

# Taking the Pulse

*of the High School Student Experience in America*

Research Findings

“Access to Technology”

Phase 1 of 6

April 29, 2015

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# Executive Summary

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In December of 2014, FCC Commissioner Jessica Rosenworcel coined the term “Homework Gap,” after a revealing view of the disparity in school children’s access to the modern web outside of school. In 2007, the Family Online Safety Institute (FOSI) was established to make the online world safer for kids and their families through enlightened public policy, industry best practice and good digital parenting. To further understand the context and impact of the disparity in access to technology as well as online safety issues, the Hispanic Heritage Foundation, the Family Online Safety Institute and myCollegeOptions® have released this report. The effect of this disparity can be seen in three main areas, and all impact student education and future opportunities for success: the physical ability to participate in required school activities, the awareness and practice of safe online behavior, and the inherent skill building that drives students’ future opportunities and career plans.

## Increased Demands for Access to Web-Based Technology

As education delivery becomes more dependent on web-based technologies, students with less access to those tools are at a disadvantage. Moreover, this access disparity goes hand-in-hand with other known hurdles to a student’s academic and financial future, like low socio-economic status and being the first in the family to go to college.

Nearly all participants of the study report that internet access outside of school is required to complete their assigned school work. Nationally, 42% of students have received a lower or failing grade on an assignment due to lack of internet access. Even in today’s mobile world, the students who have all options still prefer to complete homework assignments on home computers. Hispanic and African American students are the least likely to have regular access to a computer at home as well as the least likely to have regular access to a computer at school.

- Hispanic and African American students are the most likely to use a smart phone to access the internet and the least likely to use a desktop/laptop to access the internet, which is often preferred for school work.
- Nearly 80% of Hispanic and African American students, who do not have regular access to a computer at home, use their smart phones to access the internet and report using their smart phones to complete homework assignments.
- Hispanic students are the mostly likely to have been unable to complete an assignment due to lack of internet access, and the most likely to report receiving a lower grade because they did not have access to the internet.

Two participants in this study share their disparate contexts:

*“It is difficult at times to complete assignments at home without internet. Usually, I’ll try to do much at school by skipping lunch or arriving at school early to finish the assignment by connecting to the Internet.”*

-Hispanic, female, high school senior, Midwest, “A” average, low household income

*“At my school, every student has a laptop. 5th-12th graders get to bring their laptops home each night, weekend, and break (not over summer). I think the 1 on 1 technology really helps our students and I would encourage it in all schools.”*

-White, female, high school freshman, South, “A” average, high household income

### Online Safety, Awareness and Practices

The methods and environment surrounding students’ web access can negatively impact their safety, stress levels and their lives. Most Americans, including nearly all study participants, see positive impacts that technology has on their lives. However, nearly half of American secondary students do not report feeling safe online, and over 40% report experiencing specific hardships caused by a more connected world.

Three of the top negative impacts of technology reported by students are: isolation, cyberbullying and the cost of keeping up.

- Seventy percent (70%) of all students know someone who has been a victim to cyberbullying. Female students responded at a significantly higher rate than male students, 77% and 63% respectively.
- Twenty-five percent (25%) of those cases were not reported.
- Fifty-five percent (55%) of female students do not feel safe online as compared to 36% of male students.
- Hispanic and Asian students are more likely to identify the financial burden of maintaining technology.

Many students are better prepared and educated for a safe presence online, but many are not. Hispanic students are the least likely to report an awareness of the concept of an online reputation, and are the least likely to have been informed about the importance of protecting their online reputations and safety. This leads Hispanic students to have the least concern about protecting their online safety and digital footprints that can follow them all their lives.

As the disparity in access to web-based technology decreases, there will be an increasing critical need to effectively educate young people about safe online practices and the potential impacts of their online behaviors.

### Technology Skill Development

In the coming years, a significant percentage of individual careers and our future economy will require more technical skills and experiences, and not only in the areas that we consider “technology” careers today. The everyday lives of most professionals are increasingly dependent on technological skills, and by all accounts, that trend will continue. Today, most students are producing and consuming content online at a very high rate. The skill and experience gap between those students who are regularly connected, to those who are not will become more visible and detrimental in many future careers.

- Ninety percent (90%) of students say they have created digital media such as artwork, stories, photos, videos and blogs.
- Forty-three percent (43%) say they are more of a content consumer than a content creator.
- Thirty-two percent (32%) say they are equally a creator and consumer of online content.
- Only 4% of students see themselves as more of a content creator than consumer, with Hispanic and African American students outpacing White and Asian students by two times.
- Overall, 12% of students report they have 1-5 apps, 24% have 6-10 apps, 20% have 11-15 apps and 38% of students say they have 16 or more apps on their smart phones.

Hispanic students in America report the lowest awareness of specific computer programming or coding classes available at their schools. Yet, their participation and interest in technology classes and pursuing careers in technology is on pace with their peers, demonstrating a higher than average desire.

