

City University of New York (CUNY)

## CUNY Academic Works

---

Student Theses

College of Staten Island

---

Fall 12-4-2022

### Children and Technology: Why Technology is Important for our Children

Jill MacTiernan

*CUNY College of Staten Island*, [Jill.lifschitz1@cix.csi.cuny.edu](mailto:Jill.lifschitz1@cix.csi.cuny.edu)

[How does access to this work benefit you? Let us know!](#)

More information about this work at: [https://academicworks.cuny.edu/si\\_etds/11](https://academicworks.cuny.edu/si_etds/11)

Discover additional works at: <https://academicworks.cuny.edu>

---

This work is made publicly available by the City University of New York (CUNY).

Contact: [AcademicWorks@cuny.edu](mailto:AcademicWorks@cuny.edu)

Children and Technology: Why Technology is Important for Our Children

Jill MacTiernan

Project Submitted in Partial Fulfillment of the Requirements for the Degree of  
Master of Arts in Liberal Arts in Liberal Studies

College of Staten Island, CUNY

November 20, 2022

## Thesis Abstract

Many people get scared when they hear about how much technology runs the world today. They tend to get frightened when they go to a store and have to use a self-checkout instead of a cashier. Parents are scared of the dangers of the internet and how it will affect their children, so they tend to try to prevent/limit their children's usage of the internet and other technologies. However, that may not always be the right move. Technology can not be avoided; it is a part of our everyday lives.

With proper guidance and teachings, children can learn how to safely use technology and use it to succeed in many different aspects of life. It can be an irreplaceable tool in their academic studies as well as developing social skills. My thesis discusses its advantages and illustrates why it is so important for children to learn about technology as they grow up.

## Introduction

In modern day culture, technology runs the world. It is in our daily lives. Our lives revolve around cell phones and computers. We are in constant communication with each other by text message. People find out personal updates about each other from updates on social media, not by direct communication anymore. In the supermarkets, people can check out by a self-checkout machine, instead of a cashier. Bills are paid with one click of the mouse to a computer or a touch of our fingers on a smartphone.

This is the world children are growing up in. Our children in today's society and of the future will never understand simple concepts such as people mailing handwritten checks by a certain date or sitting near a wall talking on a landline phone that is connected to a wall with rotary dials and if someone was using the phone, no other calls could be received. The person calling would receive a busy signal. People would run home to make and receive phone calls. These are only a couple of examples that used to be a part of everyday life that have changed drastically due to technology.

Our lives have become much simpler due to these technological advances. We save time on doing errands such as paying bills. We are able to be in constant communication while living our daily lives. People can conduct major banking transactions such as opening/closing accounts, applying for loans, etc., without ever stepping into a bank. Items can be purchased on applications and prescriptions can be ordered electronically through the internet. We can be at home taking care of a home and children while shopping online for necessities, paying bills, banking, and communicating with others, even on video if we want. We are now capable of multitasking like never before.

It has been that way for a while now as technology started to really expand in this 1990s. Before that time when someone needed information, they went to a library and read books. They would use books such as the encyclopedia, etc. When people would search for jobs, they would buy a newspaper and look for employment in the classifieds section. If a person wanted to find a store, they would look in the yellow pages and if they wanted directions they would read a map. In the modern world, when we want to know any of this type of information, we take out our smart phones. We find out the information we need almost instantly through an internet search or vocally asking our smart phones. It has been this way since smart phones were invented and became more common. “The information and resources on the Internet are now integral features of daily life for most Americans.” (Rideout, Katz, 3)

### Understanding Technology is Crucial in Modern Society

People may worry that children growing up in a world that is dominated by technology which is constantly advancing will negatively effect children, but I strongly disagree with that. I think technology is a great thing for children to have access to and to learn how to operate while growing up. It is important for children to understand how all of the modern-day technology works in order to keep up with the modern-day world. When a person is not good with technology, finding phone numbers, directions, and other information are complicated. As technology advanced, people stopped reading maps and the yellow pages. “Being connected to the Internet has become all the more essential as helpful resources for accomplishing these tasks have migrated online.” (Rideout, Katz, 2016, p. 3) If a child does not properly understand how to use technology it can affect

their future. Understanding technology is crucial to working in modern society. It is a necessity in life.

In modern society, it is very difficult to have a job if you do not know how to use computers and smart phones fluently. Most jobs do not want to hire people who are not fluent in basic and common computer programs such as Microsoft Office, etc. Most aspects of daily life such as paying bills, making appointments, etc., are conducted by the internet through a smart phone or a computer. For example, when you go into a bank to open a new account, you are often told you need to open your new account by yourself online. Many stores are online only. We need it to communicate with each other via phone calls, text message, email. We also apply for jobs online. Many jobs conduct interview online as well.

The COVID-19 pandemic changed the world significantly and greatly increased the importance of technology. Many jobs became remote jobs. A personal example of this is my own job. I have been a full time paralegal since 2014. I had always worked extensive hours, five to six days a week. Technology was always a big part of my job. I always worked on a computer using many different software programs and attended meetings where the presentations used technology. However, we used paper files and meetings were attended in person. However, when the COVID-19 pandemic started, my work computer was brought to my house. My daily routine became: wake up to the alarm from my cell phone and clock in on my computer. While working on my computer as I would in the office, I would need to attend meetings online via Zoom app. I would speak to coworkers on the Zoom app, email, and on the phone. Everything that I previously did at the office with paper (assemble paper files and binders) now has to be done

electronically. This became a necessity to understand if you wanted to stay employed because we were not allowed to go into the office due to the COVID-19 pandemic.

