How do students feel about web filtering?

AN INTERNATIONAL STUDY

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Marisa is currently a student at the University of California, Berkeley. This study is sponsored by Securly, a provider of cloud-based web filtering for K-12 schools and parental controls for homes.
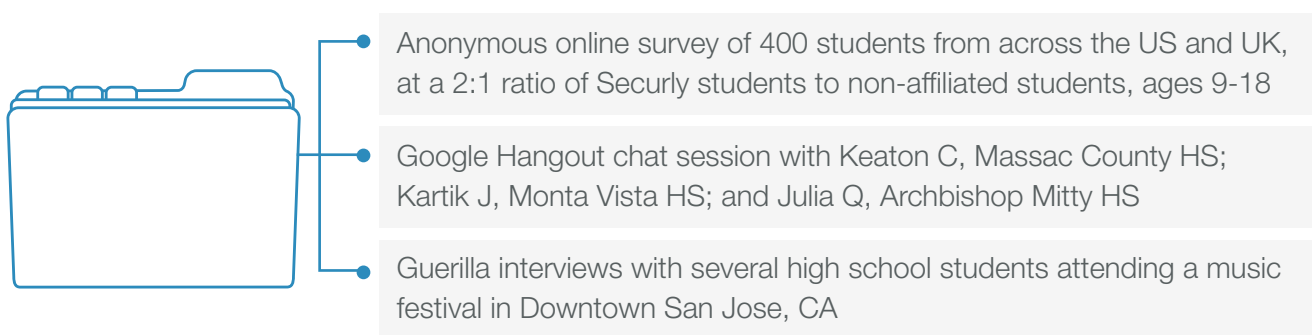
TABLE OF CONTENTS

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Background

Display devices –defined for the purpose of this study as devices that project information via a screen (i.e. smartphone, tablet, laptop, etc.)– facilitate the workplace, the household, and in recent years, the classroom.[1] As teachers begin to incorporate technology and web-based learning into their curriculum, students are devoting more time to display devices than ever before. While it is clear these devices can serve as powerful learning tools, the perils of using technology are also well documented. Until now, however, conversations around topics such as screen time, web filtering, cyberbullying, and privacy have been dominated by adults. Very little is known about how today's youth, the "1:1 generation", are coping with an unprecedented use of technology in school and at home.[2]

Naturally, we wanted to learn more. What are kids actually spending their time doing, what are they seeing, what are the effects of these protective/preventative measures? This study is the first to ask the students about their own interaction with display devices, and the associated topics of web filtering, cyberbullying, and privacy.

While we have done a significant amount of research for this study, we are always open to new ideas and feedback.
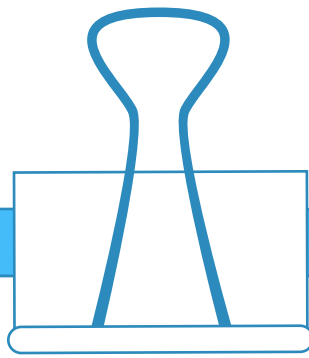
Methodology

We approached data collection in various ways:

Anonymous online survey of 400 students from across the US and UK, at a 2:1 ratio of Securly students to non-affiliated students, ages 9-18

Google Hangout chat session with Keaton C, Massac County HS; Kartik J, Monta Vista HS; and Julia Q, Archbishop Mitty HS

Guerilla interviews with several high school students attending a music festival in Downtown San Jose, CA

[1] School purchase of display devices for classroom use has increased 27% since 2011, while individual purchase of tablet PCs has grown 200% increase.
http://www.sony.co.uk/pro/article/projectors-personal-devices-are-they-the-future-of-education
[2] http://www.nlm.nih.gov/medlineplus/ency/patientinstructions/000355.htm\
http://www.avg.com/digitaldiaries/homepage#avg_dd_explore

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The online survey questions were as follows:

1. How old are you?
[9-12 years old/13-15 years old/16-18 years old]

2. How much time do you spend on your laptop, smartphone, tablet, iPod Touch, etc.?
[10+ hours/day, 5-10 hours/day, 1-5 hours/day, < 1 hour/day]