# Methodology

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This multi-phase, omnibus style survey of U.S. high school students was conceived, designed and is being conducted by the Hispanic Heritage Foundation and my**CollegeOptions**®. The study is being conducted in 6 unique phases, with each phase following the same methodology. Research topics and objectives for each phase are identified and refined through a collaborative effort of partnering organizations. Each phase will have a unique survey instrument and a unique group of partners that brings a unique expertise and connection to the topics within that phase. The included findings all stem from the first phase of the study.

## Phase 1 Survey Instrument

The first phase of the study is focused on students' use of, and access to web-based technologies and the impact that has on their educations, lives and safety. For that reason, the Hispanic Heritage Foundation and my**CollegeOptions** engaged the Family Online Safety Institute as the leading subject matter expert during this phase.

The research instrument was designed in collaboration with all Phase 1 partners and then tested on a small focus group of current high school students for relevancy and contextual accuracy. The my**CollegeOptions** Research Department built and administered the online survey instrument and collected and analyzed the data in order to produce the following report.

## Phase 1 Sampling Error

The survey was administered by inviting a random sample of 150,000 current high school students who participate in the my**CollegeOptions** College Planning Program between March 11 and March 26, 2015. my**CollegeOptions** is the nation's largest college planning program with nearly 5.5 million students participating, allowing for a generalizable study sample that is representative of the population at large. The resulting study sample of 3,243 participants is nationally representative and the maximum sampling error for the study is plus or minus 2.3% at the 99% confidence level.

## Phase 1 Limitations

It is possible that question wording and logistical difficulties associated with online studies can introduce error or bias into the findings, in addition to that caused by non-response and sampling error. In particular, due to the subject matter and resulting findings of this study, the method of conducting an online survey can and should lead to a reasonable assumption that students with the least access to web-based technologies are underrepresented in these findings. The research team at my**CollegeOptions** believes this potential bias, if corrected, would only increase the severity and importance of the resulting analysis.

# Sample Demographics

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## Students

Number of Student Respondents .....3,243

## Gender

Male ..... 47%  
Female ..... 51%  
Unreported ..... 2%

## Ethnicity

American Indian ..... 5%  
Asian ..... 6%  
African-American ..... 14%  
Hispanic ..... 20%  
Middle Eastern ..... 1%  
White ..... 53%  
Prefer not to respond ..... 1%

## Graduation Year

2015 ..... 20%  
2016 ..... 29%  
2017 ..... 28%  
2018 ..... 23%

## Grade Point Average

A ..... 52%  
B ..... 43%  
C ..... 4%  
<C ..... 1%

## Region

Midwest ..... 23%  
Northeast ..... 11%  
South ..... 45%  
West ..... 21%

## Community

Rural ..... 23%  
Suburban ..... 22%  
Urban ..... 20%  
Undefined ..... 12%



## Research Findings:

# Computer Access at Home, School and Library

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OVERALL: Nearly 9 in 10 students report regular access to a computer at home, 84% at school, and 49% at a library. Only 2% of students do not have regular access to a computer.

- **Have regular computer access at home:**
  - Hispanic 84%, African American 83%, White 93%, Asian 96%;
  - Male 91%, Female 88%;
  - First Generation 83%, Non-First Generation 93%;
  - High Household Income 97%, Middle Household Income 92%, Low Household Income 81%;
  - Hispanic-Suburban 88%, Hispanic-Urban 84%, Hispanic-Rural 78%
- **Have regular computer access at school:**
  - Hispanic 82%, African American 74%, White 87%, Asian 84%;
  - Male 83%, Female 84%;
  - First Generation 80%, Non-First Generation 85%;
  - High Household Income 87%, Middle Household Income 83%, Low Household Income 82%;
  - Hispanic-Suburban 83%, Hispanic-Urban 82%, Hispanic-Rural 83%
- **Have regular computer access at library:**
  - Hispanic 47%, African American 40%, White 50% Asian 62%;
  - Male 47%, Female 49%;
  - First Generation 44%, Non-First Generation 50%;
  - High Household Income 54%, Middle Household Income 48%, Low Household Income 44%;
  - Hispanic-Suburban 52%, Hispanic-Urban 46%, Hispanic-Rural 41%

## Research Findings:

### Internet Access at Home and School

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OVERALL: Nearly 9 in 10 students report regular access to broadband internet at home, 75% at school, and 43% at a library. Only 2% of students do not have regular access to broadband internet.

- **Have regular broadband access at home:**
  - Hispanic 86%, African American 89%, White 92%, Asian 95%;
  - Male 91%, Female 89%;
  - First Generation 85%, Non-First Generation 93%;
  - High Household Income 96%, Middle Household Income 91%, Low Household Income 83%;
  - Hispanic-Suburban 88%, Hispanic-Urban 85%, Hispanic-Rural 83%
- **Have regular broadband access at school:**
  - Hispanic 73%, African American 65%, White 80%, Asian 71%;
  - Male 77%, Female 74%;
  - First Generation 69%, Non-First Generation 78%;
  - High Household Income 79%, Middle Household Income 75%, Low Household Income 72%;
  - Hispanic-Suburban 74%, Hispanic-Urban 72%, Hispanic-Rural 76%

# Research Findings:

## Devices and Internet Access

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### Smart Phones

OVERALL: 87% of students report they own a smart phone.

