most of the issues shown above stayed level for each group – with one exception: Students who rate themselves as beginner tech users are much less likely to be concerned about students spending too much time on the computer than those who rate themselves as advanced.

SPOTLIGHT: CYBERBULLYING

Many experts on schools and child safety have noted the movement of schoolyard bullies to the digital domain where bullies take advantage of their anonymity online to taunt fellow students, embarrass, tease, and sometimes threaten their safety.

HAVE YOU OR ANYONE YOU KNOW EVER BEEN BULLIED OR HARASSED BY ANOTHER STUDENT ONLINE?	NATIONAL 6-12
Yes	25%
No	58%
Not sure	17%

Our survey confirmed this problem in school, with **1 in 4** students in grades 6-12 surveyed saying that they or someone they know **have been bullied or harassed by another student online**. When reviewing the data by gender, there is not a big difference. Slightly more girls than boys have experienced cyber-bullying.

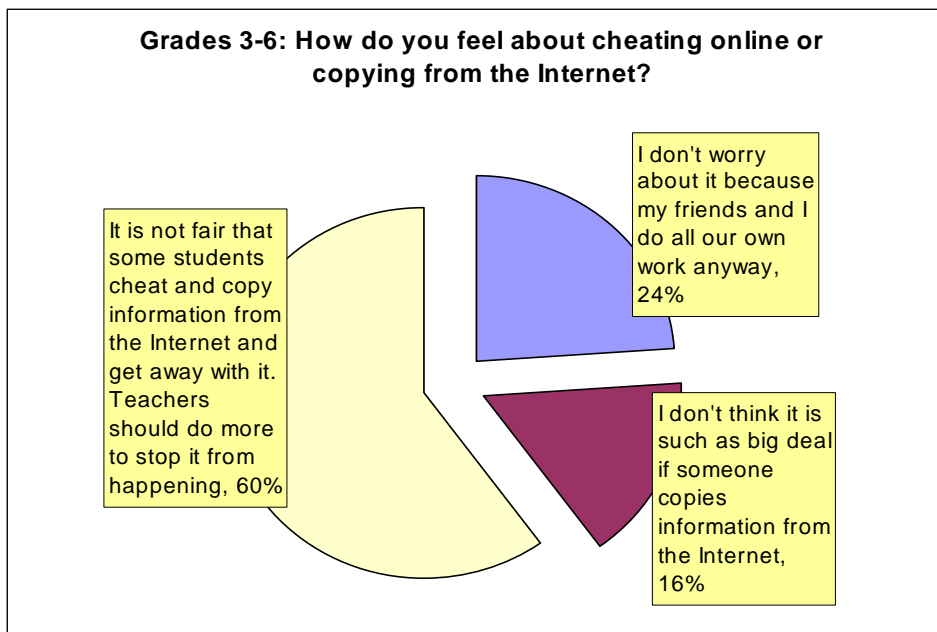
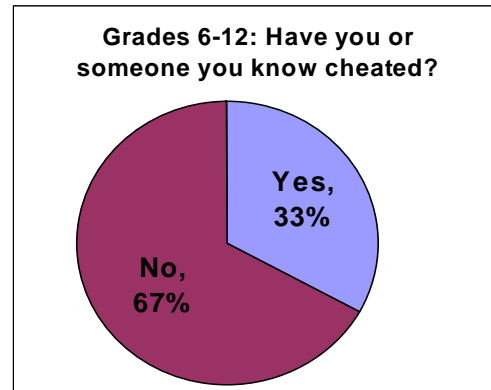


When comparing this issue to the other problems facing student-users of technology, 19% of students in grades 3-6, 4% of students in grades 6-12, and 3% of teachers ranked this as the biggest problem. Educators and organizations around the country are focusing on curbing this problem and our data supports this effort, especially in the younger grades.

SPOTLIGHT: PLAGIARISM

Plagiarism in schoolwork is not a new issue in schools, but new concerns have arisen with the advent of the Internet and the ease by which a student can access information online and even purchase ready-made term papers. We asked students and teachers about their experiences with these issues.

- 71% of students in grades 3-6 and 63% of students in grades 6-12 say that their teacher has discussed school policies and laws related to cheating or stealing using the Internet.
- A third of 6-12 students surveyed say that they or someone they know have cheated.
- 48% of 6-12th graders and 24% of 3-6th graders say "I don't worry about it because my friends and I do all our own work anyway."
- 24% of 6-12th graders and 16% of 3-6th graders say "I don't think it is such a big deal if someone copies information from the Internet."
- 28% of 6-12th graders and 60% of 3-6th graders say "It is not fair that some students cheat and copy information from the Internet and get away with it. Teachers should do more to stop it from happening."
- 8% of 6-12th graders and 12% of teachers say plagiarism is the biggest problem or issue related to students using the Internet. This beats out "not enough girls using technology," "the digital divide," and "safety from online predators" but does not rate as high as "sites that are bad for kids" and "kids spending too much time on computers."