3. What do you use your laptop, smartphone, tablet, iPod Touch, etc. for? Please select all that apply.
[Gaming/School Projects and Homework/Social Media/Entertainment/Other]

4. On a scale of 1-10, how helpful is technology to your education experience?
[1 = lowest, 10 = highest]

5. Of the following which activity do you spend the most time on? Please rank.
[Gaming/Schoolwork and Homework/Social Media/Entertainment]

6. Please describe your productivity when it comes to schoolwork while using your laptop, tablet, etc.
[Sidetracked often/Sidetracked half the time/Sidetracked never]

7. Do you think you would benefit from a service that keeps you on track? For example: provides you with a report of your Internet usage, measures your productivity, and sends an alert when you have been sidetracked for too long?
[Yes/No]

8. What web filter does your school use, if at all?
[Securly/Other/None/I don't know]

9. In your experience, what do you think web filtering is used for?
[Ensuring student productivity/Anti-cyberbullying/Blocking explicit content/Other]

10. How successful do you think web filtering services are in each respective category/task? Please rank on a scale of 1-5.
[Ensuring student productivity/Anti-cyberbullying/Blocking explicit content/Other]

11. What types of websites/content are blocked that you believe shouldn't be?

12. Good things about web filtering?

13. Bad things about web filtering and/or changes you would like to see?

14. Has web filtering hindered your education experience?
[Yes/No]

15. Can you get around the web filter?
[Yes/No]

16. Do you have a web filter on your personal device, controlled by your parents?
{Yes/No}

17. Have you experienced cyberbullying?
[Yes/No]

How much time do you spend on your laptop, smartphone, tablet, iPod Touch, etc.?

5
hours/day

On average, students spend around five hours per day using display devices.

Collectively, most students in this study spend about 5-10 hours in front of a screen. Most students in the 9-12 and 16-18 age groups spend between 1-5 hours with a device per day, with the amount of time doubling for students ages 13-15.

Total Screen Time By Age Group

400
students surveyed

Age Group
- 9-12 years old
- 13-15 years old
- 16-18 years old
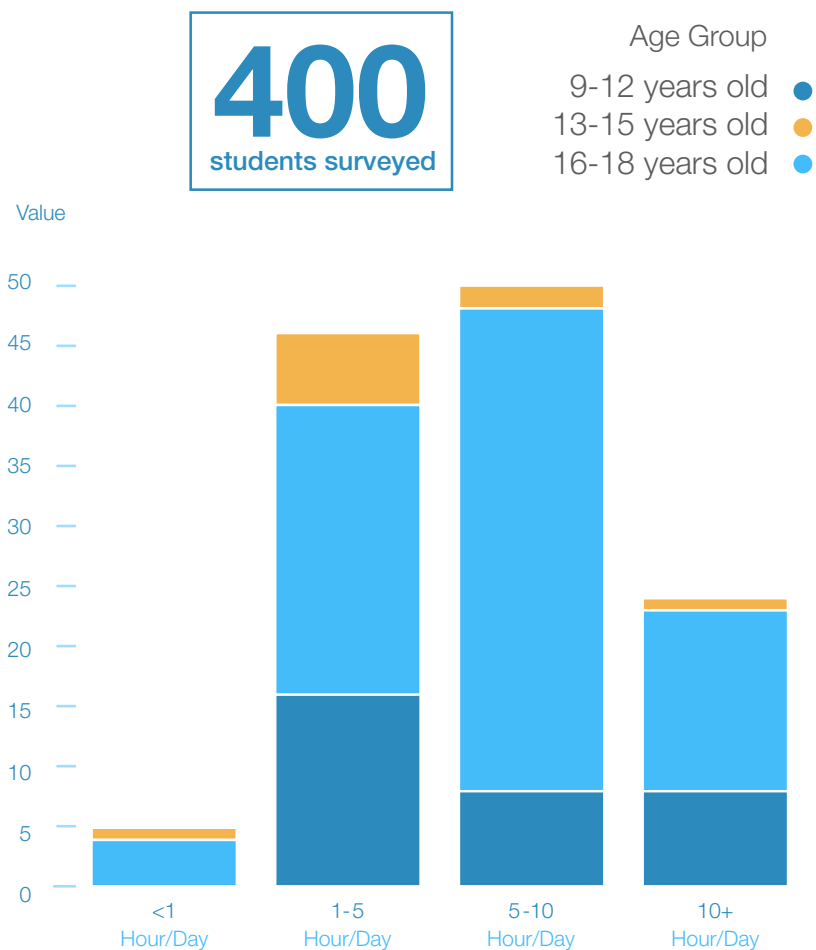
The columns represent the aggregate screen time usage quantities. Color shows details about how hour/day usage varies by age, allowing for an age group-specific comparison.

