



tools for parents



screens in schools
action kit



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Introduction to Parent Tools

Whenever the question of what to do comes up, there are always three answers:

1. **ORGANIZE**
2. **ORGANIZE**
3. **ORGANIZE**

As edtech has been adopted by the vast majority of school districts in the United States, a movement to reduce its overuse has emerged. This section of the toolkit contains information about ongoing parent organizing activities around the country and resources created by those groups.

In most cases, the first thing for concerned parents to do is to set up a meeting with either school or district administrators. The purpose of an initial meeting will usually be to [ask questions](#) about the school or district's educational technology policies and practices.

If you are at that stage you have probably spoken to other parents in your school or district, but now is the time to ask for their active support. You are **much more powerful** as a group of 6 to 10 than you are as an individual. A larger group shows a busy administrator this is not a passing concern that can be ignored without consequence.

Since many parents are particularly concerned about the problems associated with social media and gaming, another approach that can be taken is to gain the school's cooperation in [surveying students](#) about the general issues surrounding screen use, both at home and in school. By feeding back the results to students, parents, and staff, all the stakeholders feel some ownership of the problem, and the issue of screen overuse can be addressed in a cooperative problem-solving manner. This may or may not lead to immediate changes in school practices and policies, but it will have opened up that subject for discussion.

Tools for Local Action

In order to build group support, you will need to be both a good listener and a persuader. To help persuade others that the cause is just and worth the fight, you may wish to use documents in "The Problem" section of the Action Kit. These summarize and reference studies that show the effects of excessive screen time on areas such as health, learning, and privacy.

One powerful way of demonstrating support to school administrators is by circulating a petition. There are a number of online tools you can use to do so. This can be done before your initial approach, or as a next step if your first approach is rebuffed. In the Action Kit, we have included several sample petitions that have actually been used across the country. Please feel free to

adapt them for your own use by changing details and language as you see fit. These same petitions can be adapted for use as letters if there are only a few signatories.

If you wish to bring handouts to a meeting, or use handouts to increase your community's understanding of the issue, the Action Kit has a selection of fact sheets, many of which were created by members of the Action Network. Since these are short, read a few and select the one which will be most helpful in your situation. Like the petitions, many of these can be edited and adapted to your own specific needs.

As your organizing intensifies, you should take every opportunity to utilize contacts with local media to state your case before the general public. This may mean talking to journalists about your petition, or requesting that they attend a meeting at the School Board. It could also include writing a letter to the editor, samples of which are included in the Action Kit.

At some point, you and your group will need to be very clear about what, exactly, you wish to see changed. A [sample set of policy principles](#) summarizes the types of changes we are advocating at the local district level and the state/legislative level. Again, feel free to adapt this to your own needs.

You may find that after exerting pressure on a school district, you will be invited to serve on a committee to review their edtech and screen time policies. If the district is truly interested in making change, you have won half the battle. The other half is making sure to set a process in place to implement the suggested changes and continually monitor the progress toward the goals you have set. In Arlington, Virginia, for example, a group of parent activists had a seat at the table and created an [excellent set of recommendations for their district](#). They are working now to ensure that the district responds.

Some parent groups, such as [Wait Until 8th](#) and [Turning Life On](#) are particularly focused on the dangers of children's overuse of smartphones, especially gaming and social media apps. Both groups encourage families to seek peer support in delaying the use of smartphones until at least 8th grade. Allowing smartphones to be used during class exacerbates these problems, but it also has negative consequences for learning. [Away for the Day](#) provides resources and support for parents advocating for no smartphone policies in schools.

Legislative and Legal Action

Ultimately, for parents and teachers to slow the rush toward edtech, legal action may be needed. Nobody can foresee when and how this might occur. It might take the form of lawsuits against tech companies or school districts. Legislation will undoubtedly play a role.

To date, there have been several legislative efforts in the US dealing with digital devices and schools. In April 2018, Maryland passed the nation's [first classroom screen safety law](#). The law

required the state department of education to consult with the health department and develop [health and safety best practices](#) that would address the potential harm caused by screens to students' vision and musculoskeletal systems. Unfortunately, the tech industry had undue influence in developing the guidelines, so they are not as strong or as clear as advocates had hoped. But, many view this as a good first step and a possible model for other states.

Oregon introduced [similar legislation](#) in 2019, calling for a state study to set safety recommendations for students' use of technology in schools, and allows parents to opt out if they so choose. As of this writing, it is still in committee.

Other legislation both in the U.S. and around the world has focused on excluding smartphones from classrooms, primarily as a means of preventing distraction, but also to help address online bullying. [France](#) notably took this step in 2018. Similar legislation has been passed in individual states and provinces in [Australia](#) and [Canada](#). On the local level, restrictions on cell phone use in schools is common, but California went further and has enacted [legislation](#) asking all school districts to come up with smartphone policies to limit or prohibit student use at school.

Before legislative action on a broad scale can be achieved, other legal actions can be taken by parents who face administrators unwilling to share information about their districts' edtech policies and practices, or unwilling to consider making changes to those policies. In Eanes, Texas, for example, a group of parents has issued a Freedom of Information Act (FOIA) request seeking details of the district's edtech contracts and the analysis that was used to rationalize the purchases. If the district fails to comply with their request, a lawsuit may follow. Their strategy, which they are encouraging others to consider, is outlined in "A Possible Legal Strategy," included in this Action Kit.

The ubiquity and popularity of digital devices – and the financial and political power of the edtech industry – makes the thought of tackling the problems of our schools' excessive use of screens seem overwhelming. Undoubtedly, that is how anti-smoking activists in the 1950's felt, as well. Yet, if parents, with the support of teachers, organize themselves and insist on transparency and the utilization of hard evidence in edtech decisions, progress is more than just possible. We at the Children's Screen Time Action Network believe that eventually, either through lawsuits or by legislation, concerned parents and teachers can and will prevail.

Questions Parents Should Ask about Edtech

Technology has many benefits, but parents are increasingly concerned about the misuse and overuse of edtech. We recommend that parents ask their child's school and school district to hold regular meetings to inform and update parents about the use of technology. Here are some important questions to ask:

1. What specific electronic devices and programs is my child using in school?
2. Are the devices being used according to manufacturers' safe use guidelines, i.e., in ways to protect children's eyes and posture? What evidence (e.g., training received by teachers, support materials available) is there to demonstrate safe use?
3. How much time per day is my child spending on an electronic device? Are there mandated breaks?
4. How much additional time, if any, is my child being asked to spend on an electronic device outside of school hours?
5. How much is the program costing the school or district?
6. What data, if any, is being collected by electronic devices and programs? When is it removed?
7. How is that data used, and does the vendor profit by using my child's data for marketing or other commercial purposes?
8. How is the school protecting my child's privacy? What measures have been taken to increase security (from breaches, ransomware, etc.) in the last two years?
9. For each specific program attached to an electronic device that my child is using, please share the purpose of the program, the reason for its inclusion in the curriculum, and evidence of its effectiveness.
10. If I choose to opt my child out of programs that depend on the use of electronic devices, what alternative forms of instruction and assessment will be made available?

If you don't receive sufficient answers to your questions, consider **advocating** against excessive use of online programs, or consider having your child **opt out** of one or more of these programs.

These questions have been adapted from materials developed by [Parents Across America](#).

A Guide to Classroom Screen Safety

Cindy Eckard [@screensandkids](#)

Provided to the Maryland Department of Health, the Maryland State Department of Education, and the Maryland Board of Education, Fall 2018

The links contained herein are provided for quick access to some of the more definitive or recent scientific evidence, underscoring the need for the health and safety best practices that the [Maryland General Assembly has required](#) the Maryland State Department of Education, with consultation from the Maryland Department of Health, to develop.

RISKS TO STUDENTS' HEALTH AND VISION

I. [Myopia \(refractive error; nearsightedness\)](#)

- Epidemic, nationally and worldwide; use of screens recognized internationally as major cause
- Exacerbated by fixed, near work and lack of exposure to the sun
- Genetic predisposition among Asian, African-American, and Hispanic populations
- Developmental predisposition among 11-15 year olds
- Often undetected due to lack of proper eye exams
- Blurs vision; interfering with academic, athletic abilities
- Progressive; can lead to blinding conditions such as glaucoma, retinal detachment, and cataracts

SUGGESTED MITIGATION:

- Schedule device use within grade levels to [ensure routine breaks](#) from screens on a daily basis. For instance, when device use is required in the first period, it must take place in the first 20 minutes of class. The next 20 minutes would be used without screens. Then in second period, device use would also take place during the first 20 minutes, followed by a break. Third period, the same first 20 minutes. Each grade level team could determine what part of the class they would prefer, as long as the use and breaks were consistent throughout the school day.
- Increase recess and outdoor classes. Sunshine has proven to be [a key factor in the mitigation of myopia](#). It stimulates dopamine in the brain, which helps to curb the elongation of the eye that is taking place when the child grows. That elongation helps to create the refractive error.
- Work toward increased eye exams – not just vision screening – for all students. The schools may be unwittingly exacerbating pre-existing conditions; [one-third of all students need a comprehensive eye exam](#).

- Begin public health information campaign to alert families to risks at school and at home from excessive screen time; strongly encourage more breaks and more outdoor play.
- Develop classroom posters that remind teachers and students to take breaks; duplicate posters as flyers to be used at home.
- Develop classroom contracts similar to those needed for science class that outline for the teacher, student, and parent what the risks and mitigating practices are regarding the safe use of the school's digital devices (emulate the approach used for lab equipment).

II. Retinal Damage from blue light exposure; associated sleeplessness

- Hazardous blue light is absorbed more by children because their lenses have yet to develop the protective pigmentation that provides adult eyes a bit of protection from retinal cell destruction caused by blue light, emitted by digital device screens.
- The light travels to the back of the eye – the macula – and the process permanently destroys the cells needed to see. This process has been recognized as part of aging. It has been called age-related macular degeneration or AMD. Today, signs of macular degeneration are being seen in much younger patients as a result of screen use.
- Blue light suppresses the production of melatonin, the hormone that regulates sleep. Sleeplessness is directly associated with anxiety, depression, poor academic performance, and obesity. Obesity is epidemic among children today, and leads to heart disease, kidney disease, and diabetes. That's why the American Heart Association published a statement calling for screen time limits for children.

SUGGESTED MITIGATION:

- Blue light filters should be installed on every school-issued digital device and made a basic requirement for all future RFPs.
- No homework should be assigned on devices. Schools cannot control the time that students use the schools' equipment, and therefore, could be contributing to the interruption of critically important healthy sleep patterns, since many students are doing homework late in the evening.
- To protect students from the serious risks posed by blue light exposure, the use of screens in the classroom should be limited to actual schoolwork; "free play" or "quiet time" should not be spent using devices.