FINDINGS: TEACHING AND LEARNING SCIENCE

NetDay was very pleased to announce our merger in Fall 2005 with Project Tomorrow. NetDay and Project Tomorrow have long shared a vision and common understanding of the importance of providing excellence in education, and now we are combining our efforts to leverage the strengths of both organizations for increased effectiveness and impact, both locally in Southern California and nationally. Project Tomorrow original programs focused on supporting high-quality innovative science programs in schools in Orange County, California. Our new organization's goals include preparing today's students to be tomorrow's innovators, leaders, and engaged citizens with a specific focus on math, science, and technology. With this new mission, the 2005 Speak Up survey forayed into new territory this year with a specific focus on science learning and instruction in our nation's schools. What is being done to engage students in science learning? What would students find more engaging? Are students and teachers speaking the same language?

"What would make learning science more interesting to you?" We presented this question to students in all grade levels with a wide range of choices. In each of the three grade groups there was a strong emphasis in their top choices for experiential learning. Their message to teachers and administrators? Learning by the text-book just isn't what it takes to get these kids excited about science.

- The number one response in each age group is "field trips to science museum, labs, zoos, etc." Other high rated responses included "meeting with scientists," "learning about science careers," and "solving real life problems." These responses match with Project Tomorrow's first-hand experience in Orange County classrooms where innovative science programs are engaging students by connecting them to personal experiences with science.
- Students also clearly are interested in using technology such as multimedia and interactive simulations, conducting research on the internet, and using traditional classroom tools like microscopes and watching films.

"How do you increase student interest in learning science?" We asked teachers how they were engaging students in learning science. Seeing that students are calling for more hands-on experiences in science, it's interesting to learn about current practice. In future surveys, we will be interested in delving into these methods further and finding out with what frequency and/or urgency teachers are engaging student interest in the sciences.

- According to our teachers' responses, teachers are using traditional methods to deliver science instruction: Over 50% of teachers surveyed say they present material in lecture format, conduct demonstration lessons, or guide students in investigations or experiments.
- When asked how they increase student interest in learning science, 64% of teachers encourage student-initiated investigations, 56% of teachers use the Internet for research projects, and 49% have students solve real-life problems.

"What do you need more of to help you learn science?" It's not clear from the teachers' responses if their approaches are meeting their students' expectations. We followed up with the students in middle and high school grades and asked them to tell us what their schools need more of to help them learn science. Again their responses show a desire for more experiential learning, specifically classes with special topics such as forensics. We also see requests for updated equipment and the use of technology.

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- When asked to choose their top choice, 38% of students chose field trips, echoing the answer from the previous question.
- The next most common selections included classes with special topics like CSI (Crime Scene Investigation), updated books and lab equipment, and more use of technology, probes, and data collection devices.

"How do you use technology to help you learn about science?" With our experience in technology, we wanted to keep an eye on the cross-over between technology and science. We asked this to students in grades 3-6 and 6-12 and also to teachers.

- About a third of students in grades 3-6 and 6-12 reported using online search engines and science specific websites, for example NASA and National Weather Service. This is confirmed by 65% of teachers saying they used these tools for teaching sciences.
- Using general search engines, for example Google, were also common uses of technology for science learning.
- Despite students' awareness of and interest in using technology for learning about science, 27% of students in grades 3-6 and 35% of students in grades 6-12 report that they're not using technology at all to learn science. This doesn't quite match up with the less than 10% of teachers who reported not using technology for teaching science.

What is the number one thing that would help you teach science more effectively? The number one thing that would help teachers address any subject more effectively is time. In the case of science, this is no exception. Teachers say they need more instruction time for science, improved lab environments, and more professional development.

WHAT IS THE NUMBER ONE THING THAT WOULD HELP YOU TEACH SCIENCE MORE EFFECTIVELY?	TEACHERS
More instruction time	25%
Improved lab environment	18%
Professional development	14%
Updated books and lab materials	11%
Integration with other content areas	11%
Updated technology, software, etc.	10%
None of the above	5%
Teacher mentors	3%
Focus in school/district priorities	3%

OPEN-ENDED RESPONSES: SCIENCE, TECHNOLOGY, AND OUR FUTURE

NetDay wanted even more information about how students see their futures relative to the science and technology skills they are learning at school. A companion report created in collaboration with TechNet will be forthcoming. Meanwhile, here is a preview of how students answered this question: **"Science, technology and innovation are clearly important for your future. What should your school do to make sure you have the knowledge and skills to be successful?"**