Students reported the following activities when asked how they spend time on their devices. The percentage represents the amount of students who listed the respective activity as the biggest usage of their time online.
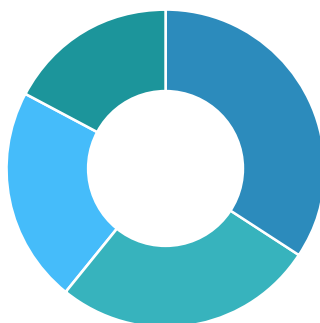
### Time Distribution for Top Activities

- Social Media — 34.40%
- Schoolwork — 26.60%
- Entertainment — 21.80%
- Gaming — 17.20%
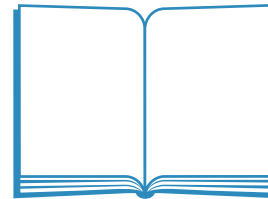
Technological effects

Technology's long-term effect on millennials is still indeterminate given the short timeframe of growth. However, recent studies (**BBC Screen Time Study, American Academy of Pediatrics Clinical Report – The Impact of Social Media on Children, Adolescents, and Families**, etc.) have predicted both negative and positive, conditional results.
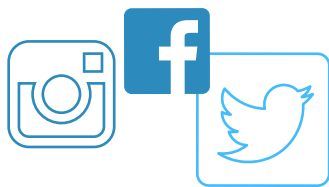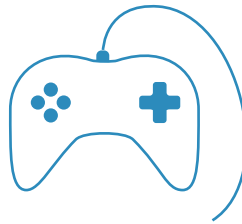
	SOCIAL MEDIA	GAMING	SCHOOL WORK
Pros	Students are better connected in the real world. Using social media, they can increase and improve relationships with existing friends from school, extracurricular activities, camps, etc. Spreads awareness about current events and causes. Young adults relate to others online who share the same experiences. It helps inspire kids who are transitioning and searching for a sense of self-identity.	Cognitive research shows that kids who regularly play video games identify shapes, directional movement, and color variation quicker than children who do not engage in gaming as often. Provides a commonality and talking point for young people. Acts as a stress reliever.	Helps to organize group projects. Gives access to a wide variety of educational resources such as YouTube tutorial videos that give students a deeper understanding of content, anytime.
Cons	Social media becomes dangerous when kids make "friends" they haven't met in real life, putting them at risk for scams and predators. Communication and social interaction solely via the web leads to social isolation. Advertisers target young adults with sidebar/banner ads to influence buying tendencies and alter a kid's view of normal or ideal consumerism. This is especially effective as companies utilize search history data.	Kids who play video games for more than 3 hours per day were more likely to engage in fights and exhibit hyperactivity. Some kids have admitted that gaming was used as an excuse to get away from the real world of homework, chores, etc.; they enjoyed feeling a part of the fantasy game world. Gaming that detracts from sleep time is disruptive and correlates with poor memory retention.	A recent study showed that when children engaged in gaming or television during the hours of 6 – 7PM (before starting their homework), they retained less coursework content than the test group that did not use technology during the same period of time. Sleep deprivation damages consolidation of memory; time spent doing homework the night before is almost a "waste" because a student will not remember nearly as much as if they had slept.

What have you noticed from continued exposure to screens?

We interviewed high school students from around the Bay Area, CA about their own experiences with constant technology use.