Technology can be an escape for people. Typically people have their homes, their families, and their work. However, as people we need an outlet, a space that we go to for recreation purposes. If someone can not get out of the house often or see people often, it can help them to feel connected to people and the world. People can join online support groups who have similar problems so that they do not feel alone and can provide support to each other. An example of how important this is, an alcoholic could need help to stop himself/herself from drinking, but due to COVID-19 or just an average personal dilemma they can not leave the house to attend an alcoholic anonymous; he or she can go online and talk to others in the same situation for support. This can help save lives.

### Positive Effects that Technology Have on Children

It is important for children to understand how all of the modern-day technology works in order to keep up with the modern day world. When a person is not good with technology, finding phone numbers, directions, and other information are complicated. As technology advanced, people stopped reading maps and the yellow pages. As more and more resources have converted from being on paper to being online, technology is becoming more and more essential. As technology has advanced, the education system has grown with it. “A teacher from the late nineteenth century entering a typical classroom today would find most things quite familiar: chalk and talk, as well as desks and texts, predominate now as they did then. Yet this nineteenth-century teacher would be shocked by the demands of today’s curricula.” (Roschelle, Pea, et al, 2000, p.76). As

society advances in technology and in all aspects of life, more becomes expected of our children to learn.

Children learning technology have many benefits – educational, technology literacy, and entertainment/enjoyment. A study was conducted in March 2020 of 290 parents whose children had access to a smartphone and/or tablet. The researchers asked the parents their opinions of technology in regards to their children. 75.1% of these parents felt the benefits were for the children and 24.9 % felt the benefits went to themselves. 66.9% felt technology gave their children educational benefits (exposure to knowledge, support with school work); 16.2% felt it helped their children achieve technology literacy (understanding how to use technology) – a parent said “She has to understand how such things work in order to fit into society”. 16.2% felt it keeps their children entertained, 7.9% felt it was good for their children’s relaxation. 7.9% felt it was good for their children’s development and focus. A parent said “Use of his tablet keeps him from becoming bored and simply watching TV for extended periods of time.” 22.4% felt it gave themselves (the parents) leisure time. A parent said “I appreciate having a little bit of a break when he’s on the tablet. I can get some work done, or just have a few minutes of silence.” 10.3% like it (technology) because it helps them keep in touch with their children and track their location easier. A parent said “She is able to go to a friend’s home or to the park and I can reach her when I need to.” 6.9% says it helps them get homework support for their children. 0.7% said technology has no benefits and 2.8% had no answer. (Berget, Koster, Krasnova, Turel, 2020)

Computers are a necessity for children. They need to learn to become fluent in them in order to be able to use them as adults to keep up with society. If a child does not



properly understand how to use computers, it can affect their future. Understanding technology is crucial to working in modern society. They also need computers to do school work. They need the internet to conduct research. They need programs such as Microsoft Word to type their homework and Microsoft Excel/PowerPoint to do school projects. In today's educational world, it is very common for students to submit their school work online through the school's websites (instead of printing it and submitting it in person.)

Educators must also be properly trained when it comes to technology so that they are capable of making sure children understand it. Children need to be taught how to use the basic programs for school work and to do basic computer functions. An example of this is attaching a document to an email. Children need to be taught how to do things like this so that it is simple for them to do when they are older. Technology has been expanding for quite some time now.

In 2018, Dr. Neetu Dabas wrote an article about how computers and technology were becoming essential in education. "No doubt, computers have become essential for everyone in every field. Teachers now started using technology like smart classes, LCD projectors, EDUCOM, Laptops, memory sticks in their classroom to make effective learning process. Haddad et al. [5] identify the five levels of technologies which are used in education such as presentation, demonstration, drill and practice, interaction and collaboration". Many major state-wide tests such as SATs, GREs, etc., are also conducted via computers, but at a testing site. If you are not fluent in using computers, it will be very hard for you to take the exam. (Dabas, 2018)

What Dabas wrote about, has only become more relevant as time has gone on and technology has become more advanced. Since 2018, more businesses have advanced to being online mostly or only online. As technology has advanced, it has become more relevant in the education system and in the world. Nearly everyone uses the internet on a daily basis to conduct their everyday lives when it comes to running errands, communicating with loved ones, friends, school, and work.

We have become very used to living like this; many times, we do not even realize what exactly we are doing. When we are communicating with others through text messages and emails, we are writing. When we post on social media, comment on other's social media, and post blogs online, we are writing. For an adult, it is second hand nature as we have been writing our whole lives, but that is not the case for children. Technology helps children practice reading and writing because they have more motivation to do so as it is a big part of their social lives. They do not realize that they are practicing reading and writing; they are just doing it for the social benefit.