- "I think that we should promote science in schools in America. We need to support camps and activities for kids in 7th and 8th grade. That is when kids start to think about their future and that is when kids need to be shown how important science is to the world. It will show them that they are the future and they can make a difference." (8th grade girl, Newport Mesa, CA)
- "My school can help with more time for science like a two hour class instead of 45 min. Science is very important to our future and a lot of time needs to be spent on it so we can have a better brighter future!!!!" (8th grade girl, Las Vegas, NV)
- The school should make tutoring session two times a week and give students an extra day to volunteer to help students that need help on any subject. They should have health classes for every grade level. Using laptop computers in science classes to help them with more research, more quality time and more help in the classroom. (10th grade boy, Baltimore, MD)
- "They should make the computer lab open after school and open on weekends so people who don't have computers can go in the computer lab and learn more." (5th grade girl, Knightdale, NC)
- "Bring students on a field trip to observe actual field work, like a zoologist for instance, so that they may know what it is like in the real world and receive a glimpse of what their futures could hold for them. A presenter of his own field would prove beneficial for those who want to find information on that particular job, but this time from a qualified individual." (11th grade girl, Georgetown, TX)
- "They need to create more specific classes, not just science in general like Chemistry, Biology, or Engineering. They should also have an honors science class that would study more challenging things like Bio-engineering and other high school classes." (7th grade boy, Chapin, SC)
- "I think that our school needs to have more money to be used to put forward to the use of technology more so that way we can have better materials to work with. Many of our science teachers need new equipment so we can have better labs, our computers need to be updated every five years so that way they can keep up with the changing programs and not freeze up. And many of us could learn how to use technological equipment better if we had the materials to learn with." (12th grade girl, Marion, NC)
- "Science really doesn't get the attention that it deserves. Technology is clearly very important to our lives and to the generations to come. If people found science more interesting, they would make more of an effort to be interested and knowledgeable in science." (9th grade girl, Orlando, FL)
- "My school should make sure that the science teachers are good and the computers are always working." (3rd grade girl, Sacramento, CA)

OPEN-ENDED RESPONSES: SCIENCE, TECHNOLOGY, AND OUR STUDENTS

To complement the student open-ended responses about science, technology and innovation, NetDay asked their teachers a similar question. A full report on these responses will be released with the student responses in the TechNet report. Meanwhile, here is a preview of how teachers answered this question: **"Science, technology, and innovation are clearly important for your students' futures. What should your school do to make sure your students have the knowledge and skills to be successful?"**

- "The science and technology needs to be hands-on. Real life - not real to life practicing. They need to be working on and solving problems in the community. By needing to know information in order to complete the task they would be motivated to learn it and see it at work." (Tech coordinator, San Antonio, TX)
- "Continue to bring in current technology to capture the students' interest and intrigue. By staying up-to-date we are not short changing our students on opportunities that could foster better learners and make it more efficient for all of them." (Middle school teacher, Omaha, NE)
- "We need to provide more technology tools, training and hardware so that all students have equal access to learning new skills." (School tech coordinator, Department of Defense Overseas School, Brussels)
- "A better science lab for an introduction into a more in-depth experimentation experience." (Middle school teacher, Petal, MS)
- "Partner with the science/technology leaders in the business world to gain insight into the new trends and education needed." (High school teacher, Orlando, FL)
- "Expect teachers and students to become technologically proficient. Expect teachers to integrate technology. Measure the effectiveness of technology integration. Measure students' technology skills." (Tech coordinator, San Marcos, TX)
- "Look at curriculum. Have an advisory board of local businesses to inform teachers in the classroom what they are looking for, etc. Make technology available to all students - after school, weekends, etc... Give teachers adequate common planning time not only with teachers within their own school, but throughout the state." (High school teacher, Georgetown, DE)
- "Provide students (and their families) with the ability to have more technology access. Prepare online classes that students can access at home and parents can also access." (Tech coordinator, Barberton, OH)
- "Support students through college by providing educational opportunities and technology for all student if America is going to compete in a global community." (Elementary teacher, Newport Beach, CA)
- Work with scientists and science organizations to better understand the issues facing our world and technology tools they use to problem-solve these issues. (Administrator, Littleton, CO)
- "Students need application—they need a chance to work hands-on with the technology that they are going to encounter. We need to be less concerned with 'how it's been done in the past' and more concerned with preparing them for the future." (High school teacher, Plano, TX)