"Constant use of social media makes people depressed. They can see other people having 'fun' when they're just sitting at home and they see other people's accomplishments. It makes other people jealous and feel bad about themselves, but really social media is not an accurate picture of someone's life because people only post things that look good. You wouldn't post something that you don't want to show off."

Julia, 15

Over exposure to display devices can affect communication skills and empathy development in young people. A recent UCLA study supports that children who had prolonged exposure to TV, smartphones, etc. could not read human emotions as well as the students who went without digital devices for five days.[3]

Recent studies show that of 200 Facebook users (college aged), 25% had expressed depressive symptoms via status updates or posts in one year.

Of 425 Facebook users (who held accounts for more than several years), many expressed that life is unfair.

Participants who accepted friend requests from strangers believed that others were happier, more successful, and had better lives than they did.[4]

"I definitely noticed a change in myself after watching about 2.5+ hours of TV and Netflix per day. I realized that for the period of uninterrupted time I was staring at the screen, I didn't talk to anyone or engage with people. My communication skills started to breakdown. I wouldn't be able to find the right words for things, or it would take me longer than usual. I couldn't think of any other reason why I had become so inarticulate that year."

Kartik, 17

According to the American Academy of Pediatrics, "Facebook depression" correlates with social isolation, affecting mostly preteens and teens. Kids are at a higher risk of consulting Internet sites which "may promote substance abuse, unsafe sexual practices, or aggressive and self-destructive behavior".[5]

[3] http://newsroom.ucla.edu/releases/in-our-digital-world-are-young-people-losing-the-ability-to-read-emotions
[4] http://guilfordjournals.com/doi/pdf/10.1521/jscp.2014.33.8.701
[5] http://pediatrics.aappublications.org/content/127/4/800.full.pdf+html

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Technology in Education

The next part of our data explores the usage of web-based learning and online habits in the classroom, including the concept of digital citizenship. Based on our data, students devote a substantial amount of time to each activity (Schoolwork, Social Media, Entertainment, Gaming) – which draws attention to the question of student productivity. The role of web filtering also comes into play as under U.S. federal law, an Internet safety policy is required for all K-12 schools.

Digital citizenship refers to the appropriate conduct for technology use. Students must understand the great responsibility that comes with using digital devices and the Internet, so they can be mindful of their own actions and recognize when others are not reciprocating proper behavior, putting them at risk. There are nine elements of digital citizenship: digital access, digital commerce, digital communication, digital literacy, digital etiquette, digital law, digital rights and responsibilities, digital health and wellness, digital security.[6] We spoke with students to see just how much they knew on the topic.

What is digital citizenship?

"My school makes kids read a handbook about Internet safety. It's not really like they're teaching you anything. It's more like 'You need to do this to use the iPad'."
–Alfonso R.

"Being responsible online, not harassing other people, knowing how to use the Internet. Making good choices on the Internet."
–Keaton C.

"You're a member of the Internet, exchanging thoughts and ideas with everyone else. You're active on Facebook, Youtube, and other social media platforms."
–Kartik J.

Has your school ever brought the term up? Or provided more information/trainings about the concept?

"They tell us how to search the web and what sites are helpful for research papers."
–Julia Q.

"They don't really give you information about it."
–Tam N.

"I'm sure there are rules on an obscure document on the website. But besides the generic posters hung around the school – which we don't really notice – there aren't too many guidelines on accessing the Internet. As smart students, we should be able to figure out what's good and what's not."
–Kartik J.

6 http://www.iste.org/docs/excerpts/DIGCI2-excerpt.pdf

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Web filtering

70.3% of our non-Securly survey takers did not know what web filter their school used, if at all.

ALL OF THE STUDENTS

we interviewed were unaware of what sites and content were blocked on their school's network. One student from Cupertino, CA stated, "They have technology guidelines and they makes us sign a contract at the beginning of the school year… but there is no list available for students with guidelines and parameters explicitly stated… I guess it's supposed to be implied?"
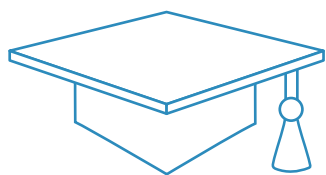
Has web filtering hindered your educational experience?