In 2008, a study was conducted on how teenagers were communicating using technology. In 2008, social media and smart phones existed, but landlines and phone calls were still more common then. Teenagers who were interviewed said they did not consider instant messaging online, text messaging, and using MySpace (the popular social media website at that time) to be writing because it was not writing with a pen and paper, they felt they were just having conversations. (Lenhart, Arafeh, Smith, 2008)

Writing on computers also helps students learn about grammar. When we type in popular computer programs such as Microsoft Word, it underlines words that are spelled wrong and underlines sentences that are grammatically incorrect. It does not

automatically make the corrections for you, it shows you what is wrong. “For many teens, the ability easily to change, edit, and revise their texts on the fly is one of the clearest advantages of writing on a computer. Nearly six in ten teens (57%) say they edit and revise more when they write using a computer compared with when they write by hand.” (Lenhart, Arafeh, Smith, 2008) While students learn how to write and about the English language in school by teachers, practicing on the computer can help them a lot. We tend to remember more by practicing and repeating things.

There are many apps in modern technology that are educational and can be accessed on smart phones and tablets (no actual computers needed) for free. Google maps is an app that people use daily for its GPS to give them directions as they drive. However, it also has educational benefits for children. “The detail and accuracy of the app can also help build upon children’s sense of place associated with their homes and expand it to include surrounding areas.” Maps teach students about geography, the world, and water bodies. Google Expeditions also teaches students about the world through virtual reality. “Google Expeditions is a wild app that treats users to science learning through augmented and virtual reality experiences.” These apps are educational, free, and can be used as tools to teach children. (Pacheor-Guffrey, 2020)

Accessing different applications, games, computer programs, and all that technology has to offer at a young age can be helpful to encourage children to do different types of things. “As more children access digital technologies sooner, engage in a greater variety of activities using such technologies and in different contexts the perceived importance of understanding the effects of technology use grows and

guidelines designed to reduce harm and promote benefits proliferate.” (Vedechkina, Borgonovi, 2021, p.2) It can help children get excited about learning and make it fun.

Computers/Technology are harder for children of low-income families because they are expensive – How does this affect their school work?

School can be harder for children of families with low income. They usually live in bad neighborhoods and attend schools that do not have many resources. “Because digital devices and the Internet have become so essential, digital inequality can exacerbate and economic inequality as well. Therefore, it is critical that we understand how low and moderate income families in the U.S. are engaging digital technologies and how they perceive the opportunities- and potential risks- that these innovations present for their children.” (Rideout, Katz, 2000, p.4)

Children who have access to computers at home are less likely to be interested in using them in school. “Interestingly, teachers in economically disadvantaged schools are as likely to report that their students use computers on a weekly basis as are teachers in more advantaged schools.” (Becker, 2000, p. 48) Children who grow up with privileges such as access to the latest technology at home are less likely to understand how it is a privilege to access technology at school for free. A child who lives in poverty is excited to have this access at school because they will not have this at home. A child living in poverty is more likely to understand that learning this technology is essential for their future, wherein a child who is not may not be as interested.

They are also more likely to use it more for academics than their personal interests. “Children from low – and moderate- income families use computers and the

internet for a variety of educational activities, but those without home access are less likely to go online to pursue their interests.” (Rideout, Katz, 2016, p. 6) In 2016, Rideout and Katz’s study show that 81% of 10 to 13 year olds use computers for homework.

### The Effects of COVID-19 on Education

As I have previously mentioned, COVID-19 has had a major effect on the world and technology. It has made technology even more relevant in modern society due to places not being able to conduct in person business. People became scared to leave their homes as COVID-19 was a brand-new disease that was causing the deaths of millions of people worldwide. A majority of businesses closed down causing everyone to have to do things through technology, even people who tried to resist technology. “The digital world is also quickly replacing the physical world as the host site for many of our most important daily activities.” (Culatta, 2021, p.3) This especially applies to schools. School was a place for children to go everyday for a certain number of hours, which differed depending on the school and age. “As the world grappled with the reality of the COVID-19 pandemic, it also led us to reset our expectations for what types of activities we could do as (or more) successfully in online spaces. We have now become a digital workforce, with the majority of professionals reporting to work in the virtual world.” (Culatta, 2021, p.3)

Due to the COVID-19 pandemic it was not safe for the students and staff to be conducting school activities in person. Therefore, all classes had to quickly stop being held in person to being held remotely through an application called Zoom. Zoom is a video chat application. This was a very fast unexpected change for many families.

Having access to technology to access classes was essential for children and their families.

For families that had access to technology such as smart phones, tablets, and computers, this was an easy adjustment. Their children know how to use technology and are used to using it independently. For families that are not well educated in technology usage or have children with special needs – it was not an easy adjustment. The same goes for adults whose jobs were quickly moved to being remote in response to the COVID-19 pandemic. It was and still is very important for parents to know how to operate technology to help their children who are going through this transition. Adults in today's society did not grow up with technology like the children in today's society. If all children were properly taught technology before the pandemic, it would have been an easier transition for some of the struggling parents. It is also important that educators properly understand technology to teach it to students. If educators do not understand it, it can not be expected that the children will.