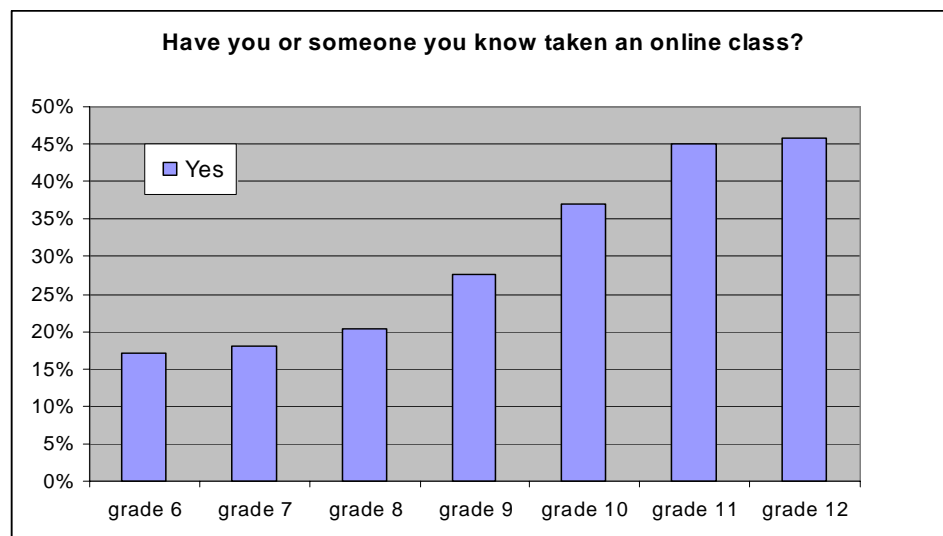
FINDINGS: ONLINE LEARNING

In today's high tech world, learning through online courseware, distance video feeds, and online forums are a new way for students of all ages to have access to courses they normally wouldn't have access to. Online learning can benefit those in communities with limited resources; can benefit students with special learning needs, and those with challenging schedules. Some schools like Florida Virtual School, VHS - Virtual High School, and digital schools in many states are bringing new options in learning to students around the country. This trend became big news this year in the aftermath of Hurricane Katrina. Could online learning help displaced students catch up with their studies?

NetDay added questions to this year's survey to ask middle school and high school students about their experiences with online learning and asked teachers around the nation as well. NetDay is excited to follow this trend in upcoming years.

"Have you or someone you know taken an online class?"

- Out of all of our middle and high school students, 17% of 6th graders, 28% of 9th graders, and 46% of 12th graders say that they or someone they know have taken an online class. (There is no apparent difference in responses between schools classified by NCES as urban, suburban, or rural, nor by Title I eligibility.)
- Even more illustrative of this growing trend, 75% of teachers say that they or another adult they know have participated in an online course.



"How would you describe your opinion about online classes?"

- Of the students who answered "Yes" to the previous question, 65% report a positive experience with their online classes. These students say that online classes are a "good opportunity to take classes that are not offered at your school," "a good option for taking classes outside of school and school hours," and "a good option for students who want a different experience than regular high school."

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- Teachers seem to agree with students with 86% choosing at least one benefit of online learning. In addition to the convenience factors, many teachers herald the potential benefits of online learning to increase students' initiative and to cater to different learning styles. Their leading responses include "Offers alternative schedule and location for students with unique circumstances" (55%), "Some students may feel more comfortable participating in discussions and activities" (54%), and "Offers opportunities for students to take initiative in their coursework" (40%).

"How would you describe your opinion about online classes for professional development?" As mentioned above, 75% of teachers say they or someone they know has taken an online class. What are teachers' opinions about this mode of learning?

- 68% of teachers have positive comments about online learning for professional development. Their leading responses include "Online classes are a good option for teachers to earn professional development credits but who are too busy to attend courses in-person" (41%) and "Online classes are a good opportunity to take classes that are not offered locally" (27%).
- 19% say "Online classes are not as good as being in a physical class with an instructor."

**I think it would be very cool and interesting to create online classes at our school. Kids would really want to give it a shot and try it out. I really think it would help our future because it would make learning fun and different.
(7th grade boy, Chapin, SC)**

FINDINGS: OUR VOICES, OUR FUTURE

Students are concerned about their futures, in high school, in college, and in the workforce. There is one strong voice coming through from their survey responses: They believe that having technology skills will help them find success.

- 70% of students in grades 6-12 believe technology skills are necessary for doing well in school.
- 63% of students in grades 6-12 believe that technology skills are necessary for success in college.
- Over 50% of students in all grade levels believe that technology skills are necessary for getting a job.
- Over 25% of students in each grade group believe that technology skills are necessary for being a good citizen.
- One-third of students in each grade group believe that technology skills are necessary for being happy.