III. Computer Vision Syndrome and Dry Eye Disease

- Children (and adults) blink 67% less often when using digital devices, which has caused a significant rise in dry eye disease symptoms in younger patients. Severe dry eye can permanently damage the cornea.
- Dry eye disease and computer vision syndrome are closely related since the symptoms can overlap: red, scratchy eyes, blurred vision, headaches, and tearing.
- The student's discomfort can interfere with academic performance since the child finds it difficult to concentrate. Moreover, if children are accustomed to experiencing this discomfort, many will find it "normal," and not report it to an adult.
- Sore necks, back pain, and shoulder discomfort are also related to computer vision syndrome, as those muscles can also affect a student's vision.

- Undetected, unreported chronic eye discomfort can be a sign of more serious conditions and permanently damage children's eyes and vision.

SUGGESTED MITIGATION:

- Adhere to [manufacturers' safety guidelines](#) for safe workstation settings to include monitor height, monitor angle, and proper settings for glare and contrast (and audio settings – which are often ignored but necessary to protect students' hearing).
- Review classroom seating and overhead lighting to minimize glare and reflection from windows or other light sources.
- Ensure proper ergonomic posture among students; require proper posture to avoid muscular discomfort.
- Train teachers and school nurses to recognize the signs of discomfort when children are using devices, and develop policies to offer paper alternatives whenever possible.
- Teach children to recognize and report their own symptoms of dry eye or digital eyestrain.
- Make these issues part of the overall public education component (classroom posters and letters to the home) for digital device screen safety.
- In all cases, encourage parents to provide a full eye exam for their children and establish a policy of uniform, scheduled breaks from screens throughout each school day.

ADDITIONAL CONSIDERATIONS

There are many additional health and safety concerns that must be addressed in the law's deliberations, chief among them:

- Fundamental cultural biases within the school climate that encourage ever-increasing screen use.
- Little awareness of screen addiction; it is exacerbated by the constant demand that students use devices regardless of healthier alternatives that would serve the same purpose, and also made worse with the increase of educational "gamification."
- Little understanding of the associations between screen use and mental health issues: anxiety and depression are sharply rising and suicides have tripled among teenage girls in recent years.

A clear understanding of the educational benefits and health risks posed by these devices must emerge so that they are used to their best advantage, without harming students in the process, visually, physically, or psychologically.

Five Principles to Protect Student Privacy

[The Parent Coalition for Student Privacy](#) believes that the following five principles should be incorporated into any law or policy regarding the protection of personal student data in grades preK-12. After students reach age 18, all these rights, including those related to notification and consent, should devolve to them:

1. *Transparency*: Parents must be notified by their children's school or district in advance of any disclosure of personal student information to any persons, companies, or organizations outside of the school or district.

All disclosures to third parties should also require publicly available contracts and privacy policies that specify what types of data are to be disclosed for what purposes, and provide a date certain when the data will be destroyed.

2. *No commercial uses*: Selling of personal student data and/or its use for marketing purposes should be banned. ***NO advertising should be allowed on instructional software or websites*** assigned to students by their schools, since ads are a distraction from learning and serve no legitimate educational purpose.

While some of the current bills ban "targeted" ads, others ban targeted ads except for those derived from a student's one-time internet use. But how can any parent know whether an ad displayed to their child was based on data-mining their child a single time or over a longer period?

3. *Security protections*: At a minimum, there must be encryption of personal data at motion and at rest, and required training for all individuals with access to personal student data, audit logs, and security audits by an independent auditor. Passwords should be protected in the same manner as all other personal student information.

There must be notification to parents of all breaches, and indemnification of the same.

No "anonymized" or "de-identified" student information should be disclosed without verifiable safeguards to ensure data cannot be easily re-identified.

4. *Parental/student rights*: NO re-disclosures by vendors or any other third parties to additional individuals, sub-contractors, or organizations should be allowed without parental notification and consent (or student, if they are 18 or older).

Parents must be allowed to see any data collected directly from their child by a school or a vendor given access through the school, delete the data if it is in error or is nonessential to the child's transcript, and opt out of further collection, unless that data is part of their child's educational records at school.

Any data mining for the purpose of creating student profiles, even for educational purposes, must be done with full parental knowledge.



Parental consent must be required for disclosure of personal data, especially for highly sensitive information such as their child's disabilities, health, and disciplinary information.

5. *Enforcement:* The law should specify fines if the school, district, or third party violates the law, their contracts, and/or privacy policies; with parents able to sue on behalf of their children's rights as well.

Without strong enforcement provisions, any law or policy protecting student privacy is likely to be ignored.

Exercise Your Student Privacy Rights

How can parents exercise their rights to protect their children's privacy under federal law?

First, know your rights: [FERPA, PPRA, and COPPA](#).

Second, know that when your district or state officials tell you that their student data policies or technology initiatives are “FERPA compliant,” understand that [FERPA has changed over time](#).

Third, use the following simple forms to exercise your rights under FERPA and COPPA (for children under the age of 13).

FORMS TO USE:

1. [FERPA Letter to Request Access to/Correct Education Records Held by the State](#)

Use this letter to request access to and correct your child's education records held by your State's Education Department.

2. [FERPA Directory Information Opt-Out Form](#)

Use this form to inform your school that they may not disclose directory information to third parties without your consent.

3. [COPPA Disclosure Request Form](#)

Use this form to request information from your school/district so you know which online programs your under-13 child is using in school, and how your under-13 child's information is being used by the operators of those online programs.

4. [COPPA Exercising Rights Form](#)

Use this form to request that your school exercise their rights under COPPA to review and delete your child's personal information collected by online programs, and prevent the online program from further using or collecting your under-13 child's personal information.

Adapted from the [Parent Coalition for Student Privacy](#)

Sample District-Wide Recommendations

The following recommendations were developed by a group of parent activists for their Student Health Advisory Board (SHAB) in the Arlington, Virginia, public schools (APS). In the context of the Action Kit, it serves as an example of a formal statement of parents' concerns, delivered through existing channels -- i.e., "working within the system." The challenge, now, is to get the District to implement the suggested changes!

Screen Use in Schools

Members of the Student Health Advisory Board (SHAB) voted to approve the development of a new SHAB workgroup this year. The "Screen Use in Schools Subcommittee" was formed and has met several times to develop recommendations for safe screen and personal device use in schools. The intent is to add a new set of recommendations to the Wellness Policy Implementation Procedure (PIP), either in full or in part, with a reference to a more comprehensive set of guidelines published as a companion to the PIP. The draft recommendations are divided into the following areas:

1. Health and wellbeing of students
2. Teacher training
3. Collaboration with APS technology committee, teachers and stakeholders
4. Supporting documentation

1. Health and Wellbeing of Students

Low/No-screen option

All parents are entitled to request a low/no-screen option for their child. This option will be presented in the first day packet. APS will develop guidelines to accommodate. No child should be withheld a device that helps them access their learning, nor forced to use a device that may exacerbate a diagnosed condition, as agreed upon through 504, IEP, health plan, or parental request. Proper computer configurations need to be offered in classrooms for children.

General use of screens in APS

Because real-life and multi-sensory experiences have been proven to be more meaningful than learning experiences on electronic devices, screens should be used for specific purposes rather than as a replacement for hands-on, project-based learning. Authentic books (paper) have been proven to be more effective in reading processes and acquisition. Screens and educational apps lack multisensory input and pose health risks, so screens should be implemented only when other methods of meeting curricular objectives have been exhausted. Diverse modalities for learning will be offered, with screens not being a choice at times. Personal devices brought from home will not be allowed in class.

Time on devices: per session and per day

Classrooms must implement scheduled and staggered screen use. In this way, breaks will be embedded throughout the day. Schedule device use within grade levels to ensure routine breaks from screens on a daily basis. For example, when device use is required in the first period, it must take place in the first 20 minutes of class. Then in second period, device use would also take place during the first 20 minutes, followed by a break. Each grade level team can determine what part of the class they prefer, as long as the use and breaks are consistent throughout the school day. The American Academy of Pediatrics (AAP) suggests a daily digital plan, where homes and schools collaborate on the quantity received per day to maintain a healthy average.

Safe configurations for every classroom

The State of Virginia requires a ratio of 1 computer to every 5 students. Each classroom needs to have these computers in the proper configurations. Classrooms should have a cluster of safely configured computers with time limits and intentional use:

1. Place a blue light filter on the screens.
2. Make sure the monitor is at eye level when seated in front of the screen.
3. Keep monitor at least 20 inches from eyes (adult arm's length).
4. Use a chair that can adjust in height to the child's sight.
5. Minimize reflections and screen glare by adjusting contrast and brightness settings and the light in the room (lamps, overhead, sunshine, etc.) to match the lighting on the screen. The screen and room lighting should be similar.
6. Ensure the feet are resting flat on the floor.
7. Keep track of time with a timer.
8. Consider setting a volume limit for headphones.

School issued devices should stay at school

Safe computer configuration cannot be assured at home, nor can the schools control the time the school device is used by a student. School device use could be contributing to the interruption of critically important healthy sleep patterns, since many students are doing homework late in the evening.

Consistency across schools

All APS Schools and Programs at Elementary, Middle, and High School levels need to follow the Policy Implementation Procedures for best outcomes in student wellbeing and academic performance.

2. Teacher Training

As technology is constantly changing and new research shifts our understanding of best practices, teachers and staff shall participate in ongoing training regarding health and safety issues associated with children's use of digital devices. When devices are used in schools, teachers shall ensure that students heed manufacturers' guidelines when using school-issued devices and adhere to best practices as put forward by pediatricians, ophthalmologists, and other medical professionals. Teachers will take into account the published ergonomic considerations from the manufacturer. Teachers will model screen hygiene at school when using their own devices. Classroom posters showing proper computer configuration should be in sight for easy reference. Teacher training will also include best practices for identifying and reducing improper/excess screen use among students that contributes to distraction and limited attention span in class.

3. Collaboration with Stakeholders

SUS aims to work in tandem with APS tech personnel, teachers, parents, and health care professionals to create a committee of experts to continue to monitor how technology is being implemented in the schools – its positive and negative impacts to the growth and development of the whole child and the community at large. SUS also believes an educational technologist would be helpful on staff.

4. Supporting Documentation (links):

[Ergonomics](#)

[Personalized Learning and the Digital Privatization of Curriculum and Teaching](#)

[Groundbreaking study examines effects of screen time on kids](#)

[Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study](#)

[Seeing the Light – Myopia Is on the Rise, and Screens May Be to Blame](#)

ACTION REQUESTED

1. Review Screen Use in School Subcommittee recommendations and update the Wellness PIP with associated content.
2. Monitor the latest data and research on personal electronic devices and their effect on growth and development.
3. Support teacher training and materials for authentic learning experiences.



4. Promote best practices in screen hygiene through modeling, training, and advocacy (i.e., “devices down and heads up,” active listening, face-to-face social interactions – generally being fully present in the company of others).
5. Inform parents about software platforms and learning apps that students are exposed to and seek parental approval as indicated by the software terms and conditions.

