Technology Addiction: Impact, Treatment, and Legal Implications for Schools

2020 ACSA Superintendents’ Symposium

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Introductions

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James Bylund, Psy.D., ABSNP - Owner of Discovery Education Specialists, a Non-Public Agency providing psychological and mental health services to schools.
Topic and Objectives

What has been your experience with tech overuse?

What are you observing with your community; your friends, your family, and yourself?

What brought you here today?

What are you hoping to get out of your experience today? What would you like to walk away with?
What is Technology Addiction?
A Continuum of Problem Overuse

Internet Gaming Disorder (DSM-V)

Gaming Disorder (ICD-11)

Electronic Screen Syndrome (Victoria Dunckley, M.D.)

Excessive or problematic recreational screen use
What Counts as Screen time?

All screen activities provide unnatural stimulation

That means TV, computers, video games, smartphones, iPads, tablets, laptops, e-readers, etc.

Content (e.g. violent video games) is not as important as total time in front of a screen - even scrolling through pictures on a phone can be harmful to a developing nervous system

Interactive (i.e., interface with the device) screen time causes more dysfunction that passive screen time
So How Big is the Problem?
A Look at the Numbers

97% of American children between the ages 12 - 17 play video games (and the # is rising)

80% of teens check their phone at least once an hour

Average daily smartphone use - 3 hours (over a lifetime equates to 11 years)

The non-profit Common Sense found teens average 9 hours a day of recreational screen time and tweens average 6 hours

What is the opportunity cost? What skills could they otherwise be developing during that time?
Why Are Screens So Addictive?
The Addictive Nature of Technology

Technology is designed to be irresistible (e.g. colors, fonts, tones, feedback/rewards, social engagement)

Provides immediate gratification (i.e., release of feel-good chemicals - dopamine)

Addresses deep psychological need in the short-term that outweigh damaging long-term consequences (social, educational/work, physical)
Addiction for Fun and Profit

Facebook and other Silicon Valley companies strive to keep users hooked. Does that make them evil?

By Will Oremus
Neurological Effects

Screens activate reward circuitry in the brain (i.e., dopamine pathway), resulting in feeling of intense pleasure (most critical element in addiction).

Brain develops a tolerance, and greater stimulation is required to achieve the same pleasurable feelings.

The sensory overload, triggers neurological survival mode (i.e., activation of sympathetic nervous system; the fight or flight response).

Associated adrenaline release has an addictive quality but chronic activation of stress response has significant adverse consequences.
Physiological Effects of Excessive Screen Use

Repeated overstimulation and chronic stress wreaks havoc on a young person’s brain.

Irritability and poor executive functioning are hallmarks of excessive recreational screen use.

Chronic exposure to addictive substances or behaviors reduces capacity of the prefrontal cortex, responsible for impulse control and decision making.
Starting Young

JAMA reported on a student of PRESCHOOL students aged 3-5 and found that increased screen time correlated with:

- significantly lower expressive language and emergent literacy skill
- organization and white matter in area of the brain involving language, executive function and literacy skills
Video Games and Never Ending Tribal Missions

Video games are designed so that they can never “win”. There is no “stop point”, the game never ends. This creates psychological tension because we want to finish what we start.

Players emotionally invest in their character and bond with fellow players and “belong” to the community, fulfilling a basic human need, but without sufficient opportunity for face-to-face interaction, children may not sufficiently develop these skills such as eye contact and reading facial expressions.
The Mismeasure of Man

We are endlessly driven to compare ourselves to others (i.e., our “self-worth”)

“Social comparison” - the link between social media use and increased depression

Use of social media is correlated with increased feelings of isolation, mood disorders, and other mental health problems (anxiety, depression, etc.)

“Online disinhibition effect” - more likely to “say” something hurtful when you don’t have to look the person in the eye (e.g., bullying)
Genius Girl, a Harvard-Stanford admissions hoax and elite college mania
What is the Impact on Learning and School Performance?
No Evidence of Improved Learning Outcomes

There is no independent research showing educational technology improves learning. Any research suggesting it does, is funded by those in the ed-tech industry.

Those in the ed-tech industry point to "engagement" but that is not the same as improved learning outcomes. For example, children are heavily engaged with Fortnite but they are not learning.
Multi-tasking is a myth. We cannot simultaneously divide our attention between two tasks. It is inefficient and increases the time spent of tasks by 40%.

- 50% of teens are on social media while doing homework
- > 50% of teens are watching television
- 60% of teens are texting while doing homework
- 76% of teens are listening to music while doing homework
Technology and Academic Achievement

Reading is slower and both recall and comprehension decline when using an e-reader v. reading a book suggesting the brain does not process the information in the same way.

The London School of Economics found school wide cell phone bans lead to 6.4% increase in test scores across the board and 14% improvement among lower achieving students.

The digital divide is not what we would expect when looking at technology use among teens.
Opportunities Lost

Youth will spend an estimated 10,000 hours playing video games by the time they are 21.

And, this is just the time playing video games, not other tech use (e.g., watching others play video games).

By comparison, it takes about 4,800 hours to earn a college degree.
How Are Schools Involved?
We value what we measure

We measure results from state tests by student, class, grade, school, district, state and nation

In order to produce higher scores we not only teach content via technology, we also teach how to use the technology itself

For students needing extra support in content we provide additional instruction—often via more technology

For students needing additional credits or coursework to improve graduation rates—we turn to technology
Is Tech Enhancing Or Replacing Instruction?