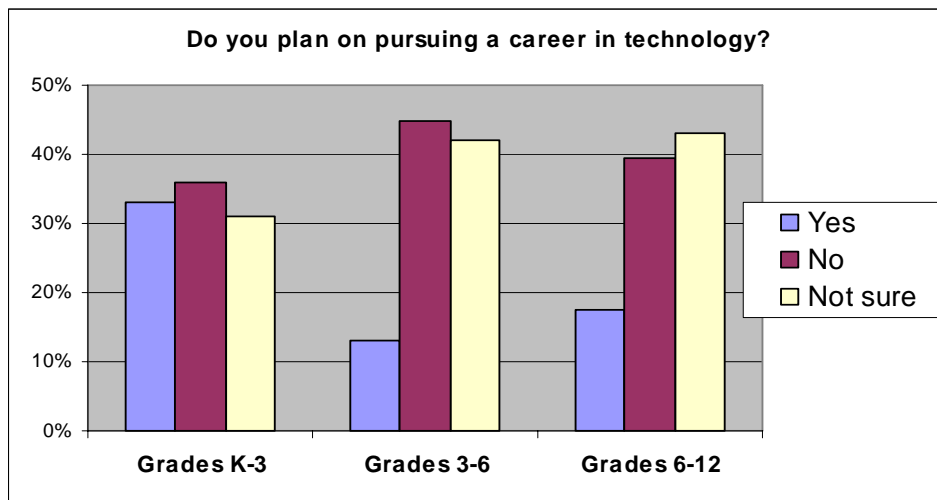
GOOD TECHNOLOGY SKILLS ARE NECESSARY FOR WHICH OF THE FOLLOWING?	GRADES K-3	GRADES 3-6	GRADES 6-12	TEACHER
Doing well in school	52%	66%	70%	76%
Finding a job	50%	50%	61%	82%
Success in college	n/a	56%	63%	89%
Being well informed	43%	44%	58%	72%
Making money	47%	35%	48%	43%
Keeping in touch with family/friends	42%	49%	63%	57%
Being happy	35%	32%	36%	14%
Being a good citizen	30%	28%	25%	18%
None of the above	13%	5%	8%	2%

"Make classes available to students that have to deal with 'real world' problems and opportunities that may come up in the future when you become older." (11th grade boy, Plano, TX)

SPOTLIGHT: TECHNOLOGY CAREERS

Following up on our tech savvy students' proclivity towards using technology, this year we posed the question **"Do you plan on pursuing a job or career in computer science, programming, web design, or technology support?"** The responses we received varied greatly between schools, neighborhoods, cities, and states. The significance of this data likely has its roots in the resources available to the community and influences such as local technology industry and the proximity of colleges and universities. We are looking forward to analyzing these community differences further and working with local groups to identify the influencing factors. Meanwhile, we can report on the national summaries:

- The majority of students are not planning on pursuing careers in technology fields: Only 17% of students in grades 6-12 plan on pursuing a technology-related career.
- When reviewing the data grade-by-grade, we see that the older students get, the more sure they are that they are **not** going into a technology-related career. While over 30% of students in grades K-3 say "Yes" to this question, only 15% of students in 6-12 answer the same way. Perhaps more interestingly, between grades 6 and 12, while the number of students who know they are interested in a technology career stays steady, the number of students who "don't know" decreases and the number of students who are sure the answer is "No" grows. What experiences in their middle and high school careers are causing students to decide against technology careers?
- When reviewing the data by gender, we see that in grades 3-6 and in grades 6-12, girls are less likely to answer "Yes," and more likely to answer "No."
- Students who rate themselves as advanced tech users are twice more likely to plan on pursuing a tech career than those who rate themselves as beginners or average tech users.



FINDINGS: WHAT STUDENTS WANT

We know that students believe that technology is important to their futures. We know that students who rate themselves as advanced tech users are more likely to pursue a technology-related career. We know that science and technology go hand-in-hand. We know that our nation is interested in a workforce confident in math and science. What are students saying about what will help them achieve the success they desire?

GRADES 6-12

- Students want more control over what technology they use and when they use it. The #1 obstacle students find in using technology at school is rules against students using their cell phones, email, or IM accounts. The #2 obstacle is "Teachers control when we use the computers"
- Limited access to the Internet and limited use of technology also rate high as obstacles: "slow Internet access" (last year's #2), "school filters and firewalls," "not enough time in the school day" (#1 in 2003 and 2004), "not enough computers," "computers don't work regularly," and "it's hard for students who don't have computers at home". (More than 25% of students in grades 6-12 chose each of these selections.)
- Our responses from students tell a consistent story. Whether we ask them about obstacles, wishes, or ideas, students overwhelmingly are voting for more or better technology and more control over it. If students could be principal for one day, the first thing they would do would be to provide laptops for each student (23%). They would also purchase more or better computers and equipment (17%), and change the rules about using communication devices at school (19%). (These same top three actions were universal across urban, suburban, and rural schools and between Title I eligible and non-eligible schools.)
- Students know the value of portable technology. The majority of students across all grades, from K to 12 said the #1 thing they would do if they were **"designing a new school for students just like them"** would be to provide laptops for every student that can be taken home (33%). The second choice for middle and high school students was to provide fast, wireless Internet access throughout the school (18%).

They could give the technology department more money to invest in technology. Buying new equipment is not wasting money it's an investment in the future of the students' lives. (11th grade girl, Hamburg, NY)

GRADES 3-6

- Students in upper elementary school want more time on computers. For grades 3-6 the #1 obstacle is not enough computer time, followed by computers that don't always work, and not enough computers.