- **Own a smart phone**
  - Hispanic 89%, African American 92%, White 85%, Asian 85%;
  - Male 88%, Female 87%;
  - First Generation 87%, Non-First Generation 87%;
  - High Household Income 89%, Middle Household Income 87%, Low Household Income 86%;
  - Hispanic-Suburban 96%, Hispanic-Urban 92%, Hispanic-Rural 80%

### Preferred Devices to Access the Internet

OVERALL: Students were asked how they most often access the internet. Nearly 6 in 10 students say they use their smart phones to access the internet, 32% use a desktop or laptop computer and 8% use a tablet most often.

- **Most often use smart phone to access internet:**
  - Hispanic 64%, African American 63%, White 58%, Asian 43%;
  - Male 56%, Female 61%;
  - First Generation 63%, Non-First Generation 58%;
  - High Household Income 55%, Middle Household Income 58%, Low Household Income 63%;
  - Hispanic-Suburban 66%, Hispanic-Urban 64%, Hispanic-Rural 59%
- **Most often use desktop/laptop to access internet:**
  - Hispanic 26%, African American 26%, White 32%, Asian 49%;
  - Male 35%, Female 28%;
  - First Generation 27%, Non-First Generation 33%;
  - High Household Income 37%, Middle Household Income 32%, Low Household Income 26%;
  - Hispanic-Suburban 29%, Hispanic-Urban 24%, Hispanic-Rural 31%

MISC: 69% of students who do not have regular access to a computer at home use their smart phones most often to access the internet. This statistic is higher (79%) for Hispanic students. Seniors are significantly more likely to say they most often use a desktop/laptop computer to access the internet compared to lower classmen. This trend holds true for Hispanic seniors compared to Hispanic freshmen as well.

# Research Findings:

## Internet Use and Homework Assignments

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### Frequency of Internet Usage in School

OVERALL: Nearly all students say they use the internet in school (98.5%). Forty-six percent of students say they use the internet daily in school while 32% use it every few days, 6% once a week and 11% every few weeks. No large differences among the racial/ethnic backgrounds.

- **Use internet daily in school:**
  - Hispanic 43%, African American 45%, White 46%, Asian 41%;
  - Male 46%, Female 46%;
  - First Generation 44%, Non-First Generation 45%;
  - High Household Income 48%, Middle Household Income 45%, Low Household Income 44%;
  - Hispanic-Suburban 41%, Hispanic-Urban 40%, Hispanic-Rural 52%
  
- **Use internet a few times per week in school:**
  - Hispanic 35%, African American 33%, White 31%, Asian 36%;
  - Male 32%, Female 32%;
  - First Generation 33%, Non-First Generation 33%;
  - High Household Income 29%, Middle Household Income 33%, Low Household Income 35%;
  - Hispanic-Suburban 39%, Hispanic-Urban 33%, Hispanic-Rural 32%

### Frequency with Which Internet Is Required to Complete Homework Assignments Outside of School

OVERALL: Nearly all students say they are required to use the internet to complete homework assignments outside of school (96.5%). Thirty-one percent of students say they are required to use the internet to complete homework assignments outside of school daily while 42% are required to use it every few days, 10% are required to do so once a week and 10% are required to every few weeks.

- **Require internet for homework daily outside of school:**
  - Hispanic 28%, African American 30%, White 29%, Asian 49%;
  - Male 28%, Female 33%;
  - First Generation 25%, Non-First Generation 31%;
  - High Household Income 36%, Middle Household Income 30%, Low Household Income 27%;
  - Hispanic-Suburban 33%, Hispanic-Urban 25%, Hispanic-Rural 25%

- **Require internet for homework a few times per week outside of school:**
  - Hispanic 45%, African American 42%, White 41%, Asian 39%;
  - Male 41%, Female 42%;
  - First Generation 41%, Non-First Generation 41%;
  - High Household Income 40%, Middle Household Income 42%, Low Household Income 42%;
  - Hispanic-Suburban 42%, Hispanic-Urban 46%, Hispanic-Rural 47%

### Device Used Most Often to Connect to the Internet to Complete Homework

OVERALL: Three in 4 students report using a desktop or laptop computer to complete assignments outside of school using the internet while 57% use their smart phones, 51% use a school computer and 12% use a library computer.

- **Most often use home computer to complete homework using internet:**
  - Hispanic 70%, African American 65%, White 77%, Asian 88%;
  - Male 76%, Female 72%;
  - First Generation 68%, Non-First Generation 77%;
  - High Household Income 83%, Middle Household Income 76%, Low Household Income 66%;
  - Hispanic-Suburban 74%, Hispanic-Urban 71%, Hispanic-Rural 65%
- **Most often use school computer to complete homework using internet:**
  - Hispanic 50%, African American 50%, White 52%, Asian 49%;
  - Male 52%, Female 50%;
  - First Generation 50%, Non-First Generation 52%;
  - High Household Income 50%, Middle Household Income 53%, Low Household Income 52%;
  - Hispanic-Suburban 44%, Hispanic-Urban 51%, Hispanic-Rural 57%
- **Most often use smart phone to complete homework using internet:**
  - Hispanic 62%, African American 62%, White 55%, Asian 55%;
  - Male 56%, Female 58%;
  - First Generation 60%, Non-First Generation 57%;
  - High Household Income 56%, Middle Household Income 57%, Low Household Income 59%;
  - Hispanic-Suburban 65%, Hispanic-Urban 65%, Hispanic-Rural 51%

MISC: Hispanic seniors are more likely to say they most often use a home and school computer to access the internet outside of school to complete assignments compared to Hispanic freshmen who say they use their smart phones to complete assignments outside of school that use the internet. This trend does not hold true for overall students.