Technology helped and continues to help children and parents with the anxiety of COVID-19. In November 2020, a study was conducted by Michelle Drouin, Brandon T. McDaniel, Jessica Pater, and Tammy Toscos that analyzed parents' perceptions of their own and their children's use of social media and other types of communication technology in the beginning stages of COVID-19 in the United States. "Social media is not the only technological medium by which people connect during crisis. Many modern-day interactions are conducted via phones and computers, such as video chats, phone calls, and text messages. Thus, use of technology, generally, might also surge during

times of crisis, and people may consider their phones critically important for staying connected.” (Drouin, McDaniel, Pater, Toscos, 2020)

There have been other disasters in the United States that have shown that having updated technology to communicate with each other is very important such as the shooting at Pulse nightclub in Orlando, Florida in 2006. A gay night club was attacked by a shooter. Many people died and were injured. Survivors were able to call for help and let loved ones know that they were ok with cell phones, using them in different ways to communicate such as calling, texting, vide chatting, and messaging on various apps. “In sum, social media is a powerful source of information and social support for those in crisis. Considering the widespread popularity and increased use of social media (and technology, generally) among both parents and children during the COVID-19 pandemic, we assert that public health and disaster-relief campaigns that are thoughtfully designed and targeted for specific age groups are promising routes for providing informational and emotional support during crisis.” (Drouin, McDaniel, Pater, Toscos, 2020)

The COVID-19 pandemic was especially hard on children of lower income families. Many of them did not have access to the technology needed to access Zoom. “Maria is a student in the Coachella Valley Unified School District, where 90% of the children are from low-income families. She didn’t have a computer, so she and her mother tried using a cellphone to access her online class, but the connection kept dropping, and they gave up after a week. She did worksheets until June, when she at last received a computer, but struggled to understand the work. Now, as school starts again online, she has told her mother she’s frustrated and worried.” (Esquivel) There are many students like Maria out there.

There are schools that give out laptops to students in order for them to learn how to use them and complete their school work on them. The Michael J. Petrides School in Staten Island gives every student a laptop. Therefore, what technology the student has access to at home is never an issue. They can learn how to fluently operate the laptops and do all of their school work anywhere on their laptops. There are many other schools like this, but not enough.

There are programs that help low income families get WIFI and computers. The *On It Foundation* donates computers to low income families. “To date, the On It Foundation has donated over 2000 free computers to low-income families with school-age children in grades K-12. We have also provided over 7500 volunteer hours of computer training to the recipients of our computers.” (theonitfoundation.org) The *Affordable Connectivity Program* helps low income families get affordable WIFI for their homes. “The Affordable Connectivity Program is an FCC benefit program that helps ensure that households can afford the broadband they need for work, school, healthcare, and more.” (<https://www.fcc.gov/acp>) People who are members of households that are below the Federal Poverty Guidelines are eligible for the program. There are many programs that mirror these in order for households to be able to afford the internet.

### How Technology Can Help Students with Disabilities

Life can be very hard for children with disabilities. There are many different children with different types of disabilities around the world. There are physical disabilities and mental disabilities. Children with physical disabilities may often feel misplaced in the world. For example, if a child can not walk, they will not be able to participate in many sports such as basketball, baseball, soccer, etc. Despite there being



activities available to them, children with physical disabilities miss out on many things socially and physically. “Participation in activities is the context in which people form friendships, develop skills and competencies, express creativity, achieve mental and physical health, and determine meaning and purpose in life. Children with disabilities tend to be more restricted in their participation than their peers: a gap that widens as children become adults.” (Murphy, Carbone, Council, 2011, p.1)

However, technology can help children with physical disabilities. Some children can not leave the house due to their disabilities for various reasons. Technology is helpful to them. They can receive healthcare through telehealth and Mhealth. Telehealth is when you attend all different types of doctor’s appointments virtually by the use of any technology. Mhealth is when you use mobile devices such as smartphone and tablets to access healthcare. These children who can be already uncomfortable in their own skin, can access the healthcare that they need while being in the comfort of their own homes.

They can access social groups to receive support from other people like themselves or use technology as an escape. If a child has a disability that prevents them from doing anything, technology such as television, games, and social networking can provide them with entertainment. They can access virtual reality and other games to keep their mind busy.

Technology with medical equipment is always advancing just like technology that we use in our average everyday lives. This type of technology is referred to as assistive technology. Assistive technology allows disabled people perform functions that they physically are not able to without the technology. There are stair climbing power chairs that help people wheel chair bound get up and down stairs. There are also smart watches

that monitor people's health and can be synced to cell phones so calls and texts can be received through the smart watch. Sometimes children are born with hearing issues, they can use hearing aids to hear. Technology has advanced and they can have surgery to receive cochlear implants. Without that technology, a child born with hearing issues would have never been able to hear. There are also many different computer software's that help children with disabilities in school.

Assistive technology can have a great impact on a disabled child's quality of life. Simple things in an average person's daily life can be a struggle for them. Assistive technology can make a huge difference. It can be very useful to teachers and children in Special Education. "Technology could play an important and significant role, in many cases, in helping students with disabilities overcome the academic difficulties that they face and helping them to develop their academic skills as well." (Alnahdi, 2014, p.3) Using assistive technology while teaching students in special education, can prepare them for their adult lives and how to live on their own while utilizing technology. Children with disabilities need to be prepared to live fully functioning adult lives on their own to the best of their ability. The more technology they are taught to utilize, the better chance they have to achieve that goal.