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- If students could be principal for one day, the first thing they would do would be to provide laptops for students (34%). They would also give each student an MP3 player (20%) and purchase more or better computers, software, printers, or digital cameras (15%).
- If students **"were designing a new school for students just like them"** they would provide laptops for every student that can be taken home (34%), provide fast, wireless Internet access everywhere at school (14%) and computer labs that stay open after school and on weekends (11%).

GRADES K-3

- Even K-3 students know the value of easy and portable access to technology. If students **"were designing a new school for students just like them"** they would provide laptops for every student that can be taken home (27%), a new computer for every teacher (14%), and computer labs that stay open after school and on weekends (13%).

OPEN-ENDED RESPONSES: IF STUDENTS WERE DESIGNING A NEW SCHOOL

In addition to the multiple-choice selections we posed to students about what their priorities would be if they were designing a new school, we also allowed students to type in their own responses. Here is a representative selection of their responses.

- "All of the above and MORE!" (8th grade girl, Huntsville, AL)
- "Have chat rooms for teachers to help us on projects." (8th grade girl, Whitestone, NY)
- "Laptops for every student that can be taken home." (6th grade girl, Benson, NC)
- "More hands-on learning about computer science." (8th grade boy, Narragansett, RI)
- "More classes to choose from." (10th grade boy, Drexel Hill, PA)
- "Computer class will be all day in school every day." (4th grade boy, Turnersville, NJ)
- "Fun, exciting, hands-on teachers." (10th grade girl, Oxon Hill, MD)
- "The latest tech mailed to our school yearly." (6th grade boy, Las Vegas, NV)
- "Learning through games." (3rd grade girl, Ocean View, DE)
- "The students would have a voice in the school." (6th grade girl, St. Louis, MO)
- "Laptops to be taken home that ALWAYS work." (12th grade girl, Memphis, TN)
- "No firewalls and restrictions." (9th grade boy, Department of Defense school, Europe)
- "Super cell phones that kids can actually learn on." (7th grade boy, Narberth, PA)
- "A class that lets your thoughts run free." (4th grade girl, Newport Beach, CA)

How can schools help? NetDay continues to promote a national agenda where schools and districts involve their students in decision-making at the local level. While we provide national summaries to the U.S. Department of Education and other national organizations concerned with student achievement, it's important for schools and districts to use their local data (provided at no cost through www.netday.org) to create their technology plans and organize professional development opportunities for their teachers and staff.

While 15% of students in middle and high school say they are involved in technology decision-making at the school or district level, 32% say they are not involved but would like to be. Twenty-three percent of middle and high school students say that nobody would listen if they had a better idea about how technology could be used at their schools. There is a great opportunity for schools to listen to students' ideas to provide better opportunities for them to achieve success in school and in their futures.

"Listen to students who have really good ideas, because you never know how much of a difference it could make." (12th grade boy, Texas)

"The school system being so powerful should listen to the opinions of students to know what kids are interested in." (8th grade girl, Maryland)

OPEN-ENDED RESPONSES: MAKE THE WORLD A BETTER PLACE

NetDay has a history of asking students to share their voices about issues that impact their education. We've asked them to share ideas about technology use and tools that will improve learning. This year we wanted to give students a broader voice into areas of concern to children all over the world. Below are some excerpts from the responses received to this question: **"This year, students around the world have learned about tsunamis, hurricanes, hunger, disease, war and terrorism. What is one way our leaders could use technology to deal with these challenges and make the world a better place?"**

- "Technology cannot save the world. Better communication of people's ideas, can save us. Technology might be able to help communication." (12th grade boy, Mendocino, CA)
- "Kids can learn about tsunamis, hurricanes, and tornados by using the Internet like to find out why and how to use it. They may find out how to help hunger and disease like who or what company to give their donations to. They may also learn about the wars going around and why it started." (6th grade girl, Chicago, IL)
- "Communication between countries and volunteer workers to help provide better, more accurate and up-to-date aid and support for the areas in need. Use technology to better educate people to be prepared for disasters." (11th grade boy, San Jose, CA)
- "We keep hearing that we are the future but we are not given the chance to express our concerns. Given the chance to express what we have learned about these things will enable

OUR VOICES, OUR FUTURE

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us to share this knowledge and use this technology as a communication device with each other's ideas." (10th grade girl, Orlando, FL)