NO	YES
53.2%	46.8%
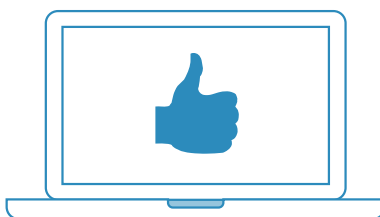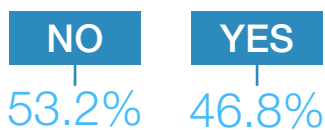
Regardless of web filtering, students still gave an average **SCORE OF 8.17** out of 10 when asked how helpful technology is to their education experience.

What do you think web filtering is used for?

Blocking explicit content

Ensuring student productivity

Anti-cyberbullying

53.60% of students reported being "Sidetracked sometimes", admitting that while working on a school assignment they were only focused for about **HALF OF THE TIME.**

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What types of websites/content are blocked that you believe shouldn't be?

The following responses are from students around the world who completed our anonymous online survey.

"I think Twitter should be unblocked because of the amount of positives that come out from it. For example, if you miss a lesson the school normally post what they did in their practical on Twitter. And also it's helpful to keep up what's happening around the world and with news."

"Google + can provide a video chat platform where either neighbouring schools –or schools from across the world– can discuss and improve from one another. This can be a catalyst for schools to focus on personal development which will form tools that students can apply everywhere."

"I think they should unblock Facebook. Not because it's good, but because what if you need to get hold of your mum or dad and you don't have their contacts. You can text them on Facebook."

"I do Music at school and at the end of every term we do a performance where we either sing or play an instrument which counts as 40% of our course. However, me and other students in my class often find that when it comes to finding lyrics to songs for our performances that most of the lyric websites are blocked. I don't know if there is a certain reason for this but being a student in music, I know how frustrating this can be."
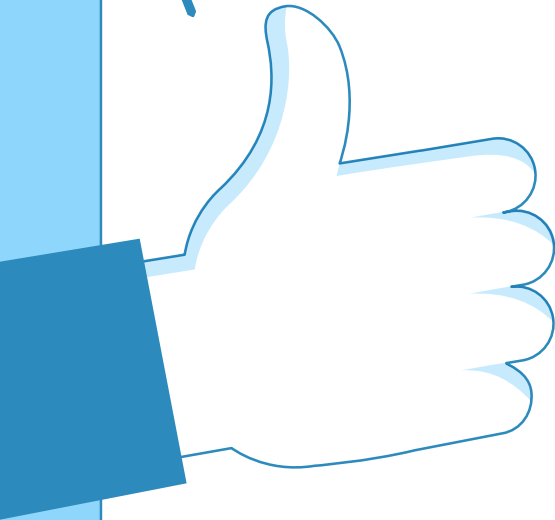
"Most YouTube videos we look up are educational and could help us with different aspects of work. In Geography, we were learning about sweatshops. These videos could help us understand the conditions people go through to make our clothes and entertainment."

9

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"GOOD THINGS"
in the students' eyes.

"It protects people from cyberbullying."

"It is extremely useful to monitor and prevent younger kids from seeing all that the Internet has to offer. The Internet contains much content and the ability to filter certain topics can be an useful tool."

"It can block things that we don't want to see and also it keeps us safe from other people that we don't know."

"As a whole web filtering is good because it does protect us from certain things. A big thing I agree with is stopping us from getting sidetracked… it can be hard in lessons when we are on the Internet to not get distracted."

"It provides an environment to practice hacking and getting around the rules."

"Web filtering is good because if things weren't filtered, personally I wouldn't have done as well in school. I would be more interested in talking to my friends over social media while they are in different lessons/classes."

"You don't get rude ads or viruses."

"It provides safety throughout the whole school for everyone. And as well as making us children feel safe whilst using the Internet, it also helps parents to know their child is safe whilst browsing, etc."

"Web filtering blocks indecent sites that shouldn't be viewed in school time or in different cases any other time. It prevents younger students being exposed to sites that shouldn't be seen at their age and can stop students being side tracked during lessons. If it used on the right sites, web filtering is a necessary thing to do for students still in education."