An Informed, Research-based, Mindful, and Double-looped School Technology Program

Adapted from [Turning Life On](#)

1. **Informed** – Share research and articles with faculty, parents, and students to understand both the implications of screens on health and development but also how technology is designed to take advantage of users
 - a. Risks
 - i. Physical and mental health
 1. Physical Health: [headaches](#), [neck](#) and [back](#) injuries, [obesity](#), [computer vision syndrome \(over 3 hours per day\)](#), [childhood myopia](#)
 2. [Mental health](#): [depression](#), [anxiety](#), and [suicide-related outcomes and rates](#) have increased in recent years and may be linked to [screen use](#)
 3. [Sleep disturbance](#) as a result of screens before bed and [overall screen time](#); AAP recommends no screen time 1-2 hours before bed
 - ii. Neurological development
 1. Link to addiction: reward-based gaming has been linked to structural brain changes in the reward circuitry that [resemble the effects of substance addiction](#)
 2. Memory, attention, and cognition
 - iii. Symptoms of ADHD developed in teens with a higher frequency of digital media use ([Ra, C., Cho, J., Stone, M. et al. \(2018\)](#))
 1. The vast resources available online are affecting our thought processes for problem solving, recall, and learning. ([Storm, B., Stone, S., Benjamin, A. \(2016\)](#))
 2. [Information overload](#) negatively impacts long-term memory
 3. [Attention, concentration](#), and deep thinking impacted by information overload and overreliance on internet (vs. memory) for information
 - iv. Social emotional development
 1. [Emotional cues/empathy and screen time](#)
 2. Inappropriate content exposure, such as porn and hate speech
 - b. General brain development and technology
 - i. [Media multitasking](#)
 - ii. [Higher thinking](#), executive functioning, impulse control
 - c. Economy of attention and persuasive design
 - i. Devices and apps are designed for ease of use. Students only need “practice” for some technology skills. Learning how to operate a device or use PowerPoint, for example, are skills they can quickly learn when developmentally appropriate. These are not skills that build on themselves, like math or reading.

- ii. [Persuasive design](#): psychologists, neuroscientists, game theorists developing tech to be addictive. More you play = more money they make.
 - d. Gamification and motivation
 - i. Pending research is examining how reward-based educational gaming affects the intrinsic motivation of students. Known as the [overjustification effect](#), studies have shown that giving kids rewards reduced their desire to do the same task without rewards.
 - ii. “Constant Flow” or “The Zone” and motivation: state between anxiety and boredom. External motivation vs. intrinsic motivation.
 - e. [Precautionary Principle](#) implies that there is a social responsibility to protect the public from exposure to harm, when scientific investigation has found a plausible risk.
- 2. **Thoughtful, Research-based** – Choosing the right technology, at the right time, to enhance, enrich, and supplement learning without abandoning proven analog pedagogy
 - a. Enhance or enrich the learning experience
 - i. Ted Talks, global communication
 - ii. Coding, robotics, 3D printing
 - iii. Multi-sensorial and multidisciplinary experiences (music, art)
 - b. Supplement (not replace or displace) traditional learning with both digital and analog skill development
 - i. “A” tool, not “The” tool: identifying when apps are helping students learn and when they are not. Providing other options and empowering students to try something new (i.e., Quizlet, Reflex Math).
 - ii. Handwriting and typing
 - 1. Encourage handwriting for [deeper thinking](#) and [bigger ideas](#) before typing final drafts
 - 2. Use handwriting to [practice capitalization, punctuation, spelling](#)
 - 3. Use handwriting to strengthen fine motor skills
 - 4. Research has indicated that the physical process of forming letters when writing (which becomes fluent around age 10) is an important part of encoding letters and sounds, which impacts the [development of letter recognition and literacy](#). “Keyboards cannot replicate the inherent cognitive and educational benefits that handwriting provides.” ([Mann et al. 2015](#))
 - 5. With respect to aspects of word recall, there may be certain cognitive benefits to handwriting which may not be fully retained in keyboard writing ([Mangen, A., Oxborough, G. \(2015\)](#))
 - iii. Notetaking
 - 1. [Research](#) suggests that taking [longhand notes is more effective than typing for learning](#) and retaining information (process of summarizing and categorizing information based on previous knowledge)

2. Students who had laptops and devices removed from class performed significantly better in exams than those with both restricted and unrestricted access ([Carter et al. \(2016\)](#))
 - iv. Analog and digital reading
 1. Studies suggest that [our brains process information differently](#) when reading analog print and digital print
 2. Readers recall details of written information based on where in the text it appeared ([Rothkopf, E. \(1971\)](#))
 3. Observations of tenth grade students participating in a study revealed students who read on a computer had a harder time finding the answers and couldn't flip back and forth between pages ([Mangen, A., Walgermo, B., Brønnick, K. \(2013\)](#))
 4. Analog reading drains [mental resources](#), negatively impacting memory
 5. Annotating, underlining, writing in margins all help students better process and remember what they've read
 - c. Develop processes for evaluating and teaching apps/online tools
 - i. Pros/cons, appropriate duration
 - ii. Identifying essential online tools and skills, and building those into the curriculum (i.e., coding, research, typing)
 - iii. Teaching students how to use apps/online tools appropriately and effectively
 - iv. Avoiding using technology for the sole reason that it's "cool," engaging, or easier
 - d. Find the balance
 - i. We do not know which materials are better delivered digitally; we can make assumptions but technology is changing quickly and science is slow to keep up
 - ii. Develop mechanisms for evaluating screen use by students so balance can be adjusted over time (i.e., what online tools are necessary (for example, when typing an essay), and what are not (for example, when submitting math homework digitally))
 - iii. Respect "media-lite families" and students who show signs of addiction
 - iv. Provide offline and non-digital options for students
 - v. Minimize online homework in order to help students minimize distractions and help parents attempting to monitor and limit students' overall screen time
3. **Mindful** – Many professionals believe mindfulness to be the antidote to too much screen time and schools are implementing practices to help students manage stress
- a. Employ mindfulness strategies to avoid distractions/multitasking
 - b. Single-task, removing notifications, unnecessary apps (i.e., text messaging)
 - c. Choose to engage vs. respond automatically to notifications
 - d. Use meditation, breaks, and power hours in order to be more efficient when using technology
 - e. Practice pausing and self-reflecting



4. ***Double-loop***

- a. Implement student-guided “Tech Talks”
 - i. What’s working? What’s not?
 - ii. How does screen time make them feel?
 - iii. How do they feel when other people are using screens?
 - iv. What do the studies tell us? Based on experience, do they agree?
- b. With students, self-reflect on knowledge and how we acquire knowledge
 - i. Reading digital vs. print
 - ii. Handwriting notes
 - iii. Focused studying
- c. Partner with parents
 - i. How is school-related screen time going at home?
 - ii. What concerns do parents have about screen time?
 - iii. How can parents and schools support each other to keep students safe?

Citizens' Resource Guide: A Possible Legal Strategy when Districts Refuse to Supply Information

*There may be times when parents' efforts to effect positive change – by asking questions about their district's technology policies and practices – are stopped at the front gate, with the district refusing to even share basic information. Despite this stonewalling, parents need **not** stop organizing. In fact, though the work may be arduous, there are tools parents can use to insist on full transparency, and potentially get a poorly conceived program suspended. This document, pursued by activists in the Austin, Texas area, describes their attempt to use the Texas Public Information Act to gain access to records about the district's use of technology. These activists were concerned about children being exposed to inappropriate content, including pornographic and violent images. A similar strategy could be employed by parents concerned about marketing in educational materials, platforms that compromise students' privacy, or simply platforms or materials that encourage screen time without sufficient proof that they will effectively aid in education.*

Factual Background

The Eanes (TX) Independent School District had a 1:1 iPad program for all students, K-12. A 6-year-old viewed pornography on his school mandated iPad in class for two weeks before a teacher was alerted and notified the parents. Subsequent discussions among parents and the administration showed that the 1:1 program was implemented recklessly without apparent regard for applicable privacy laws or compliance with the governing terms of service. Further, this was far from the first incident of a student viewing explicit material on a school-mandated device: these problems were swept under the rug for years, and included young people being exposed to extremely violent videos, the exchange of sexual messages between minors and adults, and all manner of bullying and cheating, all on school-issued devices, either at home or at school.

The Texas Public Information Act and equivalent laws in your state

Every state has laws designed to allow members of the public to access public information, including from public school districts. (These laws may have other names in other jurisdictions, and are sometimes colloquially known as Freedom of Information Act or FOIA laws. They are referred to generically as “public information laws” in this guide.) Texas Public Information Act summarizes the reasons for these laws as follows:

Under the fundamental philosophy of the American constitutional form of representative government that adheres to the principle that government is the servant and not the master of

the people, it is the policy of this state that each person is entitled, unless otherwise expressly provided by law, at all times to complete information about the affairs of government and the official acts of public officials and employees. The people, in delegating authority, do not give their public servants the right to decide what is good for the people to know and what is not good for them to know. The people insist on remaining informed so that they may retain control over the instruments they have created.

Texas Public Information Act, Section 552 of the Government Code

Acts of your local public school district qualify as “official acts of public officials and employees,” and it is your right as a member of the public to know about them.

Please note, however, that public information laws vary from state to state, so **be sure to familiarize yourself with the laws in your state**. It is also important to review any guidance prepared by your state attorney general or other body charged with enforcing the public information laws.

Here are links to freedom of information laws by [state](#). Here is a direct link to [Texas's Public Information Act \(PIA\)](#), and the [Attorney General's PIA Handbook](#). There are likely to be similar resources for you to use in your state. **Please use the provided materials as a guide, and only copy and paste verbatim where consistent with your state's laws and the facts of your situation.**

Using the state of Texas as an example, this short guide illustrates how to use public information laws to get information from your public school district about their use of technology in the classroom.

Strategy

The strategy has two parts: a “TOS (Terms of Service) Request” part, intended to effectuate immediate change for the upcoming school year, and a “Show the Program’s Worth” part, which aims to uncover all deliberations and communication related to the introduction of the program, and might lay the groundwork for a future lawsuit.

- We as parents are entitled to information about any technology that is introduced into our children’s classrooms that will enable us to evaluate its safety and merits.
- We need full disclosure and discussion about the risks and potential benefits of the technology prior to its institution. There should be no rush to implement technology, then ad hoc reacting to the problems.
- It is unacceptable to shift an even greater burden to teachers to ensure safe use.
- Until the administration gets up to speed and can provide us with this information, we insist that the District suspend the 1:1 program (or use of a particular platform or app, etc.).

- If, after a thorough and transparent review process, the technologies are found to have benefits worthy of the risks, a technology program can be rebuilt with rigorous training and full transparency going forward.

TOS Request. The goal here is to utilize your state public information law to request the information to which you are entitled about which digital services your children are using, insist that your district abide by the providers' own terms of service, and withhold your consent where you can. No school district should be able to override a parent's explicitly withheld consent.