For example, the famous scientist, Stephen Hawking had Lou Gehrig's disease. He lost control of all of his muscles. Due to technology, he was able to get around in a powered wheelchair and communicate through a speech synthesizer.

## Counterarguments

Despite technology being such a vital part of our everyday lives, I do recognize that it can be dangerous, especially to children. They can face all sorts of cyberbullying, catfishing, and aggression. There are many different types of cyberbullying.

“Cyberbullying involves sending or posting harmful or cruel text or images using the Internet (e.g, instant messaging, e-mails, chat rooms, and social networking sights) or other digital communication devices, such as cell phones. It can involve stalking, threats, harassment, impersonation, humiliation, trickery, and exclusion.” (Feinberg, Robey, 2009, p.S4H15-1) This can lead to a child becoming depressed. It could lead to them harming themselves or even worse – committing suicide. Strangers can pose as children and lure children into dangerous situations. It is also very scary at just how much information can be accessed. Pornography and other inappropriate information are available through the internet. Every type of information is accessible online. There are many scams on the internet that lead to identity theft.

Technology can also be bad for our health. Spending too much time at a computer or playing video games can lead to tendonitis and posture issues. It can lead to a child becoming an unhealthy weight because they are sitting around all day playing on the computer. “Screen time also takes them away from physical activity and that increases the risk of them becoming overweight. This is a serious concern, because COVID-19 lockdowns, and other restrictions, have increased the proportion of children classified as physically inactive.” (Korthonen, 2021)

Their social skills and relationships can be negatively affected as well. Over usage of technology can prevent them from developing friendships in person and can possibly

cause them to be used to being alone. “Children might get used to being alone and lose the desire to engage with their parents or even friends, outside the internet. Often the virtual reality of their devices is more appealing and entertaining than the physical reality.” (Nechtem Associates, 2021)

### Arguments against Counterarguments

Despite all of these valid negative effects of technology, technology is present everywhere in everything no matter what you do and what your lifestyle is. “Technology is virtually in every home in one way or another: about 96% of Americans have a TV and 94% of children ages 3 to 18 have internet access either through a computer or smartphone.” (Nechtem Associates, 2021) Despite there being so much dangerous information available on the internet, there is even more useful information. “Therefore, it’s important for parents to be mindful of how their children use technology and the potential effects – both positive and negative.” (Nechtem Associates, 2021)

There are laws that help parents to protect children on the internet. In April 2000, The Children’s Online Protection Act (COPPA) was passed. The rule applies to children under 13 and its purpose is to place parents in control over what personal information such as their name, address, phone number, social security number, pictures are collected from their young children online. It applies to online services and commercial websites. If a parent finds out that this has been violated, they can report it to the Federal Trade Commissioner. This all must be included on the website’s personal privacy statement. If it does not, they are in violation of COPPA. COPPA requires that parents can access user records, profiles and login information of their children if they request it.

Britain is cracking down on internet security to protect children. They passed a new regulation called *Age-Appropriate Design Code*. This regulation holds companies accountable to protect children. It makes websites and apps turn on the highest possible privacy settings by default for minors. It limits the amount of data companies can collect from young users. It is still unknown how effective this is and how it will be monitored. Due to this, Congress in America is discussing updating COPPA.

Senator Markey and Congresswomen Castor have introduced COPPA 2.0, *The Children and Teens' Online Privacy Protection Act of 2021*. In 2021, when this act was proposed, it included: "Build on COPPA's consent requirements by prohibiting internet companies from collecting personal information from users who are 13 to 15 years old without the user's consent; Ban targeted advertising (as opposed to contextual advertising) directed at children; Establish a "Digital Marketing Bill of Rights for Teens" that limits the collection of personal information of teens; Revises COPPA's "actual knowledge" standard to a "constructive knowledge" standard so that websites that should reasonably know that kids are on their websites need to get consent in order to collect children's data; Create an "Eraser Button" for parents and kids by requiring companies to permit users to eliminate personal information from a child or teen when technologically feasible; Establish a Youth Marketing and Privacy Division at the Federal Trade Commission (FTC); Require online companies to explain the types of personal information collected, how that information is used and disclosed, and the policies for collection of personal information; Require that internet connected devices targeted toward children meet robust cyber security standards; Require manufacturers of connected devices targeted to children and minors to prominently display on their

packaging a privacy dashboard detailing how information is collected, transmitted, retained, used, and protected; and Commission reports on the effectiveness of the COPPA safe harbor program.” (<https://www.markey.senate.gov/news/press-releases/senators-markey-and-cassidy-propose-bipartisan-bill-to-update-childrens-online-privacy-rules>)

The COPPA 2.0 proposal has been passed through the Senate and is continuing to advance.

It is important that parents communicate with children regarding internet safety, cyberbullying, and the effects technology can have on their health. Sometimes, children just need guidance on making time for both technology and physical activities. Despite the risk that a child socializing through technology can cause them to develop social issues and difficulty making and maintaining friends in person, it can also lead them to finding support online. There are many support groups online for people with different issues to join to form a community. It can also help them find educational assistance.