### Unable to Complete a Homework Assignment Due to Lack of Computer/Internet

OVERALL: 49% of students say they have experienced being unable to complete a homework assignment because they didn't have access to a computer or the internet.

- **Have been unable to complete a homework assignment due to lack of computer/internet:**
  - Hispanic 54%, African American 50%, White 46%, Asian 51%;
  - Male 47%, Female 51%;
  - First Generation 55%, Non-First Generation 45%;
  - High Household Income 44%, Middle Household Income 46%, Low Household Income 56%;
  - Hispanic-Suburban 55%, Hispanic-Urban 59%, Hispanic-Rural 45%

### Received a Lower Grade on an Assignment Due to Lack of Computer/Internet

OVERALL: 42% of students have received a lower grade on an assignment because they did not have access to the internet.

- **Received a lower grade because of lack of computer/internet:**
  - Hispanic 47%, African American 43%, White 38%, Asian 35%;
  - Male 40%, Female 41%;
  - First Generation 46%, Non-First Generation 37%;
  - High Household Income 35%, Middle Household Income 39%, Low Household Income 47%;
  - Hispanic-Suburban 47%, Hispanic-Urban 53%, Hispanic-Rural 40%

# Research Findings:

## Student Perception of the Disadvantages of No Internet Access

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OVERALL: 80% say that students who do not have access to the internet have an unfair disadvantage to those students who do.

- **Believe that not having internet is an unfair disadvantage to students:**
  - Hispanic 80%, African American 81%, White 81%, Asian 80%;
  - Male 78%, Female 83%;
  - First Generation 78%, Non-First Generation 81%;
  - High Household Income 81%, Middle Household Income 81%, Low Household Income 79%;
  - Hispanic-Suburban 76%, Hispanic-Urban 76%, Hispanic-Rural 90%
- **Quotes:**
  - *“I went a long time without Internet access and it was a very hard time for me.”*
  - *“My academics are affected because of not having a computer.”*
  - *“It is difficult at times to complete assignments at home without internet. Usually, I'll try to do much at school by skipping lunch or arriving at school early to finish the assignment by connecting to the Internet.”*
  - *“At my school, every student has a laptop. 5th-12th graders get to bring their laptops home each night, weekend, and break (not over summer). I think the 1 on 1 technology really helps our students and I would encourage it in all schools.”*
  - *“When the teacher gives you homework on the computer and then you tell him that you don't have access to the Internet or computer and then they tell you to go to a library not the school library but a public library. I ask them what if I can't get there and they say find a way like my parents are going to stop what they are doing at work to take me to a library and when I come back and don't have my homework done they want to give me a zero. I think that is really mean and unjust because everyone doesn't have a car or someone who can take them places.”*

# Research Findings:

## Student Perceptions of Technology

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### Technology Makes Life Easier

OVERALL: 97% of students say that technology makes life easier.

- **Believe that technology makes life easier:**
  - Hispanic 96%, African American 97%, White 97%, Asian 98%;
  - Male 98%, Female 97%;
  - First Generation 96%, Non-First Generation 98%;
  - High Household Income 98%, Middle Household Income 97%, Low Household Income 97%;
  - Hispanic-Suburban 96%, Hispanic-Urban 96%, Hispanic-Rural 99%

### Ways in Which Technology Makes Life Easier

OVERALL: Nine in 10 students say that technology has made their lives easier through the ease of communication with their friends and family and 9 in 10 also say it has made their lives easier through fast access to information and news.

- **Believe that technology makes life easier to communicate with family and friends:**
  - Hispanic 86%, African American 87%, White 92% Asian 92%;
  - Male 91%, Female 88%;
  - First Generation 88%, Non-First Generation 91%;
  - High Household Income 92%, Middle Household Income 89%, Low Household Income 87%;
  - Hispanic-Suburban 86%, Hispanic-Urban 87%, Hispanic-Rural 89%
- **Believe that technology makes life easier through fast access to news and information:**
  - Hispanic 89%, African American 87%, White 90%, Asian 93%;
  - Male 90%, Female 88%;
  - First Generation 87%, Non-First Generation 90%;
  - High Household Income 91%, Middle Household Income 88%, Low Household Income 88%;
  - Hispanic-Suburban 88%, Hispanic-Urban 88%, Hispanic-Rural 93%



- **Believe that technology makes life easier through entertainment (games, videos, photos):**
  - Hispanic 70%, African American 73%, White 80%, Asian 86%;
  - Male 83%, Female 72%;
  - First Generation 72%, Non-First Generation 80%;
  - High Household Income 83%, Middle Household Income 77%, Low Household Income 72%;
  - Hispanic-Suburban 70%, Hispanic-Urban 72%, Hispanic-Rural 71%

### Technology Makes Life Harder

OVERALL: 41% of students say that technology makes life harder.