This may create a lot of work for the administration in collecting and reviewing terms of service for many apps installed on their platforms. In a responsibly administered program, providers' terms of service would already be collected, vetted, and made publicly available on districts' websites. But since many districts may have neglected to collate this information ahead of time, it may be hard for them to collect and supply this information.

If the district argues that it is too burdensome for it to identify the terms of service for each app, website, and service used on its device, this is all the more reason to suspend the program until the district gets a better grasp.

Show the Program's Worth. This second part is concerned with forcing the district to prove its claims about the efficacy of its 1:1 program or whatever edtech you are seeking more information about. You can request any presentations or research shared by edtech vendors with your school. You can also request communications between the vendor and school officials or between school officials when discussing the technology or technologies you are seeking information about, as well as emails between school officials when they were considering whether to adopt the technology. You might also request any evaluations concerning the effectiveness of the technology in meeting specific learning objectives. If your school is responsive, the documents they provide may bolster your arguments for eliminating or reducing a particular technology's use.

The Eanes parents' request can be found [here](#). Please note that this request consisted of hundreds of questions: the parents made the point in an attached letter that if the program was being administered in a responsible way, the abundant information they requested would be readily at hand and easy to provide. However, asking for that much increases the odds both that you will anger your district and that they will stonewall, so more targeted requests may be more effective.

Some Thoughts about Tactics: Filing a public information request may engender an adversarial, if not hostile response from a school district. For that reason, parents are encouraged to talk through the ramifications of what is likely to be seen as an escalation by the school district. While school districts have a legal obligation to respond, and there may be criminal penalties for failing to respond, your district may be unused to responding to such

requests and may fail to meet its legal obligations. It is important to remain diligent, and remember: you have a right to this information!

If you decide to move forward with making requests, the following will improve your chances of obtaining the information you seek.

- Seek out partners – other parents, lawmakers, school board members, school administrators, and/or teachers who share concerns about the issues at stake.
- Cultivate local reporters to maximize the public impact of your request.
- If you have a parent group organized around screens in schools in your community, share the requests with those parents after they've been served on the board.
- Since a lawsuit may eventually be required, if you have connections with a local lawyer or firm that might be willing to represent you – *ideally pro bono* – identify them early on.
- Most states have a hotline for resolving disputes over public information requests: use it until you get the records you're entitled to.
- States may impose a criminal penalty on public officials that fail to adequately respond to public information act requests. You may use it to get the appropriate law enforcement authorities involved if you are being stonewalled.

It will be important to set certain expectations. Expect that your administration may be defensive and less than forthcoming, despite their legal obligation to give you the requested information.

And expect that your administration will attempt to shift the costs of responding from them to you, including, most likely, the cost of its employees' time. A common tactic to avoid responding to a public information request is to demand the requester pay a very large fee up front. (State laws about whether and how much a school district can charge to respond to a public information act request vary.) That this is a transparently abusive tactic that goes against the spirit and letter of public information laws does not mean that it's rarely used.

For parents who are frustrated by their school district's pattern of concealing information that they have a right to know, public information requests can be an excellent tool. As the old saying goes, knowledge is power!

Using Surveys as a Tool to Help Families and Schools

By Emily Cherkin, Founder of The Screentime Consultant, LLC

When I was in graduate school for my Master's in Education, a professor shared a story about working with fifth graders. My professor was teaching a social and emotional concept and wanted the students to see how their peers in the class would respond, while keeping individual answers anonymous. So he conducted a survey (off-line, in that era), and then compiled student responses into a chart. He then presented the group's responses back to the class. Though I do not remember the details of the survey, I vividly recall his observation that because the students could see a general "snapshot" of their classmates' opinions, their willingness to buy into the lesson was greater. Had he informed the students of his own ideas about the answer, he believed, they would not have had the same connection to the information.

As a former teacher myself, I have found this to be true: most kids, in most age groups, are far more interested in the feedback and opinions of their peers than in what the teacher has to say. This does not mean needing to change the way a teacher teaches; rather, it is an opportunity to use the students' ideas and opinions as a way to get group discussions going. Now, as a frequent speaker at schools around the country on the topic of screen-based technology as it impacts teaching and parenting, I have found that the use of anonymous surveys is an excellent tool to draw an audience by making the talk about their own unique community. Like my professor who saw his fifth graders engage when the lesson was about them specifically, so too are my audiences drawn toward hearing about the attitudes around screen-based technology in their own schools.

I currently utilize the Google Forms tool in Google as a way to administer surveys. In recognition of the quagmire that comes with using online data collection tools or surveys, I am up front with the schools I work with about privacy risks. I do not require identifying information beyond general age group (i.e., middle school vs. high school) or school role (i.e., teacher vs. student), and in my contract with schools I stipulate both that I retain the data as proprietary information, but that I will also not share any data collected (including photos or student work) without the consent of the client.

If you are interested in using surveys as a tool to get a snapshot about an individual school's use of and attitudes about screens and technology, it is not too difficult to build a survey on Google Forms (or another similar site, such as SurveyMonkey).

Here are a few examples of questions I ask in my surveys:

- Do you have your own smartphone?
- Per day, how many hours do you spend on screen-based technology for entertainment (or work, or school)?
- In general, how often is screen-based technology a distraction to you (or to your students or your children)?
- Do you have rules in your house (or school) related to screen-based technology use? And are those rules enforced?
- Do you have a screen in your bedroom every night?
- As a parent/teacher/student, what is one positive thing about technology or screen time? What is one challenge?

Here are a few tips about building surveys that have helped me:

- Use neutral language, especially in answer choices (e.g., Always, Sometimes, Occasionally, Never). Google Forms and SurveyMonkey offer standardized responses to multiple-choice questions, and they help keep the language neutral.
- Mix up the question types: “check a box” or “how often do you…” and have one or two short answers.
- Limit the survey length. Kids especially do not want to spend a long time answering questions on a survey.
- Be prepared for pushback from all groups surveyed. Someone told me once, “Pushback means you’ve touched a nerve.” Use that as an opportunity to discuss.
- Google Forms and SurveyMonkey are useful tools for compiling the data into charts or graphs that illustrate a response. For example, you can give audiences a snapshot of how many students in X age group have screens in the room at night. This can be very helpful for those parents in particular who feel or hear that they are the “only” parent with a no-screens-in-the-bedroom rule.
- Normalize the experience: it is valuable to see how people respond, but it is also important to say that this is something we all struggle with, and no one is going to get it perfectly right. Also, every person is impacted differently by quantity, amount, quality, etc., when it comes to screen time, so take the survey responses with a grain of salt.
- I have found it helpful to provide my audiences with a survey summary. Many schools find this information useful in addressing the screen-based technology questions.
- Remember that surveys like this are intended to get the “big picture.” It is okay if there are outliers. Students in particular care about the trends: what “everyone else” is doing.

Superintendent Letter (short)

Dear Superintendent [NAME],

We are writing to you to express our deepest concern regarding the overreliance of our public schools on screen-based learning.

Our children are already spending an enormous amount of time on screens outside of school – averaging nine hours per day for high school students, according to [one study](#). Excessive screen time has been associated with many maladies, including anxiety and depression, executive function disorders, eye disorders, and screen addiction. While screens in schools are not the only source of these problems, our schools share a responsibility to make sure they do not exacerbate such issues.

There are several steps that we suggest [DISTRICT NAME] take immediately to decrease the danger posed by the excessive use of screens by children:

- Eliminate the use of online textbooks. Students dislike them and e-books require them to be up late on screens. The blue light from screens suppresses melatonin production, contributing to sleep deprivation.
- Eliminate computer-based homework, which results in students spending more time on distracting, non-school activities at night (another contributor to sleep deprivation) and which makes parent monitoring of their child's screen time difficult.
- Allow children to opt out of computer-based activities if requested by a parent or recommended by a child's ophthalmologist, pediatrician, or mental health professional.
- Follow the device manufacturer's guidelines for the safe use of digital devices, including all ergonomic and eye protection measures.

We would be very happy to meet with you to discuss these concerns at your earliest convenience.

On behalf of our children, we implore you to take this issue seriously.

Signed,

Superintendent Letter (long)

Dear Superintendent [NAME],

We are writing to you to express our deepest concern regarding the overreliance of our public schools on screen-based learning.

Our children are already spending an enormous amount of time on screens outside of school – averaging nine hours per day for high school students, according to [one study](#). Excessive screen time has been associated with many maladies, including anxiety and depression, executive function disorders, eye disorders, and screen addiction. While screens in schools are not the only source of these problems, our schools share a responsibility to make sure they do not exacerbate such issues.

The drive to continually increase students' technology use is understandable, as our district endeavors to prepare our children for the 21st century economy. Unfortunately, computer-based learning has no demonstrable advantage over low-tech methods. Indeed, we believe that many screen-based activities in school actually result in greater distraction and decreased focus on the part of students. Plus, students are already having difficulties in these areas because of the hyper-stimulating effects of interactive media used at home. Furthermore, much of the technology that students are being introduced to in school will certainly not be in use by the time our students enter the workforce. And software designers are making it ever easier to get up to speed on their platforms, so teaching children how to use their tools is hardly necessary.

There are several steps that we recommend the district take immediately to decrease the danger posed by the excessive use of screens by children, including:

- Following the device manufacturer's guidelines for the safe use of digital devices, including all ergonomic and eye protection measures.
- Eliminating the use of online textbooks. Students dislike them and e-books require them to be on screens often late into the night. The blue light from screens suppresses melatonin production, contributing to sleep deprivation.
- Eliminating computer-based homework, which results in students spending more time on distracting, non-school activities at night (another contributor to sleep deprivation) and which makes parent monitoring of their child's screen time difficult.
- Allowing children to opt out of computer-based activities if requested by a parent or recommended by a child's ophthalmologist, pediatrician, or mental health professional.
- Requiring students to put away all smart phones during the school day.
- Collecting data (anonymously) from students and teachers about school-related time spent on digital devices – both in-class and at-home – and making the data available to parents by class and by grade.



- Conducting regular educational and professional development activities to inform teachers, students, and families about the proper use of digital devices, the ways to safeguard student privacy, and the dangers of excessive screen use.

We would be very happy to meet with you at your earliest convenience to discuss these concerns. We can also provide you with references to scientific studies that support the concerns we have expressed.

On behalf of our children, we implore you to take this issue seriously.

Signed,

Moratorium Request

Dear Superintendent and School Board Members,

Thank you for all the work you do to support our children.

As a community we all need to question the current use and future planned investments to bring more electronic devices into our children's classrooms.

Independent peer-reviewed research by education experts has *not* validated tablets, laptops, or smartphones as effective teaching tools.

Given that research *has* identified serious learning, physical health, mental health, and behavioral and privacy concerns connected to children's use of digital devices, we should employ the **precautionary principle**: the idea, based in environmental science, that the introduction of a new product or process whose ultimate effects are disputed or unknown should be resisted. With little or no benefit and potential harm, it is prudent to pause and limit the use of digital devices in our district until such time as these devices can be shown to be safe for children.