"It stops anything that may be dangerous from happening i.e: ensures you are safe and that you can roam the Internet without the worries of anybody seeing your private business."

"BAD THINGS"
& change

"I feel like web filtering at school is definitely necessary, however, this type of filtering is not usually used at home and therefore they [students] are not really being taught to use the Internet safely. They are just restricted from content that is seen as inappropriate that could be accessed easily at home."
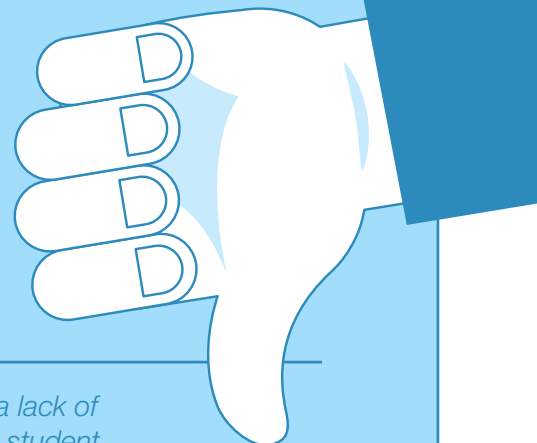
"It filters any websites with drugs which is annoying. For dance class, I've needed to research them as part of my coursework. I would like to see a more specific filtering system that doesn't filter a whole site because of one word."

"The filter should see if the page has any learning stuff on it. If it is blocked because of pictures, they should only block the pictures and not the entire page."

"Have a certain amount of time set for being on a particular website (games, social media, entertainment sites). This would be a good change because students would be able to play games but still focus on school. And not worry about trying to get around the filter anymore"

"The only downside to web filtering is that actually sometimes the things you are looking for can be blocked because of the name it is under. I think the web filtering at our school is too sensitive… Although it's great to have it, I think teachers need to trust the students on their Chromebooks. Because at the end of the day, it's not the teachers who will be affected the most, it will be the students who haven't used their Chromebooks correctly."

"Filtering creates a lack of trust between the student and teacher."

"Often times, PDFs are filtered. Web filtering also doesn't filter everything it should. Only the things that are more popular."

"Some of the things are extremely restricted, and it's annoying when simple things are blocked. For instance, certain keywords such as grapes and trapezium are blocked. This has prevented me from looking up math tutorial videos."

"At school, I would appreciate the ability for teachers or someone to quickly un-block a website for us if it was blocked wrongly or if it was needed for schoolwork. It usually just says, 'see an administrator', which isn't helpful at all."

"In my school, you have to go and ask an administrator to unblock a certain website. So you end up taking up 10-20 minutes of a lesson to go from a class to IT to get it unblocked and than walking back again. I think personally that it is just a waste of education because in that time you could of learnt something else."

The other half & cyberbullying

As noted earlier, students spend the most time on social media compared to any other activity. In recent years, the growing accessibility to constant communication has been paralleled by the rise of cyberbullying, bullying via electronic communication. **A study featured on iKeepSafe** likened cyberbullying to road rage: both the keyboard and the car provide refuge and anonymity for aggressive behavior. This "sense of detachment seems to empower people to do and say things they never would do in person".
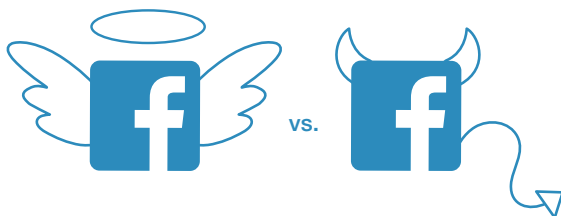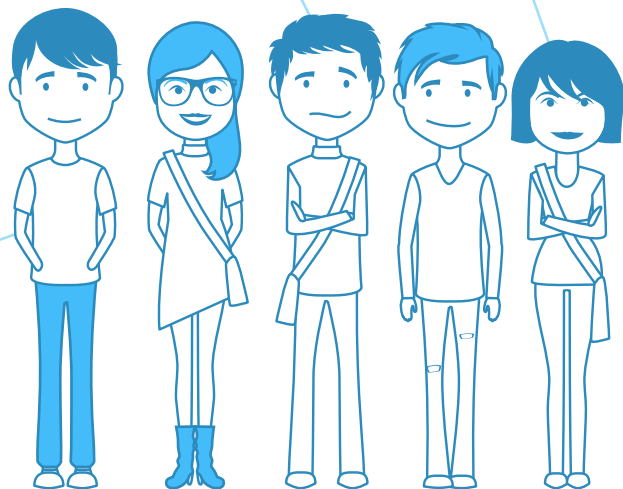
From our sample size, over 30% of the students reported having been cyberbullied.