- **Believe that technology makes life harder:**
  - Hispanic 36%, African American 31%, White 45%, Asian 44%;
  - Male 37%, Female 45%;
  - First Generation 39%, Non-First Generation 42%;
  - High Household Income 43%, Middle Household Income 44%, Low Household Income 39%;
  - Hispanic-Suburban 36%, Hispanic-Urban 33%, Hispanic-Rural 39%

### Ways in Which Technology Makes Life Harder

OVERALL: Fifty-one percent of students believe that technology makes life harder because people isolate themselves, while 46% report technology makes life harder because of cyberbullying and nearly 44% believe that technology makes life harder because it costs too much money to maintain.

- **Believe that technology makes life harder because people isolate themselves:**
  - Hispanic 44%, African American 44%, White 50%, Asian 62%;
  - Male 46%, Female 55%;
  - First Generation 53%, Non-First Generation 51%;
  - High Household Income 49%, Middle Household Income 55%, Low Household Income 51%;
  - Hispanic-Suburban 58%, Hispanic-Urban 58%, Hispanic-Rural 48%
- **Believe that technology makes life harder because of cyberbullying:**
  - Hispanic 44%, African American 46%, White 46%, Asian 44%;
  - Male 35%, Female 55%;
  - First Generation 47%, Non-First Generation 46%;
  - High Household Income 42%, Middle Household Income 46%, Low Household Income 50%;
  - Hispanic-Suburban 42%, Hispanic-Urban 37%, Hispanic-Rural 43%

- **Believe that technology makes life harder because it costs too much money to maintain:**
  - Hispanic 46%, African American 35%, White 44%, Asian 49%;
  - Male 42%, Female 45%;
  - First Generation 45%, Non-First Generation 44%;
  - High Household Income 41%, Middle Household Income 45%, Low Household Income 45%;
  - Hispanic-Suburban 41%, Hispanic-Urban 52%, Hispanic-Rural 43%

# Research Findings:

## Students and Online Safety

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### Feeling Safe Online

OVERALL: More than half of students (54%) say they feel safe online while 15% do not feel safe and 31% are not sure.

- **Feel safe online:**
  - Hispanic 49%, African American 45%, White 59%, Asian 46%;
  - Male 64%, Female 45%;
  - First Generation 48%, Non-First Generation 55%;
  - High Household Income 61%, Middle Household Income 53%, Low Household Income 48%;
  - Hispanic-Suburban 54%, Hispanic-Urban 49%, Hispanic-Rural 48%

### Cyberbullying

OVERALL: 7 in 10 students have known someone who has been a victim of cyberbullying by cell phone, email or social media. More than 55% have known someone who has been a victim of a rumor that harmed a reputation, 52% have known someone who has received mean or threatening messages, 40% have known someone who has had inappropriate or suggestive pictures spread around with the intention of harm, and 37% have known someone who has been a victim of contact from someone pretending to be another person in an effort to cause harm.

- **Know someone who has been cyberbullied:**
  - Hispanic 69%, African American 67%, White 74%, Asian 61%;
  - Male 63%, Female 77%;
  - First Generation 70%, Non-First Generation 70%;
  - High Household Income 69%, Middle Household Income 72%, Low Household Income 71%;
  - Hispanic-Suburban 68%, Hispanic-Urban 68%, Hispanic-Rural 66%
- **Know someone who has been a victim of rumors that harmed a reputation:**
  - Hispanic 56%, African American 50%, White 59%, Asian 52%;
  - Male 50%, Female 61%;
  - First Generation 59%, Non-First Generation 55%;
  - High Household Income 53%, Middle Household Income 58%, Low Household Income 58%;
  - Hispanic-Suburban 58%, Hispanic-Urban 48%, Hispanic-Rural 59%

- **Know someone who has been a victim of mean or threatening messages:**
  - Hispanic 49%, African American 47%, White 56%, Asian 47%;
  - Male 45%, Female 58%;
  - First Generation 55%, Non-First Generation 52%;
  - High Household Income 51%, Middle Household Income 56%, Low Household Income 51%;
  - Hispanic-Suburban 51%, Hispanic-Urban 47%, Hispanic-Rural 49%

### Reporting of Cyberbullying

OVERALL: Students who know someone who has been cyberbullied by cell phone, email or social media report that 3/4 tell someone and 1/4 do not tell anyone. Half of students who know someone who has been cyberbullied say that person tells a friend, 32% tell a family member, 28% tell a school counselor/teacher/principal, and 10% tell the police.