We welcome the opportunity to present some of the research that supports our request at the next scheduled School Board meeting. Until that time, we insist that a viable low-tech option be created for students wishing to opt out of the 1:1 learning program.

Signed,

Discontinue the Current 1:1 iPad Program for Grades K-5

Parents, teachers, pediatricians, librarians, art therapists, poets, doctors, and taxpayers of [PLACE or DISTRICT] are asking that **[SCHOOL or DISTRICT] discontinue immediately the current 1:1 iPad program within [SCHOOL or DISTRICT] elementary schools for grades K-5.**

The [1:1/Digital Learning/Personalized] program(s), which put personal iPads in the hands of elementary school children over the past [#] years, has not only cost millions for devices, staffing, and infrastructure, but it has put children into a social experiment that is likely to harm their physical and social-emotional wellbeing. Recent studies have led other school systems to greatly reduce device exposure or ban them entirely.

We urge [DISTRICT] to address the following:

1. Eliminate the current 1:1 model for grades 2-5 and classroom iPad use in grades K-1.
2. Have an established, equitable and proven curriculum that demonstrates how the use of these devices furthers children's academic success and actually teaches "technology," i.e., coding, robotics.
3. Ensure [DISTRICT] has procedures for [DISTRICT] parents to opt out of iPad use and out of the devices being sent home.
4. Set restrictions on the number of hours per day children spend on digital devices (including expected homework time with the device).
5. Have [DISTRICT] send a waiver to explicitly list the potential risks of iPad usage, including, but not limited to, attention issues, screen addiction, blue light effects on eyesight, insomnia, and effects on reading acquisition.
6. Ensure [DISTRICT] has a consistent and sensible technology policy that applies to our youngest learners – no iPads during indoor recess or open-ended iPad usage (YouTube, gaming, etc.). Reading should be from real books until further evidence that reading from electronic devices does not stunt reading acquisition.

Considerations:

These devices are being used as testing devices in the name of "personalized learning." This program has been implemented via trial and error for [#] years, using our children as the guinea pigs. We know what positively influences our children's development: having wonderful teachers who are able to spark their love of learning; exposure to and connection with the outdoors; developing social skills and relationships with peers; freedom to solve problems creatively; engagement with their surroundings in a way that involves the senses and the whole body.



[A global report by the Organization for Economic Co-operation and Development \(OECD\) suggests](#) iPads work against all of these elements, and are therefore not a constructive medium with which to be occupying so much of our youngest students' time.

What parents are seeing within [DISTRICT] is significantly inconsistent from school to school – some schools allow the devices to go home; some small groups of kids learn to code robots; some classrooms barely use the devices outside of state-mandated testing. When devices are required to be used at home, we also see conflict arising from unwanted additional screen time.

Exposure to technology has its place and can be incorporated through shared carts of iPads or a wired computer lab for special technology sessions (i.e., coding, keyboarding, internet safety, or use as a research source).

Budget Concerns for [DISTRICT] & [COUNTY]:

We have to prioritize funds. The costs of infrastructure and personnel to maintain individual devices for students in grades 2-5 is significant and will continue to increase as our school population grows. (Costs increase even more if the schools also provided the filters and peripheral devices necessary to avoid the development of eye and musculoskeletal problems in students.) This is not a good use of our tax dollars – especially for a program that has not proven its benefit since it began.

The opportunity cost and unintended consequences of 1:1 programs are of grave concern. We strongly suggest halting further implementation and pulling back when it comes to our youngest learners.

Thank you for your prompt attention to this matter,

Low-Screen Instruction Option for Elementary and Middle School

Dear Superintendent [NAME] and School Board Members,

As parent/s whose child/ren have been impacted by the 1:1 program, we ask that the [SCHOOL DISTRICT] offer parents a choice to place their children on a low-screen instructional track for all core subjects.

Ensure the Basics for our Youngest Learners

Our children's education has been shortchanged by the heavy use of digital devices. [Studies](#) have shown that computer-based instruction does not aid learning, and, in fact, frequently hinders it. What's being called "personalized learning" is anything but "personal." Computerized instruction on iPads is not the way most children learn best.

Examples of Bypassed Skills: Writing and Reading from Books

[DISTRICT] promises mastery of cursive handwriting in third grade in the Program of Studies and has not delivered consistently, leaving many children all the way through high school not able to write or even read cursive. Cursive and printing [have been shown](#) to help students retain information (note-taking), improve reading fluency and improve fine motor skills.

Similarly, reading from screens is not the same as reading from print. [Studies](#) show that reading – especially nonfiction – from screens is more superficial and less likely to result in retention of information.

How much have we lost as we try to leap ahead?

What skills are lost by replacing authentic experiences with screens? Most kids are coming into [DISTRICT] with substantial "screen" experience and need not be taught how to use them. Teachers are seeing the lack of "soft skills" required for success, like: resolving peer conflicts, attending to a non-multimedia lesson, sustaining effort, and good motor skills.

Research shows devices being correlated with serious health problems and developmental and cognitive delays. Myopia, sleeplessness, anxiety, internet addiction, and attention issues are a few of the associated risks that we need to be concerned about. In several states, including Maryland, Oregon, and California, legislation concerning the use of devices in schools has either been passed or is under consideration.

As parents, we want low-screen instruction for our elementary and middle school learners while encouraging a love of learning and curiosity. **This track would include increased interaction with teachers and peers, less multiple choice testing, daily reinforcement of handwriting and writing throughout their subjects, reading from print, and developmentally appropriate use of technology when it can be used in transformative ways.**



Help us ensure a solid foundation of the basics for our youngest learners.

Thank you,

Sample Petition – Summit Learning

Dear School Board Members,

We, the undersigned residents of _____, have become increasingly concerned with the decision by school administrators and the Board of Education to pilot the Summit Learning Program, and with the implementation of the Summit platform in our elementary and middle school classrooms.

Despite assurances from administrators and certain Board members about the success of the pilot program, discussions with parents, students, and teachers have revealed a number of inconsistencies between the information being provided by school administrators and the actual experience of using the Summit platform as applied in _____'s classrooms. For example,

- It remains unclear whether classwork, testing, and assessment questions are consistent with focus area content.
- The effectiveness of controls implemented to restrict access and ensure age-appropriateness and quality of content has not been established.
- It is not clear whether our elementary and middle school classrooms have sufficient teacher and staff resources to conduct the individual instruction and mentoring time to all students that the Summit platform recommends.
- Administrators have not established the degree to which personally identifiable data on students is protected, and whether the disclosure of data required by the district's contracts with Summit is in compliance with applicable laws.

While we appreciate the challenges of providing effective instruction to students with wide-ranging abilities and interests, we believe that school administrators have not given sufficient consideration to whether the Summit platform is an appropriate tool to address those challenges in _____ at this time. We further believe that the chosen approach of experimenting with firewalls and addressing the correctness and consistency of content on an *ad hoc* basis while implementing the pilot is not appropriate. Lastly, the lack of consistency in implementation, inadequate training of teachers and staff, continued exposure to inappropriate material, and poorly-designed Focus Area content and assessment questions are leading to increasing reports of student anxiety, frustration, and disinterest.

We therefore respectfully request that _____ Public Schools suspend their pilot of the Summit platform until such time as a more detailed assessment of the appropriateness and effectiveness of content, and of the effort and resources needed to correctly implement the platform, can be completed. This exercise must be transparent and include input from teachers, administrators, parents, and students.

Thank you for your prompt attention to this matter,

Opción de programa de instrucción con uso mínimo de pantallas para la escuela primaria e intermedia

Estimados miembros de la Junta Escolar y Superintendente [nombre del Superintendente],

Como padres de niños que han sido impactados por el programa 1.1, solicitamos que el [DISTRITO ESCOLAR] ofrezca a los padres la opción de ubicar a sus hijos en un programa de instrucción con uso mínimo de pantallas para todas las materias de estudio básicas.

Asegurar las materias básicas para nuestros estudiantes más jóvenes

La educación de nuestros hijos ha sido reducida por el uso excesivo de dispositivos digitales. Los [estudios](#) han mostrado que la instrucción basada en la computadora no ayuda al aprendizaje, y que, de hecho frecuentemente la impide. El ahora llamado “aprendizaje personalizado” es cualquier cosa menos “personal”. La instrucción computarizada en los iPads no es la forma en que la mayoría de los niños aprenden mejor.

Ejemplos de habilidades ignoradas: lectura y escritura de libros

El [Distrito] promueve el dominio de la escritura cursiva en tercer grado en el [Programa de estudios](#) y eso no se ha realizado consistentemente, dejando a muchos niños, desde la primaria hasta la preparatoria, sin que puedan escribir e incluso leer en cursivas. La escritura cursiva e impresa ha [demostrado](#) que ayuda a los estudiantes a retener la información (tomar notas), a mejorar su fluidez en la lectura y a mejorar habilidades motoras finas.

De manera similar, la lectura en pantallas no es lo mismo que leer versiones impresas. Los [estudios](#) demuestran que leer –especialmente no-ficción- desde una pantalla es más superficial y menos probable que resulte en retención de la información.

¿Qué tanto hemos perdido mientras intentamos adelantarnos?

¿Qué habilidades se pierden cuando se reemplazan experiencias auténticas con el uso de pantallas? La mayoría de los niños llegan al [DISTRITO] con una experiencia substancial en el uso de “pantallas” y no necesitan ser enseñados en como usarlas. Los maestros están observando una falta de “destrezas sociales personales” que se requieren para el éxito escolar, como: resolver conflictos con sus compañeros, asistir a una lección sin medios electrónicos, realizar esfuerzo sostenido, y habilidades motoras buenas.

La investigación demuestra que el uso de dispositivos electrónicos se correlaciona con serios problemas de salud y de desarrollo, así como retrasos cognitivos. Miopía, insomnio, ansiedad, adicción al Internet, y problemas de atención son solo algunos de los riesgos asociados, y por los cuales debemos preocuparnos. En varios estados, incluyendo Maryland, Oregón y California, ya se están considerando o se están aprobando leyes relacionadas con el uso de dispositivos en las escuelas.



Como padres, queremos para nuestros estudiantes de escuela primaria e intermedia* una instrucción con uso mínimo de pantallas, donde a la vez se les inculque el amor al aprendizaje y la curiosidad. **Este programa podría incluir una mayor interacción con compañeros y maestros, menos pruebas de opción múltiple, reforzamiento diario de la escritura a mano y la escritura a lo largo de todas las materias, lectura de libros impresos y un uso de la tecnología apropiado al desarrollo, siempre y cuando pueda usarse de manera transformadora.**

Ayúdenos a garantizar una base sólida de educación básica para nuestros alumnos más jóvenes.