Socializing online can always bring up the risk of being catfished (when someone is pretending to be someone else online) and losing money or your identity stolen. However, real friends and love can be found online. I went to high school with a girl who began talking with a guy who claimed to be her age in the United Kingdom on a forum for people who love the gothic lifestyle. They talked online and on the phone for four years. After four years, they decided they wanted to meet in person. Their parents spoke to each other on the phone and the guy came to the United States and met her along with her family. They are now married with children. This would not have been possible without technology. Her parents monitored her talking with him and vetted the situation.

Socializing online can also give children a way to keep in touch with friends and family that live far away. “Also, kids can interact with others in their age group while playing games online and learn to play as a team.” (Nechtem Associates, 2021) As long as the necessary precautions are taken, socializing online can be a positive thing.

### Helping the Children Properly Understand Technology

As scary as the dangers of technology are, technology is important because it can not be avoided. Therefore, it is important that parents, educators, and caregivers do their best to teach children about technology and help them learn the positives of it while navigating through the negatives of it. “Our conversation needs to be broader than just online safety and should focus on positive attributes that our kids can emulate and practice and, in so doing, improve our communities and build healthy virtual relationships.” (Culatta, 38, 2021) Richard Culatta wrote a book called “*Digital for Good; Raising Kids to Thrive in an Online World*”. Culatta presents five attributes to use when teaching children how to navigate the world of technology. They are balanced, informed, inclusive, engaged, and alert. “The task of keeping up with all the potential virtual spaces where our children may be involved can seem daunting. But like most of our digital conversations, this gets easier as we apply these same five attributes to our own digital habits and spend time understanding what our children are experiencing.” (Culatta, 39, 2021) If you understand technology and understand the popular apps that children use etc., it will be easier to understand how to help your child use them positively and filter out the negatives.

The first attribute Culatta discusses is balance. “Balance digital citizens participate in a variety of online activities and make informed decisions about how to

prioritize their time in virtual and physical spaces.” (Culatta, 38) Balance is important with everything in life, especially technology. We need to spend time in the technology world, but we also need to do other things in the real world as well. This applies to everything, as too much of anything can be unhealthy. Many parents choose to limit children’s time of how much technology they can use per day.

However, something to keep in mind is, there are many different forms of technology. For example, a teenager could need to use a computer to do research and type his homework on. On the same day, he could need his cellphone to call a long distance family member and use an app on his cell phone to order food if his parents are coming home late from work. After a good day’s work, the teen may want to play a video game or watch a television show. This may add up to a lot of hours using technology, but it is a balance of useful technology.

Culatta suggests it is good to introduce children to new technology and apps to help them maintain a good balance with their technology use. Besides helping maintain a good balance, it also helps keep their technology use safe as you are introducing them to safe apps instead of them getting bored and discovering more dangerous apps/websites. “If we don’t ever recommend new apps for our children to try, then we can’t really be too frustrated if we don’t like the digital media they choose on their own. (Culatta, 48) Every child is different with different interests so it is important to keep that in mind when choosing safe technology to introduce them to.

It is also important to encourage children to take breaks, especially on days where they are using a lot of technology. It can be easy for anyone to get wrapped in it. Culatta recommends instead of taking away the device that the child is using and forcing them to



take a break, to suggest a break and making sure that they know they are not in trouble. He also suggests creating a schedule of activities such a device-free meals. It is where no one can bring devices to the dinner table (or whatever meal you are choosing to do). It also important to remain positive and allow the child to have a say in these plans.

The next attribute Culatta discusses is informed. “Informed digital citizens evaluate the accuracy, perspective, and validity of digital media and have developed critical skills of curating information from the digital world.” (Culatta, 38) This increases the importance of why parents, caregivers, and educators need to be up to date on how to use technology. If we do not know how to use it, we can not teach it. Culatta discusses three things we can do to help children understand technology; they are *asking good questions, choosing the best source, and evaluating the usefulness.*

When we do research, the most common way to do it, is to use the website *Google*. There are other search engines, but *Google* is the most common. There are different ways to use search engines, the questions and keywords have to be formed in particular orders. They also have options for advanced searches. “When I was searching with my son to learn more about the brown marmorated stink bug, I explained that a good question might be ‘How many species of bugs are there in the world?’ because if I searched for just ‘how many bugs,’ Google might have thought I was talking about the total number of bugs in the world.” (Culatta, 73)

When searching the internet for research, there will be millions of sources. However, not all of them will be credible. Anyone can post anything on a website; we have to teach children to make sure that the information is legitimate. For example, a very common source is Wikipedia. Anyone can post anything on Wikipedia; it is not

dependable and legitimate. However, academic sources are dependable. Teaching this, is an important part of teaching children how to navigate technology because it will be useful in their academic studies. We also must evaluate the usefulness of the sources. You may search for something and find a source, but once you read it, you may realize it does not make sense or that it contradicts other dependable sources. Sometimes, it could be a scam. If a source asks you for money and/or personal information, there is a big chance it isn't legitimate. "Digital media that are trying to sell something might be highly valuable if we're looking to make a purchase, but less so if we're looking for unbiased facts." (Culatta, 74)