- **Know someone who has been cyberbullied and it was reported:**
  - Hispanic 76%, African American 75%, White 75%, Asian 72%;
  - Male 80%, Female 71%;
  - First Generation 75%, Non-First Generation 75%;
  - High Household Income 77%, Middle Household Income 74%, Low Household Income 74%;
  - Hispanic-Suburban 75%, Hispanic-Urban 80%, Hispanic-Rural 77%

### Concern When Posting Online Content

OVERALL: When posting comments or photos online, 29% of students are very concerned, 37% somewhat concerned, 24% not at all concerned (10% don't post) about how that information might be perceived by colleges, friends/family, and employers.

- **Very concerned about how online content may be perceived by colleges, friends/family, employers:**
  - Hispanic 31%, African American 37%, White 28%, Asian 25%;
  - Male 25%, Female 33%;
  - First Generation 30%, Non-First Generation 29%;
  - High Household Income 28%, Middle Household Income 26%, Low Household Income 32%;
  - Hispanic-Suburban 29%, Hispanic-Urban 31%, Hispanic-Rural 42%

### Online Reputation/Digital Footprint Awareness

OVERALL: 3 in 4 students say they know what an online reputation is while 1 in 4 do not.

- **Have an awareness of online reputation/digital footprint:**
  - Hispanic 66%, African American 71%, White 81%, Asian 73%;
  - Male 78%, Female 73%;
  - First Generation 65%, Non-First Generation 79%;
  - High Household Income 81%, Middle Household Income 74%, Low Household Income 70%;
  - Hispanic-Suburban 73%, Hispanic-Urban 61%, Hispanic-Rural 68%

### Guidance on Effects of Online Reputation/Digital Footprint

OVERALL: 7 in 10 students say that someone in their lives has talked to them about their online reputation or digital footprint.

- **Have discussed online reputation/digital footprint:**
  - Hispanic 61%, African American 67%, White 77%, Asian 64%;
  - Male 69%, Female 72%;
  - First Generation 60%, Non-First Generation 74%;
  - High Household Income 76%, Middle Household Income 69%, Low Household Income 65%;
  - Hispanic-Suburban 64%, Hispanic-Urban 57%, Hispanic-Rural 66%

### Attitude toward Potential Effects of Online Reputation

OVERALL: 74% of students say they care about the potential effects of their online reputations, 16% are not sure and 10% say they do not care.

- **Care about the potential effects of online reputation:**
  - Hispanic 65%, African American 75%, White 78%, Asian 67%;
  - Male 71%, Female 77%;
  - First Generation 66%, Non-First Generation 78%;
  - High Household Income 80%, Middle Household Income 72%, Low Household Income 71%;
  - Hispanic-Suburban 70%, Hispanic-Urban 58%, Hispanic-Rural 73%

# Research Findings:

## Digital Content Creation

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OVERALL: 89% of students report they have created digital content. Three quarters have posted their content to social media websites, 68% have shared artwork, stories or photos to a social site, 55% post videos online and 30% have blogs or their own websites.

- **Have created digital content:**
  - Hispanic 87%, African American 84%, White 92%, Asian 86%;
  - Male 87%, Female 90%;
  - First Generation 88%, Non-First Generation 89%;
  - High Household Income 86%, Middle Household Income 90%, Low Household Income 90%;
  - Hispanic-Suburban 89%, Hispanic-Urban 87%, Hispanic-Rural 88%
  
- **Have posted to social media sites:**
  - Hispanic 68%, African American 66%, White 81%, Asian 74%;
  - Male 72%, Female 78%;
  - First Generation 69%, Non-First Generation 77%;
  - High Household Income 79%, Middle Household Income 79%, Low Household Income 69%;
  - Hispanic-Suburban 69%, Hispanic-Urban 68%, Hispanic-Rural 75%
  
- **Have shared artwork, stories, photos, etc. to an online social site:**
  - Hispanic 67%, African American 61%, White 72%, Asian 68%;
  - Male 61%, Female 74%;
  - First Generation 67%, Non-First Generation 69%;
  - High Household Income 70%, Middle Household Income 69%, Low Household Income 66%;
  - Hispanic-Suburban 69%, Hispanic-Urban 66%, Hispanic-Rural 67%
  
- **Have posted videos online:**
  - Hispanic 46%, African American 55%, White 59%, Asian 50%;
  - Male 58%, Female 51%;
  - First Generation 48%, Non-First Generation 56%;
  - High Household Income 57%, Middle Household Income 56%, Low Household Income 57%;
  - Hispanic-Suburban 52%, Hispanic-Urban 46%, Hispanic-Rural 40%

### Content Creation/Consumerism

OVERALL: 43% of students say they are more of a content consumer than a content creator (4%), while 32% say they are an equal creator/consumer, and 20% were not sure.