Gracias,

Sample Letter to the Editor

Dear [EDITOR],

Screens can play a role in the classroom, but all too often children are bored in screen-based educational programs, the learning is superficial, and the supposed benefits of "personalized learning" are elusive. Students, parents, teachers, and taxpayers have been sold a Big Tech bill of goods – while the very creators of these devices and computer programs are enrolling their own children in screen-free schools.

Studies show that more screen time leads to worse school performance – not to mention the troubling evidence of health effects on developing brains and eyes.

It is time to act. We cannot allow our children to be experimented on any longer. Parents, teachers, and health professionals must join together to slow the profit-driven, wholesale insertion of digital technology into our children's classrooms.

Sample Letter to the Editor

Kudos to [NAME] for writing about the new evidence showing that screen time is affecting [SUBJECT]. (See, "Article Name", *Newspaper name*, Date)

The most troubling question, though, is why haven't we acted sooner to limit children's exposure to digital devices. Abundant peer-reviewed scientific studies show that screens are harming our children, whose developing brains and eyes are more sensitive to environmental impacts than those of adults. Other studies have shown dramatic correlations between teen screen use and a rise in anxiety and depression, teen suicide, and gaming addiction.

The ubiquity and popularity of digital devices – and the financial and political power of the tech industry – make the thought of tackling the problem seem overwhelming. Undoubtedly, that is how anti-smoking activists in the 1950s felt as well. But isn't it time we stopped using our children as canaries in the coal mine when it comes to screen time?

Policy Recommendations Concerning Responsible Edtech Use, K-12

Regarding Student Health:

At the STATE LEVEL:

- State Boards of Education should seek input from a committee of medical experts from a variety of areas within the state Departments of Public Health and/or other State health entities in formulating recommendations for safe use of digital technology in schools. The committee should both seek expert testimony and monitor research on the various effects of screen use, such as brain development, eye health, musculoskeletal health, sleep deprivation, depression, anxiety, self-harm, etc. Recommendations should be shared with all district school boards and superintendents; they should be updated as new scientific evidence becomes available.

At the DISTRICT Level:

- Parents and students should be afforded low-tech and no-tech options whenever requested, including paper copies of all textbooks, reading materials, worksheets, and testing materials.
- Teachers should be instructed to minimize the amount of homework assigned that must be done online. Requiring students to spend time on digital devices interferes with families' abilities to maintain healthy limits on screen time.
- Cell phone use should be prohibited in all classrooms during class time, with phones out of reach.
- Districts should develop, institute, and enforce policies to ensure that schools and teachers follow manufacturers' guidelines regarding safe use of digital devices. Parents should be made aware of all manufacturers' ergonomic and safe use guidelines, and should sign off on their understanding and acceptance of these guidelines prior to devices being issued to students.
- In planning for safe use of digital devices for school and homework, administrators should gather data regarding: (a) in-school screen usage by grade level; and (b) the amount of time children, by grade level, spend on digital devices at home doing school-related work. Aggregated school-related usage data should be made available to the public.
- Districts should create teacher, student, and parent education programs about the known and potential health consequences of the overuse of screens, including physical and mental health consequences; and such programs should be delivered to all

constituents on a yearly basis. Annual attendance at such programs should be mandatory for teachers and students in 4th grade and beyond, and records maintained to that end.

- While scientific research regarding the health effects of exposure to radio frequency from digital devices and Wi-Fi has been inconclusive, school health officials should monitor ongoing research efforts and respond to any new screen safety standards that are established.
- School guidance counselors should be trained to recognize and treat potential negative psychosocial effects of overuse of social media and online gaming, including screen dependence, anxiety and depression.

Regarding Edtech and Computer-based Learning:

At the STATE LEVEL:

- Each State Board of Education should establish a committee that includes experts in education, experts in technology, and teachers. No computer-based, gamified, or personalized learning product should be used in a school unless this committee has reviewed its underlying algorithms, pedagogical soundness, potential health risks, and implications for child and teacher privacy, and has approved the product.

At the DISTRICT Level:

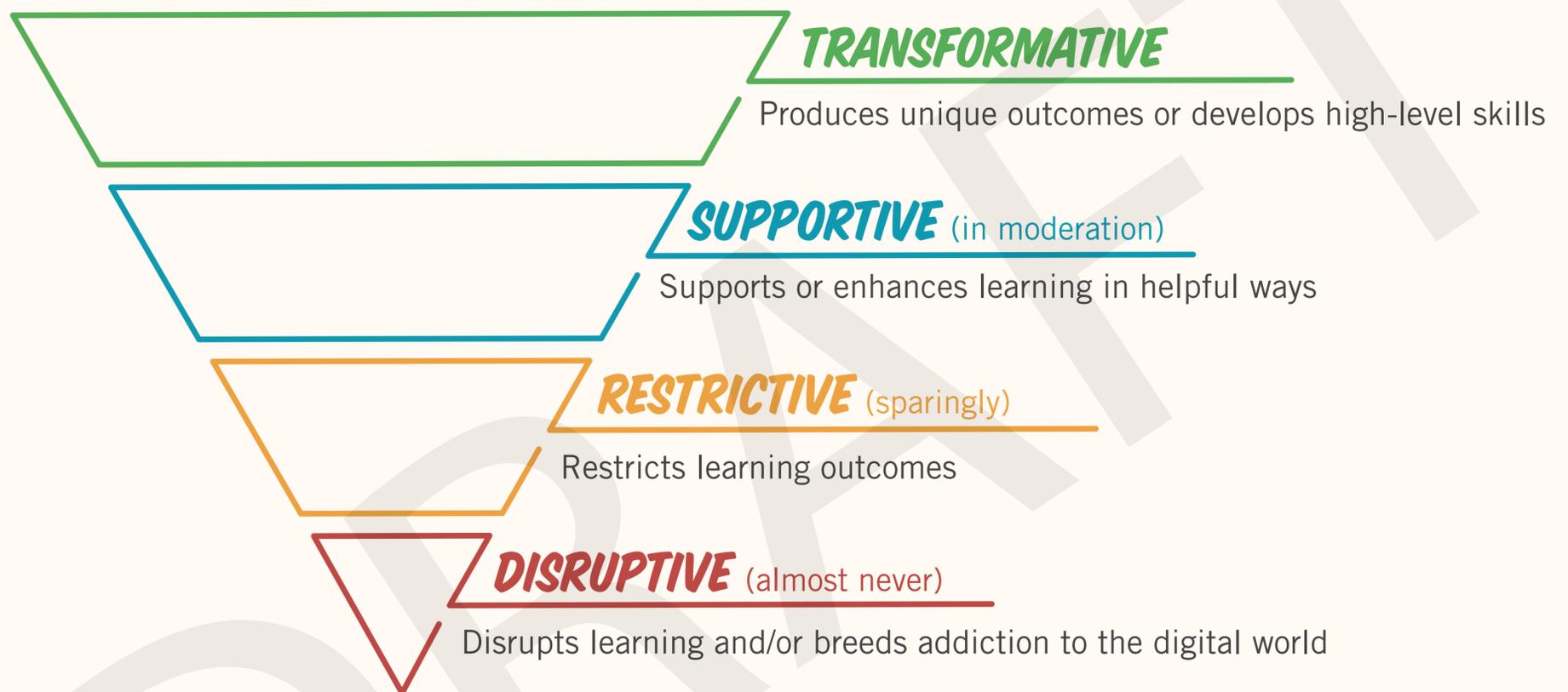
- In general, digital devices should be avoided in elementary school classrooms given the proven benefits of offline learning and lack of evidence supporting the efficacy of screen-based instruction during these years. The introduction of online testing or online instruction in the elementary grades should be prohibited, as it requires the introduction of digital technology in the early grades (in order to prepare students for the tests).
- Beginning in middle school, limited use of technology is acceptable to introduce word processing, spreadsheets, and computer-based research. Otherwise, technology should only be used when there is no equally good way to teach a particular skill or concept.
- Technology-related skills needed by graduation – including word processing, the use of spreadsheets, and the ability to conduct internet- and computer-based research – should continue to be taught in high school, subject to established safe use guidelines.

Regarding Use of Student Data:

- *Transparency:* Schools must publicly post and notify parents of the personal student data that they and their edtech vendors collect, the purpose of the collections, with whom the data is shared, if and when it will be destroyed, and the person(s) responsible for answering questions and providing public access to vendor contracts and privacy policies.
- *Notification and Consent:* Parents must be notified any time their student's data is shared with edtech companies, and given the ability to consent, particularly for highly sensitive information such as their child's disabilities, health, and disciplinary information.
- Such consent cannot be obtained in blanket form, but should be obtained each time a new edtech software program or app is introduced.
- *Limitations on Use:* Student data should be used only to benefit individual students and their schools. Edtech companies must be prohibited from using or sharing student data for any commercial purposes, including the development and marketing of products and services.
- *Security and Breach Notification:* Personal data of students and teachers must be protected using rigorous and currently accepted industry standards and in conformance with state and federal law. Any student or teacher affected by a data breach must be notified directly and given assistance to remedy any harm.
- *Accountability:* Schools, districts, and edtech companies with access to student and teacher data must comply with all state and federal privacy laws and be held accountable for all violations of student privacy.

THE EDTECH TRIANGLE

This framework is a research-based synthesis of the EdTech practices, tools, and skills that optimize learning, support well-being, and protect against some of tech's negative outcomes. EdTech can be powerful in the classroom, and it should be used in line with current research.



TRANSFORMATIVE: Robotics, coding, computational thinking, computer animation, website design, graphic design, advanced photo, video, or music editing, spreadsheet creation, digital citizenship, any tech that helps students with special needs.

SUPPORTIVE: Online resources such as images or articles not available to students in print, supplementary videos such as documentaries or TED Talks, limited use of virtual reality, keyboarding, moderate but purposeful posts by teachers used to update parents on student work via sharing platforms.

RESTRICTIVE: E-texts in place of print, prioritizing typing over handwriting (except in final work), using software or applications that have already been mastered by the student (such as taking pictures with a tablet), points-based learning games, overcomplicated tech use by teachers.

DISRUPTIVE: Tech rewards, tech choice during free time, tech for tech's sake, unrestricted access to cell phones during school hours, needless screen-based homework assignments, any platform that exposes students to age-inappropriate content or bullying, too much tech.*

SCREEN TIME LIMIT RECOMMENDATIONS

*Tech use is not imperative for academic success, and The EdTech Triangle does not endorse a minimum amount of tech use per grade. Moreover, all types of screen-based EdTech (even Transformative) can isolate students from their teachers or peers. As such, and in order for students to develop skills in collaboration, empathy, and critical thinking, screen time limits should be followed.



Pre-K	0 mins	6th	0-40 mins/day
K	0-20 mins 2x/week	7th	0-50 mins/day
1st	0-20 mins/day	8th	0-50 mins/day
2nd	0-20 mins/day	9th	0-60 mins/day
3rd	0-30 mins/day	10th	0-60 mins/day
4th	0-30 mins/day	11th	0-70 mins/day
5th	0-40 mins/day	12th	0-70 mins/day

Myths and Facts about Students and Screens

By Dr. Richard Freed, PhD, author of *Wired Child*

Myth: Giving kids phones or computers improves their school success.