Another attribute Culatta mentions is inclusive. "Inclusive digital citizens are open to hearing and recognizing multiple viewpoints and engaging with others online with respect and empathy." (Culatta, 38) Earlier, I discuss cyberbullying/dangers of strangers and peers online . However, there are other challenges besides cyberbullying that come with communicating with others online. People have different opinions. Sometimes your child may post something online and people may disagree or even have evidence it is wrong. People can be disrespectful. We can teach children not to participate in behavior like that and to stand up for others, instead of ignoring it. "Being inclusive online requires taking actions to make sure others feel safe and respected in virtual spaces as well. All the responsibility should not be on the potential victim to stop intolerance. Alert digital citizens how to switch from being bystanders to upstanders." (Culatta, 98)

The next attribute is engaged. "Engaged digital citizens use technology and digital channels to solve problems and be a force for good in their physical and virtual communities." (Culatta, 38) There are different ways to be engaged. You are being

engaged in the online community as long as you are doing something to help others using technology. You can let others know about crimes through the internet. For example, many neighborhoods have social media pages and various online groups that are for people in the same neighborhoods. Let's say, something happens to someone such as a gang slashes their tires. You can use technology to help spread the word by posting about this on social media pages and you can do it anonymously. It helps to warn others and prevent it from continuing.

You can also use technology to spread the word about charities and people in need. For example, I know a family whose three year old daughter is being treated for cancer. People are collecting money for them due to this hardship. The collection is posted online and the money is being collected online. This is typically done on the website [gofundme.com](http://gofundme.com) and it can be shared on social media websites. Spreading good and bad updates about people and family members help strengthen relationships and keeps people engaged within the virtual community.

The next attribute is alert. "Alert digital citizens are aware of their digital actions and know how to be safe and create space for others online." (Culatta, 39) As I discussed earlier, there are scams on the internet. It is important that we remain alert and cautious while browsing the internet. We must teach children and others while teaching about technology in order to prevent others from theft of their personal information and viruses in their devices. There is software that can be purchased which helps to protect people from these dangers. "When it comes to online safety, the most fundamental technical problem is a web-filtering service. A web filter service is software that identifies dangerous and inappropriate websites and blocks from being accessed by computers and

mobile devices on the network.” (Culatta, 127) Some examples of web filtering software are Nortons and McAfee.

When teaching children technology, it can be very overwhelming to both of you at first. It is a lot of responsibility and so much to discover for the child. It is scary for the caregiver as well because of all the risks that come with the benefits. A big way to keep this under control is using parental blocks. Most technology has it – smartphones, computers, televisions, etc. With this, caregivers can block children from accessing dangerous technology such as websites, movies, etc.

### Conclusion

It is of the utmost importance that children are taught how to use all types of technology for school and everyday living. Technology is always changing and advancing, it is important that children are learning how to use it as it is advancing. If they do this, they will always be up to date on it to use for school, future jobs, and daily living. If they do not, it will be harder for them as adults as technology is in our everyday lives.

## References

- Abi-Jaoude, Elia, Karline Treurnicht Naylor, and Antonio Pignatiello. "Smartphones, social media use and youth mental health." *Cmaj* 192.6 (2020): E136-E141.
- "Affordable Connectivity Program" Retrieved July 31, 2022 from <https://www.fcc.gov/acp>
- Alnahdi, Ghaleb. "Assitive Technology in Special Education and the Universal Design for Learning." 2014 Accessed May 1, 2022 <https://files.eric.ed.gov/fulltext/EJ1022880.pdf>
- Becker, Henry Jay. "Who's Wired and Who's Not: Children's Access to and Use of Computer Technology." *The Future of Children*, vol. 10, no. 2, Princeton University, 2000, pp. 44–75, <https://doi.org/10.2307/1602689>.
- Bergert, Cora, et al. "Missing Out on Life: Parental Perceptions of Children's Mobile Technology Use." *Wirtschaftsinformatik (Zentrale Tracks)*. 2020.
- Charles Nechtem Associates. "The Impact of Technology on Children." 2021. Accessed May 1, 2022 [https://www.cerritos.edu/hr/\\_includes/docs/August\\_2021\\_The\\_Impact\\_of\\_Technology\\_on\\_Children\\_ua.pdf](https://www.cerritos.edu/hr/_includes/docs/August_2021_The_Impact_of_Technology_on_Children_ua.pdf)
- "Complying with coppa: Frequently asked questions." Federal Trade Commission. (2022, January 28). Retrieved February 14, 2022, from <https://www.ftc.gov/tips-advice/business-center/guidance/complying-coppa-frequently-asked-questions>
- Culatta, Richard. "Digital for good: Raising Kids to Thrive in an online world." Harvard Business Review Press, 2021.
- Dabas, Neetu. "Role of computer and information technology in education system." *International Journal of Engineering and Techniques* 4.1 (2018): 570-574.
- Drouin, Michelle , McDaniel, Brandon T., Pater, Jessica, and Toscos, Tammy. How Parents and Their Children Used Social Media and Technology at the Beginning of the COVID-19 Pandemic and Associations with Anxiety. *Cyberpsychology, Behavior, and Social Networking*. Nov 2020.727-736. <http://doi.org/10.1089/cyber.2020.0284>
- Du, Janxia, William Sansing, and Chien Yu. "The Impact of Technology Use on Low-Income and Minority Students' Academic Achievements: Educational Longitudinal Study of 2002." *Association for Educational Communications and Technology* (2004).
- Edyburn, Dave. (2000). Assistive Technology and Mild Disabilities. *Special Education Technology Practice*.
- Escueta, Maya, et al. "Upgrading education with technology: Insights from experimental research." *Journal of Economic Literature* 58.4 (2020): 897-996.