- "Our leaders could use technology to make the world a better place by first making a plan then put their plan or idea on a survey online and what other people (the citizens) have to say about it and if the citizens find problems the leaders can fix it. They also can use technology to find people online who maybe can help them." (7th grade girl, Baltimore, MD)
- "Give computers to places in the world where they have none. Let kids communicate with each other." (K-3 class, Orange, CA)
- "Our leaders should use modern technology to improve communication and information. For example, government leaders should be able to communicate with each other quickly and efficiently by using live video conferencing, cell phones, more computers, and other modern technology both during times of peace and times of disaster." (12th grade male, Orlando, FL)
- "The leaders could make the world a better place by communicating with children by email to find out how they are affected by these conditions and how they feel about them and what their opinions are." (K-3 class, Clear Creek, TX)
- "I think we can use technology to do fundraisers online or email victims who have technology still or for the wars we can email soldiers to maybe encourage them to keep going. I also think young adults can help raise things for other kids in the world that aren't as fortunate since we are kids and we understand what they might want. For example video games, iPods, CD/DVD players, computers, etc." (8th grade girl, Belvedere, NJ)
- "They could make websites with games, information, and email people newsletters on how to be a better citizen." (4th grade girl, St. Charles, MO)

FINDINGS: WHAT TEACHERS WANT

As stakeholders and key members of our nation's learning communities, teachers have key insights into the impact of technology in the classroom and its possibilities for success. Administrators at the school and district levels should be certain to include their teachers' insights and ideas in technology planning and to inform professional development opportunities.

- Teachers say that technology is having a positive impact on their teaching and on their students' success: As a result of technology, teachers say their jobs are easier (74%), they communicate more with parents about their children's progress (47%), their lesson plans and student's learning experiences are richer because of information from the Internet and multimedia opportunities (47%), and students take a more active role in their learning (47%).
- Forty-seven percent of teachers say they are not sure if students are receiving the type of science and math instruction that will help them successfully learn 21st century skills. As a nation, we should look carefully at this information. However, more importantly, local communities will want to look carefully at how their own data compares across schools, neighborhoods, and regions. This is an example of where we saw great variance between regional responses.
- Teachers will always need more time, but issues related to technology access follow at nearly the same rate of importance: The #1 obstacle teachers face in using technology at school for professional tasks is lack of time in the school day (57%). This was the same top obstacle reported in 2004. Other main obstacles in order of importance to teachers: Not enough computers (46%), lack of time for planning (43%), not all students and families have computer access at home (43%), computers don't work regularly (29%), and slow or unreliable Internet access (25%).
- Teachers want more time and more access for themselves and for their students. If teachers were designing a new school for teachers just like them, they would provide fast, wireless Internet access throughout the school (19%), they would schedule professional development time for learning with technology (17%), and they would provide a laptop for every student (12%). (These same top three priorities are consistent across years of experience as teachers.)
- Of the many trends in educational technology, teachers believe the following technology services have the potential to improve students' success in school: Providing a useful school website (65%), providing laptops for students (48%), offering computer science classes (43%), providing access on the school network for storage or file sharing (39%), selling or loaning computer equipment to families for use at home (34%).
- The good news is that teacher education programs are receiving high ratings from teachers in terms of preparing them to use technology for instruction. 63% of teachers say that their pre-service education prepared them somewhat or very much. This number is even higher for recent graduates of teaching programs. Teachers are also very satisfied with the professional development opportunities available through the school or district with 91% reporting that these opportunities have helped them prepare to use technology for instruction.
- In general, technology is helping teachers do their jobs well. 61% of teachers believe that technology is an asset in helping them meet No Child Left Behind requirements. Only 4% say it's a distraction.

OPEN-ENDED RESPONSES: IF TEACHERS WERE DESIGNING A NEW SCHOOL

Just like we asked students, we gave all teachers the opportunity to fill-in-the-blank and tell us what their priorities would be if they were designing a new school. Good news for students eager for laptops: 25% of all open-ended responses we received from teachers also mentioned laptops – either for every teacher, for each student, or both. Many of the responses also mentioned projection devices and interactive white boards, more equipment, more reliable technology, and more time.

- "A new up-to-date laptop for every teacher." (Middle school teacher, Avondale, WV)
- "Teachers with advanced degrees in their fields." (High school teacher, Townson, MD)
- Complete/consistent access to all technologies." (Middle school teacher, San Antonio, TX)
- "A budget for new computers every 2 years for teachers." (High school instructional aide, Newport Beach, CA)
- "More planning time and mentoring." (High school teacher, Denver, CO)
- "Smart boards in every class with staff development." (Administrator, Columbia, MO)
- "Access to computer lab when you need it." (Middle school teacher, Leitchfield, KY)
- "All classrooms with 30+ computers and net access." (High school media specialist, Conroe, TX)
- "Digital projectors in all classrooms." (Middle school teacher, Ashland, NE)
- "Time to learn about new technology." (Elementary teacher Cumberland, WI)
- "Every student having Internet access at home." (Middle school teacher, Dallas, TX)
- "A Smartboard in every classroom." (Elementary school tech coordinator, San Juan Capistrano, CA)
- "Teacher input on purchases of software & hardware." (Resource, Department of Defense Overseas School, Korea)
- "Computer course for students." (Elementary teacher, Plymouth, MA)
- "Time to prepare lessons incorporating technology." (Special ed teacher, Alabaster, AL)
- "Just-in-time professional development available." (Elementary media specialist, Ft. Leonard Wood, MO)

"We should continue to strive to integrate the latest technology into our classroom instructions and provide the latest tools in technology to our students for them to use." (Classroom Teacher, Bluffton, SC)

ACKNOWLEDGMENTS

NetDay's 2005 Speak Up owes much of its success to the teachers, principals, and technology coordinators who helped organize the survey events at their own schools. We'd also like to thank the students and teachers for sharing their amazing voices with us this year.