FACT: Unfortunately, kids tend to use computers, phones, and other digital devices primarily for entertainment, not learning purposes (1). So, it's not surprising that the more time kids spend using screens or phones – including computers, the internet, TV, video games, social media, or texting – the lower their academics grades (2). In fact, after about 30-45 minutes of total screen and texting time per day, kids' grades start to suffer (3). High-school age kids who spend 4 or more hours with screens per day have grades that are a full grade point lower, e.g., A- to a B-, than kids who spend 30 minutes or less per day with screens.

WHAT KIDS REALLY NEED: Children's engagement with reading and books is a powerful predictor of their school success (4), so expose kids to books early and often. And, as kids get older, help them study away from the distractions of computers, screens, and phones. If kids need to use computers for school, help them stay on track by having kids use them in a common area rather than their room, and employ monitoring software to help your child keep track of their off-task usage.

Myth: Students generally learn better using technology than “old-school” methods such as paper and pencil.

FACT: While many claim that immersing kids in technology improves educational outcomes, most objective studies show that technology either has no effect, hurts kids' learning success, or that limited tech use has better outcomes than tech immersion (5).

WHAT KIDS REALLY NEED: Many “old-school” learning methods help kids learn better than electronic devices. For example, evidence shows that print books teach kids to read, and read better, than the electronic versions (6). Limited use of certain technologies for older children, e.g., teaching a coding class in high school, makes more sense.

Myth: Students' regular use of screens during the school day improves their chances of employment in the 21st century economy.

FACT: With minor exceptions, students are certain to be exposed to enough technology at home and school without substituting technology for traditional teaching methods. The technology taught in school today is simple to use and unlikely to still be in use when they go out into the job market.

WHAT KIDS REALLY NEED: Students' future success will depend not on having learned particular applications, but rather having gained basic skills in logical thinking, mathematics, reading, writing, and group work.

Myth: Allowing the use of smartphones during the school day promotes students' academic success.

FACT: Students in high school who are allowed to use phones during the school day tend to receive lower test scores than students who aren't allowed to use phones during the school day (7).

WHAT KIDS REALLY NEED: Many private schools, recognizing the profound distraction of smartphones, don't allow students to have phones out during the school day. And, with an increasing number of public schools acknowledging that smartphones hurt kids' ability to focus, many public school students are also now required to not use phones during the school day (8).

Myth: A harmful digital divide exists because less advantaged kids don't have the same tech access as more advantaged kids.

FACT: Less advantaged kids now have about the same access to technology as more advantaged children, and it hasn't helped close income and racial achievement disparities (9). In truth, it's increasingly recognized that the truly harmful digital divide is the one describing the greater entertainment screen and phone use of low-income kids and children of color as compared with higher-income and white kids (10). We believe this to be a new but powerful factor in the lower levels of academic achievement in less advantaged as compared to more advantaged children. Indeed, private schools serving wealthier students employ less technology on average than their public school counterparts.

WHAT KIDS REALLY NEED: Less advantaged children need opportunities to learn important school skills away from the distractions of screens and phones.

Myth: Health concerns about screen time are overblown.

FACT: There is still much to be learned about the long-term health effects of screens on children, but there is evidence for exercising extreme caution. Overuse of screens has been shown to cause myopia in children (11) and contributes to macular degeneration (12). Excess screen use in general contributes to obesity (13), and use at night contributes to sleep deprivation (14). Alarming, evidence now indicates that screen use in children appears to interfere with normal brain development (15). And the more time kids – especially teen girls – spend with social media or smartphones and other digital devices, the more likely they are to be depressed or have suicide-related behaviors such as cutting (16).

WHAT KIDS REALLY NEED: Young children need free play and natural light to foster normal brain and eye development. Physical activity remains crucial for older children. Strong face-to-face connections with family, teachers, and friends are also critical to students' emotional wellbeing.

References

- 1 Rideout, V.J., Foehr, U.G. & Roberts, D.F. (2010). Generation M2: Media in the lives of 8- to 18-year-olds. Kaiser Family Foundation. <http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8010.pdf>
- 2 Robert M. Pressman, Judith A. Owens, Allison Schettini Evans & Melissa L. Nemon (2014). Examining the Interface of Family and Personal Traits, Media, and Academic Imperatives Using the Learning Habit Study, *The American Journal of Family Therapy*, 42:5, 347-363, DOI: 10.1080/01926187.2014.935684; Vigdor, J.L. & Ladd, H.F. (2010, June). Scaling the digital divide: Home computer technology and student achievement (Calder Working Paper, No. 48). Retrieved April 10, 2013 from http://www.caldercenter.org/publications/upload/CALDERWorkingPaper_48.pdf
- 3 Robert M. Pressman, Judith A. Owens, Allison Schettini Evans & Melissa L. Nemon (2014). Examining the Interface of Family and Personal Traits, Media, and Academic Imperatives Using the Learning Habit Study, *The American Journal of Family Therapy*, 42:5, 347-363, DOI: 10.1080/01926187.2014.935684
- 4 Strickland, D. & Riley-Ayers, S. Early literacy: Policy and practice in the preschool years. Retrieved May 25, 2018 from <http://www.readingrockets.org/article/early-literacy-policy-and-practice-preschool-years>
- 5 Dvorak, J.C. (2018, May 16). Who needs computers in the classroom? Not students. *PC*. <https://www.pcmag.com/commentary/361231/who-needs-computers-in-the-classroom-not-students>
- 6 Chiong, C., Ree, J., Takeuchi, L. & Erickson, I. (2012, Spring). Print books vs. E-books. The Joan Ganz Cooney Center. Retrieved October 30, 2013, from http://www.joanganzcooneycenter.org/wp-content/uploads/2012/07/jgcc_ebooks_quickreport.pdf
- 7 Beland, L. & Murphy, R. (2016). Ill Communication: Technology, distraction & student performance. *Labour Economics*, 41, 61-76. DOI:10.1016/j.labeco.2016.04.004
- 8 Smith, T. (2018, January 11). A School's Way To Fight Phones In Class: Lock 'Em Up. NPR. Retrieved from <https://www.npr.org/2018/01/11/577101803/a-schools-way-to-fight-phones-in-class-lock-em-up>
- 9 Owenz, M. (2017, November 21). The rich get smart, the poor get technology: The new digital divide in school choice. Screen-Free Parenting. Retrieved May 24, 2018 from <http://www.screenfreeparenting.com/rich-get-smart-poor-get-technology-new-digital-divide-school-choice/>
- 10 Common Sense Media (2015). The Common Sense census: Media use by tweens and teens. Retrieved May 24, 2018 from <https://www.common sense media.org/research/the-common-sense-census-media-use-by-tweens-and-teens>
- 11 Keck School of Medicine of USC (2016, January 22). Too Much Screen Time is Raising Rate of Childhood Myopia. Retrieved January 6, 2019 from <https://keck.usc.edu/too-much-screen-time-is-raising-rate-of-childhood-myopia/>
- 12 Reints, Renae (2018, August 15). The blue light emitted from electronics can cause accelerated blindness, study finds. Retrieved January 6, 2019 from <http://fortune.com/2018/08/15/blue-light-blindness-study/>
- 13 American Heart Association News (2018, August 6). Limit screen time among kids, experts caution. Retrieved January 6, 2019 from <https://www.heart.org/en/news/2018/08/06/limit-screen-time-among-kids-experts-caution>
- 14 University of Colorado Boulder (2017, November 1). Children are uniquely vulnerable to sleep disruption from electronic screens. Retrieved January 6, 2019 from <https://www.sciencedaily.com/releases/2017/11/171101130549.htm>
- 15 Dunckley, Victoria, M.D. (2014) Gray Matters: Too Much Screen Time Damages the Brain. *Psychology Today*, retrieved January 6, 2019 from <https://www.psychologytoday.com/us/blog/mental-wealth/201402/gray-matters-too-much-screen-time-damages-the-brain>
- 16 Twenge, J.M., Joiner, T.E., Rogers, M.L. & Martin, G.N. (2017). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and Links to Increased New Media Screen Time. *Clinical Psychological Science*, 6(1), 3-17. DOI: 10.1177/2167702617723376



Why Keep Their Devices Turned Off and Put Away While at School?

(adapted from [Turning Life On](#))

Students who engaged in media multitasking during class, that is, using multiple forms of technology, including handheld devices and computers, to access the internet and/or social media, scored lower on tests and in some studies earned lower grades.

Students who received notifications during class, even though they did not respond, were just as distracted as active users of mobile devices and performed poorly on tasks.

Students who used no technology during class outperformed those who used some. Students who texted during class performed poorly.

Even the mere presence of a device negatively impacted test scores and grades. “Out of sight” does not mean “out of mind.”

Students who believed they could multitask and text during class without being distracted still scored lower on tests despite intellectual ability.

The effects of devices on test scores and learning are not necessarily related to emotional regulation. Devices can negatively affect all students regardless of mental health, emotional stability, or intelligence.

The part of the brain responsible for analytical learning - the hippocampus - is not used when distracted either by external or internal drivers.

1:1 Devices: Is This Good for Our Children?

Katie Talarico, MEd

Educational technology, in the form of 1:1 programs and computer-based teaching, is costing our schools millions of dollars.

Are 1:1 school devices good for our children? Are they worth the cost?

Please consider the following research:

Educational benefits are questionable

- The National Education Policy Center has called for a pause on personalized learning because of “questionable educational assumptions . . . self-interested advocacy by the tech industry, serious threats to student privacy, and a lack of research support” (1).
- As technology use increases, academic achievement often decreases (2,3,4,5,6).
- 1:1 devices create a distracted learning environment (7,8,9).
 - Multitasking is associated with significant cognitive losses.
 - Those who think they multitask well generally do not.
 - ONE multitasking student distracts students around him/her.
 - Just the OPPORTUNITY to multitask (available on all devices!) reduces effective IQ.
 - Multitasking while studying causes new info to go to the “wrong” area of the brain, making it harder to retrieve.
- Reading comprehension has been shown to be lower on screens than in print (10,11).
- Handwriting benefits learning (12).
- Students who take notes with paper and pencil have a better grasp of the material than those who take notes on a laptop (13).