Esquivel, Paloma; Blume, Howard; Poston, Ben; Barajas “A generation left behind? Online learning cheats poor students, Times survey finds” *Los Angeles Times*. Accessed January 14, 2022. <https://www.latimes.com/california/story/2020-08-13/online-learning-fails-low-income-students-covid-19-left-behind-project>

Feinburg, Robey, *Cyberbullying: Intervention and Prevention Strategies*. National Association of School Psychologists. 2009.

Goldschmidt, Karen. "The COVID-19 pandemic: Technology use to support the wellbeing of children." *Journal of pediatric nursing* 53 (2020): 88.

Grewenig, Elisabeth, et al. "COVID-19 and educational inequality: How school closures affect low-and high-achieving students." *European economic review* 140 (2021): 103920.

Morgan, Hani. "Best practices for implementing remote learning during a pandemic." *The Clearing House: A Journal of Educational Strategies, Issues and Ideas* 93.3 (2020): 135-141.

Griffiths, Mark. "Friendship and social development in children and adolescents: The impact of electronic technology." *Educational and Child psychology* 14 (1997): 25-37.

Healy, Jane M. “Failure to Connect: How Computers Affect Our Children’s Minds: For Better or Worse.” *The Phi Delta Kappan*, vol. 81, no. 5, Phi Delta Kappa International, 2000, pp. 1–11, <http://www.jstor.org/stable/20439670>.

Korhonen, Laura. The good, the bad and the ugly of children’s screen time during the COVID-19 pandemic. 2021. Retrieved June 1, 2022 from <https://onlinelibrary.wiley.com/doi/10.1111/apa.16012>

Lenhart, Amanda, Sousan Arafeh, and Aaron Smith. "Writing, technology and teens." *Pew internet & American life project* (2008).

Murphy NA, Carbone PS; Council on Children With Disabilities; American Academy of Pediatrics. Parent-provider-community partnerships: optimizing outcomes for children with disabilities. *Pediatrics*. 2011 Oct;128(4):795-802. doi: 10.1542/peds.2011-1467. Epub 2011 Sep 26. PMID: 21949138.

Ophir, Y., C. S. C. Asterhan, and B. B. Schwarz. "Unfolding the notes from the walls: Adolescents’ depression manifestations on Facebook.” *Computers in Human Behavior* 72 (2017): 96-107.

Ovide, S. (2021, December 9). Why apps suddenly want to protect kids. *The New York Times*. Retrieved February 14, 2022, from <https://www.nytimes.com/2021/12/09/technology/apps-child-protection.html?searchResultPosition=2>

- Pacheco-Guffrey, Heather. "Tech Talk: Taking Science Home With Technology." *Science and Children*, vol. 57, no. 5, National Science Teachers Association, 2020, pp. 14–17, <https://www.jstor.org/stable/27045198>.
- Primavera, Judy, Peter P. Wiederlight, and Timothy M. DiGiacomo. "Technology access for low-income preschoolers: Bridging the digital divide." *Annual meeting of the American Psychological Association, San Francisco*. 2001.
- Ratheeswari, K. "Information communication technology in education." *Journal of Applied and Advanced research* 3.1 (2018): 45-47.
- Rideout, Victoria, and Vikki S. Katz. "Opportunity for All? Technology and Learning in Lower-Income Families." *Joan Ganz Cooney Center at Sesame Workshop*. Joan Ganz Cooney Center at Sesame Workshop. 1900 Broadway, New York, NY 10023, 2016.
- Roschelle, Jeremy M., et al. "Changing How and What Children Learn in School with Computer-Based Technologies." *The Future of Children*, vol. 10, no. 2, Princeton University, 2000, pp. 76–101, <https://doi.org/10.2307/1602690>.
- "The OnIt Foundation Opportunities Necessary to Increase Technology." Retrieved July 31, 2022 from <https://theonitfoundation.org/>
- Senators Markey and Cassidy Propose Bipartisan Bill to Update Children's Online Privacy Rules: U.S. Senator Ed Markey of Massachusetts. <https://www.markey.senate.gov/news/press-releases/senators-markey-and-cassidy-propose-bipartisan-bill-to-update-childrens-online-privacy-rules>
- Trahan, Castor, Markey press major tech companies to extend online protections required under a new U.K. Statutory Code to children and teens in the United States. U.S. Representative Lori Trahan. (2021, June 30). Retrieved February 14, 2022, from <https://trahan.house.gov/news/documentsingle.aspx?DocumentID=2155>
- Vedechkina M, Borgonovi F. A Review of Evidence on the Role of Digital Technology in Shaping Attention and Cognitive Control in Children. *Front Psychol*. 2021 Feb 24.
- Wexler, Natalie. "How classroom technology is holding students back." *MIT Technology Review*. Retrieved January 23 (2019): 2020 from <https://www.technologyreview.com/2019/12/19/131155/classroom-technology-holding-students-back-edtech-kids-education/>