- **Are more of a content consumer than content creator:**
  - Hispanic 36%, African American 29%, White 48%, Asian 43%;
  - Male 48%, Female 38%;
  - First Generation 33%, Non-First Generation 46%;
  - High Household Income 50%, Middle Household Income 42%, Low Household Income 36%;
  - Hispanic-Suburban 40%, Hispanic-Urban 34%, Hispanic-Rural 30%
  
- **Are more of a content creator than content consumer:**
  - Hispanic 5%, African American 8%, White 3%, Asian 3%;
  - Male 6%, Female 3%;
  - First Generation 5%, Non-First Generation 4%;
  - High Household Income 4%, Middle Household Income 4%, Low Household Income 5%;
  - Hispanic-Suburban 3%, Hispanic-Urban 7%, Hispanic-Rural 6%
  
- **Are equal content consumer/creator:**
  - Hispanic 34%, African American 32%, White 33%, Asian 37%;
  - Male 31%, Female 33%;
  - First Generation 35%, Non-First Generation 32%;
  - High Household Income 31%, Middle Household Income 36%, Low Household Income 32%;
  - Hispanic-Suburban 34%, Hispanic-Urban 34%, Hispanic-Rural 34%

### Smart Phone/Tablet Apps

OVERALL: 12% of students report they have 1-5 apps, 24% say 6-10, 20% say 11-15, and 38% say they have 16 or more apps on their smart phones/tablets.

- **Have 16+ apps on their smart phones/tablets:**
  - Hispanic 35%, African American 40%, White 41%, Asian 37%;
  - Male 42%, Female 36%;
  - First Generation 31%, Non-First Generation 41%;
  - High Household Income 42%, Middle Household Income 39%, Low Household Income 33%;
  - Hispanic-Suburban 34%, Hispanic-Urban 39%, Hispanic-Rural 27%

- **Have 11-15 apps on their smart phones/tablets:**
  - Hispanic 18%, African American 18%, White 20%, Asian 24%;
  - Male 20%, Female 20%;
  - First Generation 20%, Non-First Generation 20%;
  - High Household Income 20%, Middle Household Income 20%, Low Household Income 21%;
  - Hispanic-Suburban 19%, Hispanic-Urban 18%, Hispanic-Rural 26%
  
- **Have 6-10 apps on their smart phones/tablets:**
  - Hispanic 28%, African American 26%, White 23%, Asian 24%;
  - Male 22%, Female 26%;
  - First Generation 31%, Non-First Generation 22%;
  - High Household Income 22%, Middle Household Income 25%, Low Household Income 26%;
  - Hispanic-Suburban 28%, Hispanic-Urban 26%, Hispanic-Rural 27%

### Video Game/App Creation

OVERALL: Nearly half of students say they would be interested in creating a video game or app while 29% are not interested and 23% are not sure.

- **Are interested in creating a video game/app:**
  - Hispanic 51%, African American 56%, White 44%, Asian 57%;
  - Male 62%, Female 36%;
  - First Generation 50%, Non-First Generation 48%;
  - High Household Income 48%, Middle Household Income 46%, Low Household Income 50%;
  - Hispanic-Suburban 48%, Hispanic-Urban 54%, Hispanic-Rural 51%
  
- **Are not interested in creating a video game/app:**
  - Hispanic 25%, African American 25%, White 31%, Asian 21%;
  - Male 18%, Female 38%;
  - First Generation 27%, Non-First Generation 28%;
  - High Household Income 30%, Middle Household Income 31%, Low Household Income 26%;
  - Hispanic-Suburban 28%, Hispanic-Urban 22%, Hispanic-Rural 26%
  
- **Are not sure about interest in creating a video game/app:**
  - Hispanic 23%, African American 18%, White 25%, Asian 22%;
  - Male 19%, Female 26%;
  - First Generation 24%, Non-First Generation 23%;



- High Household Income 22%, Middle Household Income 24%, Low Household Income 24%;
- Hispanic-Suburban 23%, Hispanic-Urban 24%, Hispanic-Rural 23%

### Computer Coding/Programming Class

OVERALL: Only 28% of students have ever taken a computer coding or programming class.

- **Have taken a computer coding or programming class:**
  - Hispanic 29%, African American 36%, White 25%, Asian 37%;
  - Male 31%, Female 26%;
  - First Generation 28%, Non-First Generation 29%;
  - High Household Income 29%, Middle Household Income 27%, Low Household Income 28%;
  - Hispanic-Suburban 27%, Hispanic-Urban 30%, Hispanic-Rural 31%

### Computer Coding/Programming Career Awareness

OVERALL: 61% of students report they are aware of computer coding/programming careers.

- **Are aware of computer coding/programming careers:**
  - Hispanic 56%, African American 58%, White 63%, Asian 71%;
  - Male 66%, Female 57%;
  - First Generation 55%, Non-First Generation 63%;
  - High Household Income 67%, Middle Household Income 61%, Low Household Income 55%;
  - Hispanic-Suburban 59%, Hispanic-Urban 54%, Hispanic-Rural 58%

### Technology Career Interest

OVERALL: Nearly 35% of students report they are interested in a career in technology such as computer coding, computer science, app/software development, etc. 34% say they are not interested and 32% are not sure.

- **Are interested in a career in technology:**
  - Hispanic 38%, African American 38%, White 29%, Asian 54%;
  - Male 48%, Female 22%;
  - First Generation 36%, Non-First Generation 35%;
  - High Household Income 36%, Middle Household Income 31%, Low Household Income 35%;
  - Hispanic-Suburban 35%, Hispanic-Urban 38%, Hispanic-Rural 43%

## Appendix:

### Taking the Pulse - Phase 1 Survey Questions

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**1) In which of the following places do you have regular access to a computer? (Select all that apply)**

Home

School

Library

I do not have regular access to a computer.