Health risks are significant

- Screen time is associated with subsequent attention issues and ADHD symptoms in studies of children ranging from age 1 to age 24 (14,15,16).
- Screen time is associated with obesity, irregular sleep, behavior problems, psychological difficulties, impaired academic performance, digital eyestrain, type 2 diabetes, and cardiovascular disease (17,18).
- Sleep is essential to physical and mental health. The blue light emitted from screens suppresses melatonin production and directly affects circadian rhythms and sleep patterns (19,20).
- “Light-at-night” (often homework time) has been linked with cancer, diabetes, heart disease, obesity – and, more recently – depression and suicide (21).
- Myopia diagnoses have doubled, and researchers have related it to increased screen use. Macular degeneration – which can cause blindness – is also associated with blue light exposure (22).
- “Electronic Screen Syndrome” refers to symptoms related to mood, cognition and behavior that result from interactive screen exposure – even from educational material. Screen use may act as a stimulant to young nervous systems (23).
- Brain Scans of “internet/gaming addicts” show *brain atrophy* in the frontal lobe, the striatum, and the insula. Can subtle damage occur in children even with “regular” screen use? Kids put on “screen fasts” show a surge in frontal lobe function when screens are temporarily eliminated (24).
- Screen use negatively affects communication skills and ability to empathize (25). A 2014 study from UCLA showed that middle schoolers’ ability to recognize “non-verbal emotions” through facial expressions went up after just 5 days at a device-free camp (26).
- Problematic computer use (internet addiction) is a growing social issue (27). 50% of teens feel they are “addicted” to devices – and 59% of parents agree (28).

Data security issues threaten kids’ privacy and expose them to unwanted targeted marketing

Inappropriate content is inevitable

- Despite filters, students can – and do – access inappropriate material during school; including pornographic, violent, and degrading images/information. Sometimes this is accidentally encountered, and sometimes kids just get past the filters.

Many Silicon Valley executives send their kids to tech-free schools (29, 30, 31).

REFERENCES

1. Boninger, F., Molnar, A., Saldana, C. [Personalized Learning and the Digital Privatization of Curriculum and Teaching](#). 2019.
2. Organisation for Economic Cooperation and Development. [“Students , Computers, and Learning”](#). 2015.
3. Carter, S., Greenberg, K., Walker, M. [The Impact of Computer Usage on Academic Performance: Evidence from a Randomized Trial at a United States Military Academy](#). 2016.
4. Fuchs, T. and Woessman, L. [Computers and Student Learning: Bivariate and Multivariate Evidence](#). 2004.
5. Malamud, O. and Pop-Eleches, C. [“Home Computer Use and the development of Human Capital”](#). 2010.
6. Vigdor, J. and Ladd, H. [Scaling the Digital Divide: Home Computer Technology and Student Achievement](#). 2010.
7. Levitin, D. [Why the Modern World is Bad for Your Brain](#). 2015.
8. Welford, A. [Single Channel Operation in the Brain](#). 1967.
9. Wood, E., Zivcakova, L., Gentile, P., et al. [Examining the impact of off-task multi-tasking with technology on real-time classroom learning](#). 2012.
10. Niccoli, A. [Paper or Tablet? Reading Recall and Comprehension](#). 2015.
11. Jabr, F. [The Reading Brain in the Digital Age: The Science of Paper vs. Screens](#). 2013.
12. Darling, N. [Step Away from the Keyboard: How our Hands affect our Brains](#). 2014.
13. Mueller, P. and Oppenheimer, D. [The Pen Is Mightier Than the Keyboard: Advantages of Longhand Over Laptop Note Taking](#). 2014.
14. Sigman, A. [Time for a View on Screen Time](#). 2012.
15. Tamana, S., Ezeugwu, V., Chikuma, J., et al. [Screen-time is associated with inattention problems in preschoolers: Results from the CHILd birth cohort study](#). 2019.
16. Ra, C., Cho, J., Stone, M., et al. [Association of Digital Media Use With Subsequent Symptoms of Attention-Deficit/ Hyperactivity Disorder among Adolescents](#). 2019.
17. Page, A. [Children’s Screen Viewing is Related to Psychological Difficulties Irrespective of Physical Activity](#). 2010.
18. Kaneshiro, N. [Screen time and children](#). Reviewed: 2019.
19. Harvard Health Letter. [Blue light has a dark side](#). 2012.
20. National Sleep Foundation. [Screen Time and Insomnia, What it Means for Teens](#) and [How Blue Light Affects Kids & Sleep](#). 2019.
21. Oshima, N., Nishida, A., Shimodera, S., et al. [The Suicidal Feelings, Self-Injury, and Mobile Phone Use After Lights Out in Adolescents](#). 2012.
22. USC Roski Eye Institute. [Incidence of Childhood Myopia on the Rise](#). 2016.
23. Dunckley, V. [Reset Your Child’s Brain: A Four-Week Plan to End Meltdowns, Raise Grades, and Boost Social Skills by Reversing the Effects of Electronic Screen-Time](#). 2015.
24. Dunckley, V. [Gray matters: Too much screen time damages the brain](#). 2014.
25. Turkle, S. [Reclaiming Conversation: The power of talk in a digital age](#). 2016.
26. Uhis, Y., Michikyan, M., Morris, J., et al. [Five days at outdoor education camp without screens improves preteen skills with nonverbal emotion cues](#). 2014.
27. Cash, Hilarie, Rae, C., Steel, A., et al. [Internet Addiction: A Brief Summary of Research and Practice](#). 2012.
28. Common Sense Media. [New Report Finds Teens Feel Addicted to their Phones, Causing Tension at Home](#). 2016.
29. Bilton, N. [Steve Jobs was a Low-Tech Parent](#). 2014.
30. Richtel, M. [A Silicon Valley school that doesn’t compute](#). 2011.
31. Akhtar, A. [Bill Gates and Steve Jobs Raised Their Kids Tech-free, and It Should Have Been a Red Flag](#). 2019.



SCREEN SCHOOLED

TWO VETERAN TEACHERS EXPOSE HOW TECHNOLOGY OVERUSE IS
MAKING OUR KIDS DUMBER

Joe Clement
and
Matt Miles

Educational Technology

- \$500 billion market that's largely been untapped
 - Rupert Murdoch, NewsCorp
- “Wary of claims that a digital generation is overthrowing culture and knowledge as we know it and that its members are engaging in new media in ways radically different from those of older generations”
 - Dr. Mizuko Ito, Humanities Research Institute at the University of California, Irvine
- “The findings show that young people’s engagements with digital technologies are varied and often unspectacular – in stark contrast to popular portrayals of the digital native.”
 - Dr. Neil Selwyn, the Institute of Education at the University of London
- "Screens in Schools Are a \$60 Billion Hoax”
 - Dr. Nicholas Kardaras, psychotherapist

Usage

- “Kids today are being controlled by smartphones, and becoming enslaved by them.”
 - Ryuta Kawashima, professor Tohoku University
- American teenagers (13- to 18-year-olds) average about nine hours (8:56) of entertainment media use, excluding time spent at a school or for homework. Tweens (8- to 12-year-olds) use an average of about six hours’ (5:55) worth of entertainment media daily.
 - 97% of teens’ time on technology is spent passively consuming entertainment media.
 - 16 minutes of which are spent using their technology for school work
 - Children are presently using 4-5 times the amount of technology recommended by pediatric experts.
 - The Common Sense Census: Media Use by Tweens and Teens
- In a week, the average teenage boy will:
 - watch 50 pornographic videos
 - spend an average of 44 hours in front of the television and computer screen
 - spend an average of 30 minutes in a one-to-one conversation with his father.
 - Dr. Philip Zimbardo, psychologist and professor emeritus at Stanford University
- Experts estimate that the average young person will be spending 10,000 hours gaming by the age of 21. To put this in context, it takes the average college student half that time – 4,800 hours – to get a bachelor's degree.
 - Dr. Jane McGonigal, Director of Games Research and Development, Institute of the Future
- Virtually every gaming app available today is designed using research conducted by neuroscientists for the purpose of making the games addictive.
 - Neuro-imaging shows that digital gaming has similar dopamine release as an injection of meth.
 - Dr. Richard Freed, psychologist and author of *Wired Child*

Cognitive Function/Multitasking

- Studies conducted with brain scans showed that technology use of greater than 5 hours per day was consistent with neurological “pruning” of tracks to the prefrontal cortex, known for executive functioning and impulsivity control.
 - Iowa State University and National Institute on Media and the Family
- Half of teens say they "often" or "sometimes" watch TV (51%), use social media (50%), text (60%), and listen to music (76%) while doing homework.
 - The Common Sense Census: Media Use by Tweens and Teens

- “People who chronically multitask show an enormous range of deficits... They can't manage a working memory. They're chronically distracted. They initiate much larger parts of their brain that are irrelevant to the task at hand. And even – they're even terrible at multitasking.”
 - 98% of people are incapable of doing two activities at the same time.
 - The average student at Stanford uses 3-4 devices at a time.
 - Dr. Clifford Nass, Sociologists Stanford University
- Participants who multitasked on a laptop during a lecture scored lower on a test compared to those who did not multitask, and participants who were in direct view of a multitasking peer scored lower on a test compared to those who were not. The results demonstrate that multitasking on a laptop poses a significant distraction to both users and fellow students and can be detrimental to comprehension of lecture content.
 - Dr. F.W. Sana, et al., “Laptop multitasking hinders classroom learning for both users and nearby peers”

Mental Health

- Study shows heavy digital users are more likely to get into trouble a lot, be sad or unhappy, and be bored.
- 10-11-year-olds who used electronics for 2+ hours suffered more psychological distress than kids who use less.
- “The overuse of technology isn't the only problem, it's the experiences that are fundamental to healthy development that are being replaced by the overuse of technology.”
 - Dr. Richard Freed, psychologist and author of *Wired Child*
- Excessive technology use has been associated with:
 - historically low rates of human empathy
 - decline in the number of real-life relationships
 - increased depression
 - increased anxiety
 - increased suicidal thoughts
 - increased attention deficit
 - autism/autism-like behavior
 - increased aggression and hostility
 - increased rates of childhood bipolar disorder
 - dysfunctional coping skills
 - worse academic achievement
 - problems with verbal memory
 - low wellbeing and high loneliness
 - problems sleeping
 - psychosis
 - seizures
 - The National Institutes of Health (Bristol University 2010, Mentzoni 2011, Shin 2011, Liberatore 2011, Robinson 2008)

Technology in Schools

- Banning cell phones in school:
 - is the equivalent of adding a week to the school year.
 - had a 6.4% improvement on test scores; underachieving students increased by 14%
 - London School of Economics
- The more schools invest in technology, the less likely children are to pay attention and learn.
 - Dubbed the “Learning Paradox”
 - Cris Rowan 2010
- “The introduction of home computer technology is associated with modest, but statistically significant and persistent negative impacts on student math and reading test scores. Further evidence suggests that providing universal access to home computers and high-speed Internet access would broaden, rather than narrow, math and reading achievement gaps.”
 - J.L. Vigdor 2014

Please join us on “Beyond the Screens” on Google Communities, PaleoEducation.com, and look for our book, *Screen Schooled*, available now in bookstores and Amazon.



screens in schools action kit

With profound thanks, we honor these volunteer contributors for their tenacity, dedication and courage to create the original documents. Taking on this critical issue and providing tools to parents and teachers represents hope for generations of learners to come.

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