In our individual interviews, most students didn't realize the frequency of cyberbullying, often estimating numbers

< 20%.

doesn't know others are being cyberbullied too

bully by day, cyberbullied by night

cyberbullied

VS.

Social Media – a double-edged sword.
According to students, cyberbullying occurs most on Facebook, Twitter, Snapchat, Ask.Fm, and YouTube. Conversely, one participant stated that Facebook was a way to receive counsel from her family and friends while being bullied at school.

How do you handle cyberbullying?

TALK TO ADULTS	IGNORE IT	TALK TO FRIENDS	HOTLINE	RETALIATE
40.7%	28.7%	17.6%	10.2%	2.8%
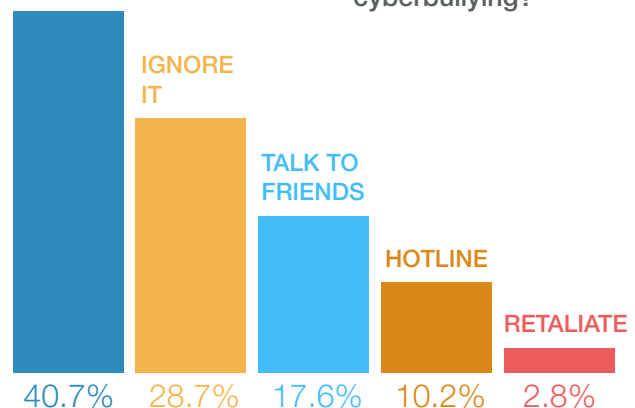
"… the adolescent's brain is likened to a car with no brakes…

There is an area of the brain called the pre-frontal cortex that controls decision-making. It isn't fully developed until the early to mid-twenties, which is why we often see adolescents making quirky, rash decisions. Research has already linked this behavior to early drug and substance abuse, decisions that students can later regret, but no one had ever drawn a correlation between this research and social media abuse."

–Trisha Prahbu, creator of ReThink, who at the age of 14 created an app that asked kids to pause and reconsider the hurtful words they were about to post on social media in hopes of stopping cyberbullying at the source.

Speaking with high school students across the country, we realized that yes, kids sometimes do not consider the ramifications before they speak (or post), but also that they were not quite sure what qualifies as "cyberbullying". Given the mean spirited words casually thrown at celebrities/in the media, kids are left conflicted whether to laugh or sympathize with a notorious A-lister. The "victim" might not realize the magnitude of the insults or the psychological toll, even the "bully" might not realize that they're causing harm.

"I think 4-5% have reported being cyberbullied. A lot of people probably experience it, but because they think everyone does it and it's a widespread thing, they're not wiling to speak up about it or admit it for fear of being weak."
Kartik J.

"I always don't know whether to feel bad for the celebrities on the Celebrities Read Mean Tweets segment of Jimmy Kimmel because it's really funny and the way the people read it is hilarious. But when you think about the words themselves, they're really hurtful."
Julia Q.

"Kids are really insecure. There's still regular in-person bullying that happens everyday and I think that the Internet/the ability to sit behind a screen can make anyone feel powerful. So people who are victims themselves end up becoming cyberbullies to cope."
Keaton C.

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> *"I've been teased as everyone has been. I mean everyone makes fun of each other online. I don't consider it serious."*
> Kartik J.

> *"There's always that one person that gets picked on in the group of friends. And everyone kinda just joins in the teasing."*
> Amy Z.