Other (please specify): \_\_\_\_\_

**2) In which of the following places do you have regular access to a broadband internet? (Select all that apply)**

Home

School

Library

I do not have regular access to the internet.

Other (Please Specify): \_\_\_\_\_

**3) Do you own a smart phone (iPhone, Android, etc.)?**

Yes

No

**4) Which of the following do you use most often to access the internet? (Select ONE)**

Desktop/Laptop computer

Tablet (iPad, Kindle Fire, etc.)

E-reader (Nook, Kindle, etc.)

Smart phone (iPhone, Android, etc.)

I do not have access to the internet.

Other (please specify): \_\_\_\_\_

**5) How often do you use the internet for class activities in school?**

- Daily
- A few times per week
- Once a week
- Every few weeks
- Once a month
- I do not use the internet at school.
- Other (please specify): \_\_\_\_\_

**6) How often do you need to use the internet to complete a homework assignment outside of school?**

- Daily
- A few times per week
- Once a week
- Every few weeks
- Once a month
- I do not need the internet outside of school to complete homework assignments.
- Other (please specify): \_\_\_\_\_

**7) What do you use to connect to the internet to complete these assignments? (Select all that apply)**

- Home computer
- School computer
- Library computer
- My smart phone
- Other (please specify): \_\_\_\_\_

**8) Have you ever been unable to complete a homework assignment because you didn't have access to a computer or the internet?**

- Yes
- No

**9) Did you receive a lower grade on the assignment(s) because you could not access the internet?**

- Yes
- No

**10) Do you think students who do not have access to the internet have an unfair disadvantage to those students who do have access?**

- Yes
- No
- Not Sure

**11) Do you have any comments about access to a computer or the internet?**

**12) Do you think technology makes your life easier?**

- Yes
- No

**13) In your opinion, how does technology make life easier? (Select all that apply)**

- Easier to communicate with friends/family
- Easier to look for and apply for college, jobs, etc.
- Entertainment (games, videos, photos, etc.)
- Fast access to information/news
- Helps to be more organized
- Other (please specify): \_\_\_\_\_

**14) Do you think technology makes your life harder?**

- Yes
- No

**15) In your opinion, how does technology make life harder? (Select all that apply)**

- Always changing (becomes outdated, have to learn new technology)
- Costs too much money to maintain
- Cyberbullying
- Privacy issues
- People isolate themselves
- Waste of time
- Other (please specify): \_\_\_\_\_

**16) Do you feel safe online?**

- Yes
- No
- I don't know

**17) Do you know anyone who has experienced any of the following cyberbullying situations by cell phone, email or social media? (Select all that apply)**

- Sending mean or threatening messages
- Spreading rumors that harm someone's reputation
- Someone pretending to be someone else in an effort to hurt another person
- Spreading inappropriate or suggestive pictures of another person to hurt them
- I do not know anyone who has experienced cyberbullying.
- Other (please specify): \_\_\_\_\_

**18) How have these students dealt with the cyberbullying situations? (Select all that apply)**

- They tell a friend.
- They tell a school counselor, teacher or principal.
- They tell a family member.
- They tell the police.
- They do not tell anyone.
- Other (please specify): \_\_\_\_\_

**19) When posting comments or photos online, how concerned are you that colleges, friends/family, employers, and others may judge you based on that content?**

- Very concerned
- Somewhat concerned
- Not at all concerned
- I do not post things online.

**20) Do you know what a "digital footprint" or online reputation is?**

- Yes
- No

**21) Has anyone ever talked about the potential effects of your online reputation?**

- Yes
- No

**22) Do you care about the potential effects of your online reputation?**

- Yes
- No
- Not sure

**23) Have you ever been involved in the creation of any of the following digital content? (Select all that apply)**

- Posting videos online
- Blogging or creating your own website
- Sharing artwork, stories, photos, etc. to an online social site
- Posting to social media websites
- I have not participated in the creation of digital content.
- Other (please specify): \_\_\_\_\_

**24) Do you feel you are more of a content creator or a content consumer? (Select ONE)**

- Content creator
- Content consumer
- Equal creator and consumer
- Not sure

**25) How many apps do you have on your smart phone or tablet?**

- 0
- 1-5
- 6-10
- 11-15
- 16+
- I do not own a smart phone or tablet.

**26) Do you ever play video games or app games?**

- Yes
- No

**27) How often do you play video game or app games?**

- Multiple times per day
- Once per day
- Every few days
- Once a week
- Once a month
- Other (please specify): \_\_\_\_\_

**28) Would you be interested in creating a video game or phone app?**

- Yes
- No
- Not Sure

**29) Have you ever taken a computer coding/programming class?**

- Yes
- No

**30) Do you know about the potential careers related to computer coding/programming?**

- Yes
- No

**31) Since technology is such a big part of everyday life, would you be interested in pursuing a career in technology? (Example: computer coding, computer science, building apps/software, etc.)**

- Yes
- No
- Not sure