Textbooks and assignments are moving online (remember how multi-tasking impacts attention and learning)

Some Districts are moving to put a device in the hands of every learner while other districts are moving to ban cell phones etc in the classroom.

Encouraging use of cellphones and iPads in class to “enhance” learning

Between 09-10 and 15-16 school years, her percent of schools that prohibit cell phones dropped from 90% to 66% (National Center for Educational Statistics)
Is Tech Enhancing or Replacing Instruction?

Inadvertently encouraging students to stay up late at night to “turn in” assignments before the deadline (e.g., by midnight)

Electives and clubs (e.g., “e-sports”) that encourage screen use

Some schools are provided entirely in an online format

Utah developed an entire online state preschool program
What are our legal obligations and liabilities?
What are the Legal Considerations?

Movement underway to place warning labels on screen devices and keep interactive screens out of the hands of young children.

Internet gaming disorder recognized as a mental health disorder.

Schools increasingly use screen devices in instruction and assessments.
What Are the Potential Legal Considerations?

Will this open schools to challenges for contributing to problems associated with screen overuse?

What responsibilities will schools have to address these issues?
Potential Legal Considerations?

Section 504 and the Americans with Disabilities Education Act require schools to accommodate students with qualifying conditions. Will these conditions result in a need to evaluate eligibility under Section 504 and the ADA? If so, will they result in determinations students are eligible for accommodations?
Potential Legal Considerations?

The Individuals with Disabilities Education Act includes 13 qualifying criteria

Will such conditions require consideration under the IDEA for eligibility?

If so, what might the eligibility category be?
Laws and Lawsuits in the Area of Tech Addition are on the Rise
Potential Legal Considerations?

OCTOBER 7, 2019

EPIC GAMES FACING FORTNITE ADDICTION LAWSUIT FROM PARENTS

Filed on behalf of 10 and 15 year old

Claims Fortnite as addictive as cocaine because of known and intended dopamine release by makers of game

Claims company did not warn consumers about the possibility of addiction
Potential Legal Considerations?

December 11, 2017

FRANCE BANS MOBILE PHONES IN SCHOOLS

July 2019

CALIFORNIA GOVERNOR SIGNS NEW LAW ALLOWING SCHOOLS TO BAN SMARTPHONES AND ASKING ALL SCHOOLS TO DEVELOP SMARTPHONE POLICIES TO LIMIT OR PROHIBIT USE AT SCHOOL
Potential Legal Considerations?

February 7, 2018

EX-GOOGLE EMPLOYEE CALLS TECH ADDICTION AN EXISTENTIAL THREAT AND CALLS FOR REGULATION

Founded Center for Humane Technology to fight tech addiction and seek regulation of tech companies to develop products to be addictive

Seeking to realign technology to society’s best interests

Started Truth About Tech: How Tech Has Kids Hooked
What Can Schools Do To Address The Problem?
Consider The Pros and Cons of Tech

Despite much hype, there is as of yet no evidence that screen media in the classroom enhances learning or brain development for the majority of students.

There is some evidence to support the use of tech, including screen devices, as compensatory tools for students with disabilities.

Virtually all positive findings are funded by the ed-tech industry.
Assess How Tech is Used and the Outcomes

Assess how and how often technology is being used in the classroom.

Evaluate learning outcomes from technology devices.

Consider all students and the potential impact (e.g., use of technology as a reward for students with moderate to severe disabilities).

Discuss and consider both sides of the debate when making decisions about the use of technology in the classroom.
Questions to Ask

Are we actually using technology or are we simply replacing paper with a device.

How does use of technology improve academic outcomes (i.e., over traditional/analog methods)?

What independent research do we have to support the use of tech in this way?

How does use of technology enhance social and behavioral development (e.g., opportunities for meaningful, face-to-face, social interaction)?
More Questions to Ask

Does tech simplify the lesson or make it more complex?

Do all students have access to the platform?

Does tech support instruction or replace it?

Does tech enhance creative thinking and problem solving (i.e., why)? Or is tech used to solve problems for them (i.e., who or what)?

How can we enforce distraction free classroom (i.e., no phones)?

How can families opt students out of screen-based instructional activities?
Prevention and Intervention

Consider a Digital Wellness Committee or group looking at this for your District

Be purposeful and systematic about technology in the classroom (and District)

Consistently educate parents, staff, and students about the importance of healthy technology use and the negative impact technology can have

Encourage development/use of family tech use plans

Consider technology use as of part pre-referral and intervention process as well as special education evaluations (e.g., school refusal behavior)
Consider a Digital Diet
Section 504 and IDEA

Collaborate with parents to address the unique needs of each student with a disability (e.g., screen fasts)

Providing accommodations for student with co-occurring screen overuse disorders (e.g., copies of traditional textbook and other device free accommodations)
What the Experts Say

When asked how his kids liked the new iPad, Steve Jobs said, “They haven’t used it. We limit how much technology our kids use at home.”

Chris Anderson, former editor of Wired magazine, said he limits his children’s screen time because “we have seen the dangers of technology firsthand. I’ve seen it in myself. I don’t want to see that happen to my kids.”

Alan Eagle, a Google Executive, said, “At Google and all these places, we make technology as brain-dead easy to use as possible. There’s no reason why kids can’t figure it out when they get older.”
Recommended Readings

https://drdunckley.com/

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Questions???

Comments
Thank You!!!