> *"I don't know if that counts as cyberbullying, calling your friends names. A lot of people get into Twitter fights. Social media is not a good place to handle arguments, but people use it anyways to harass people who they don't like or who they feel hate them because it makes them feel powerful, but safe; they don't actually have to confront anyone or deal with empathy."*
> Julia Q.

Summary & Recommendations

1. GREATER TRANSPARENCY

The vast majority of students understand the rationale –and support the concept– behind web filters and safety measures that schools have put into place. However, many students feel that school administrators could do a better job of communicating basic information to students that will allow them to answer questions like:

What?

- ■ **What** is the name of our school's web filter?

- ■ **What** is the process to request that a website be unblocked?

- ■ **What** kind of information are schools and vendors collecting about us, and what is being done to make sure this information is safeguarded?

In addition, students seek knowledge of the categories of websites that are blocked, which they feel would preempt incidents of being surprised upon being served a blocked page. Teachers likewise need to be equipped with the same information, as their lesson plans often revolve around the use of a specific website. Thus, increased communication and greater transparency between school IT admins, teachers, and students should be a primary goal for any school seeking to increase the role technology plays in the classroom.

2. PROMOTE DIGITAL CITIZENSHIP

Many students surveyed are unfamiliar with the concept of digital citizenship. They report that their respective schools post signs in hallways to provide assistance on navigating the Internet. However, when it comes to defining the proper online etiquette, students feel that the school's Acceptable Use Policy (AUP) – a contract signed by all students prior to receiving a 1:1 device – is not strictly reviewed or enforced.

For those students who reported that their school placed an emphasis on digital citizenship, the elements they felt were most helpful are:

Treating others with respect. As we like to say, "Tweet others as you would like to be tweeted." Encourage students to have respect for others online by practicing the common courtesies that everyone deserves. Have students consider what can be interpreted as inappropriate and hurtful.
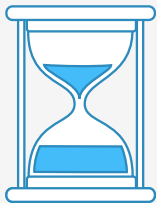
Limiting the amount of screen time. It is important for students to be aware of distracting websites that inhibit productivity. Studies show that side effects associated with display devices occur only when usage is above 3 hours. Gaming, social media, browsing, etc. have actually been proven beneficial to child development in moderation.

Avoiding malicious or inappropriate websites. The Internet offers a wealth of resources for learning, but it is also riddled with adult content, viruses, predators, and identity thieves. It is crucial for schools to prepare students for what they might see so that browsing cautiously becomes second nature to them.

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3. PARENTS, SET THE FOUNDATION

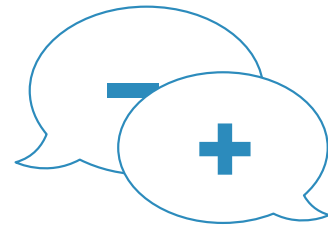Parents should set screen time boundaries and guidelines for their children starting at a young age.

Depending on the child's age, it is important that parents:

Specify an amount of time
a device can be used
and/or periods of the day
that are "device free".

Set guidelines to
ensure safe social media
practices.

Discuss the negative/positive
effects and responsibility that
come with using a display
device to ensure children
understand the reasoning
behind boundaries.

Children will develop good habits to manage screen time and carry these habits with them as they mature to their teenage years. Sleep is extremely important in adolescence. Blue light (from screens) has been proven to suppress melatonin and contribute to a teen's already unpredictable sleep cycle; more simply, time spent using a device detracts from sleep time. Sleep deprivation reduces memory retention and often leads to poor performance in school.

4. DEFINE CYBERBULLYING

Our survey participants spoke about online teasing/taunting very nonchalantly. The majority of students accept the frequency of these types of incidents as the norm. Young adults are having difficulty distinguishing between friendly teasing and cyberbullying, especially as mainstream media is riddled with slurs and jabs at celebrities. What is overwhelmingly clear is that students often may not realize when they have gone too far, or when someone else has crossed the line. During our in-person interviews, one high school student when describing a social experience with peers said, "I don't know if that really counts as cyberbullying". To abate this issue, schools should educate their students about cyberbullying – including a clear definition of the act, any resources available to victims, and at what stage intervention is needed.

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