OUR SPEAK UP 2005 CHAMPIONS

NetDay Speak Up events for 2005 are generously supported through grants and in-kind support from the BellSouth Foundation, the BellSouth Corporation, and Dell. NetDay is very proud to be a recipient of a Google Grant to help us with outreach for our Speak Up events.

NETDAY SPEAK UP 2005 RESEARCH SUPPORTERS

NetDay Speak Up events benefit from the expertise of several key partners including the NetDay Student Advisory Council, teacher advisors, and individuals in the business community. Thank you for providing valuable consulting support on the development of the 2005 Speak Up event.

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Alliance for Excellent Education, American Association of School Administrators, American Electronics Association (AeA), American Federation of Teachers, American Institutes for Research, Association of Materials Resource Centers, Benton Foundation, Cable in the Classroom, California Charter Schools Association, The Centers for Quality Teaching and Learning, The Children's Partnership, City of Seattle Department of Information Technology, College Board, Computer Using Educators (CUE), Consortium for School Networking (CoSN), Council of Chief State School Officers (CCSSO), Council for Exceptional Children (CEC), Educating Future Generations (efg), Educational Testing Service (ETS), Florida Virtual School, The Forum for Youth Investment, Gaggle, Generation Yes, George Lucas Educational Foundation, GiveKidsGoodSchools.com, Greater Lafayette Chamber of Commerce, GreatSchools.net, High Tech High, iEARN (International Education and Resource Network), International Society for Technology in Education (ISTE), Kidz Online, McKenzie Group, MAR*TEC, MassCUE, Math Forum @ Drexel, MOUSE, NASA Office of Education, The National Alliance of State Science and Math Coalitions, National Association for College Admission Counseling (NACAC), National Association of Elementary School Principals (NAESP), National Board for Professional Teaching Standards, National Commission on Teaching and America's Future, National Council for Community and Education Partnerships (NCCPEP, GEAR UP), National Council for the Social Studies, National Council of Teachers of English, National Education Association (NEA), National Education Knowledge Industry Association (NEKIA), National Middle School Association, National Park Foundation, National Rural Education Association (NREA), National School Boards Association (NSBA), National Science Digital Library, National Science Resource Center -- Regional LASER Sites, North American Council for Online Learning, One Economy, Points of Lights Foundation, Project Tomorrow, Professor Garfield Foundation, Public Education Network, Science@OC at the California Science Center, Software & Information Industry Association (SIIA), State Educational Technology Directors Association (SETDA), TechCorps, TechNet, Technology Information Center for Administrative Leadership, Think.com, USATODAY Education, US Conference of Mayors, Virtual High School, Inc.*, Who's Who Among American High School Students

OUR PROJECT TEAM

Thank you to our support team who helped make our visions for the 2005 Speak Up event a reality.

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ABOUT NETDAY AND PROJECT TOMORROW

OUR MISSION AND VISION

NetDay Speak Up is a national initiative of the nonprofit education group, Project Tomorrow. This new national 501(c)(3) organization is the result of the merger of the national education technology group, NetDay, and the Orange County, CA science education group, Project Tomorrow, in September 2005. Our new mission is to support innovative, research-based uses of science, math and technology resources to develop critical thinking, creativity and problem solving skills in K-12 students. Our vision is to prepare today's students to be tomorrow's innovators, leaders and engaged citizens.

SPEAK UP INITIATIVE

Since 2003, NetDay has surveyed over **562,000 K-12 students** and over **26,000 teachers** from schools in all 50 states through our annual online survey event held each fall. The Speak Up data represents the largest collection of authentic, unfiltered stakeholder input on education technology and is used regularly by education, business and policy leaders to inform federal, state and local programs on education and technology.

The Speak Up initiative has three general goals:

- To collect national data about what students and teachers think about education and technology.
- To raise awareness about the importance of including student and teacher voices in national and local discussions on education and technology.
- To stimulate local conversations about the role of technology in learning and workforce preparedness.

In the Speak Up 2005 surveys, we included new questions about science education, 21st century skills, online learning, science education, and teacher professional development. We are very pleased to salute our Speak Up sponsors: **BellSouth Foundation and Dell, Inc.**, and to recognize the support of **Google, TechNet and our 65 nonprofit partners.**

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