

Impact of technology and smart phones on child development



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Technology has altered the way the human brain works. It has changed the way people think, the way they read, and it has made it much harder for the brain to retain information. This is attributed to the scientific phenomenon called neural plasticity, where the nerve cells in the brain rewire themselves in response to new experiences. While it used to be almost effortless for a person to read a book, it has now become much harder for them to keep focused due to the fast pace interaction of technology. The outermost portion of the human brain begins to diminish when too much technology is used, which makes it difficult to retain information. Since technological devices are making it more difficult for an adult's brain to work at full capacity, think about what it could be doing to young children while their brains are still trying to develop. Imagine walking through a park and seeing all the children playing on either a cell phone or a tablet rather than playing with each other on the jungle gym. It seems a bit ridiculous doesn't it? The fact is, it's growing increasingly common to see young toddlers sitting in strollers with their eyes glued to a smart phone, and preschoolers staring aimlessly at a tablet while waiting for dinner at the local Red Robin. A person uses their cellphone for almost every activity in their life. The alarm on their cell phone wakes them up in the mornings, their GPS gives them directions to their destination, they read their emails, use social media, and they stay connected by texting and making phone calls all throughout the day on their device. Even though tablets and smartphones have become a tool that helps adults manage their daily lives, these technological devices are detrimental to a young child's intellectual, behavioral, and social development.

In order to understand the crucial link between early childhood development in children between the ages of one and five and technological devices, one must first understand the importance of early childhood development. The early stages of development in young children impacts their intellectual and emotional health, which in the ends can lead to a child thriving in life. In a study done by a pediatrician and scientist, Dr. Catherine Birken, she found that twenty percent of her patients used a smart phone when they came in for their eighteen-month checkup. Nsikan Akpan, the digital science producer for PBS News Hour, wrote an article about this study and states, “ By the time they reached their 18-month checkups, 20 percent of the children used mobile devices for 28 minutes on average each day. They found children who spent more time with hand-held screens were more likely to exhibit signs of a delay in expressive speech — how children use their sounds and words, and how they put their words together to communicate. Each additional 30 minutes of hand-held screen time was linked to a 49 percent increased risk in expressive speech delay” (Akpan). It is crucial for parents to be involved in their child’s development. With children from birth to five, it is important for parents to be reading, singing, and playing with their children. Children’s brains are automatically wired to comprehend speech, and they learn how to speak by listening to the people around them. Interacting with children is the best way for them to develop their language skills. When a parent reads to a child it strengthens their language skills, and children can begin to match the words a parent is saying with the pictures in the book. When an infant is using a hand held device instead of interacting with their parent it begins to have a negative impact on the child, and if a child forms a speech delay it can hinder their literacy skills when they begin school. In an <https://assignbuster.com/impact-of-technology-and-smart-phones-on-child-development/>

article written by Sudha Chandrasekaran, she states, “ Children these days are starting school at the age of five and six years with the communication skills of two- and three-year-olds, presumably because their parents or caregivers have been “ pacifying” them with iPads rather than talking to them” (Chandrasekaran). It is of the utmost importance that parents understand the harmful possibilities devices are inflicting on their children’s brains. Recent studies have found that children that lack parent-child verbal interactions end up having slow language development and have a harder time reaching academic achievement. Since neural plasticity means the brain can change and adapt due to new experiences, this can impact a child’s memory and learning. When a child plays on a phone or a tablet rather than reading, singing, or doing other activities that can strengthen their motor and verbal functions it can have negative effects. If a child has too much screen time it can cause their brains to rewire in a way that will make them less prepared for their future.

Since technological devices such as smart phones and tablets have become more accessible, they have had a major influence on children and have impacted them behaviorally. Children that are using devices on a regular basis are having behavioral issues, their frustration levels have increased, and their sleep cycles are being disturbed. There was a research study that was done in Japan by two Kyoto University students and they state, “ Screen time through media use is likely to affect children’s behavior and capacity to pay attention through several mechanisms, as it may lead to sleep disturbances, which can adversely impact development. Media use at bedtime has been associated with increased autonomic activation due to

hyperarousal, or disrupted melatonin production due to brightly lit screens” (Hosokawa and Katsura). The more time children spend in front of a device, the more common it is for them to have behavioral issues. Children that have their attention glued to a smart phone or tablet have had an increased spike in their aggression. This increased spike in aggression has been partially attributed to the violence they are seeing while using their devices. Since a child’s brain is still malleable and developing, they learn from what they are seeing, and they will copy what they are seeing even if those behaviors are not acceptable. When a young child sees constant violence, they learn that violence is the only way to solve conflict. This can negatively impact them behaviorally because if there is a conflict at school, they will result to violence instead of trying to solve the problem in a healthy manner. Too much screen time in children is causing them to suffer from sleep deprivation. When a child plays on their devices right before bed it can cause them to have disrupted sleep cycles and not be able to fall into a deep sleep. If a child does not get enough sleep it is common for them to become irritable and act out behaviorally. Younger children begin to act out when they are told to do something that does not include their devices, and their attitudes towards their families begin to change in a negative way. Since it is much easier to calm down a child throwing a fit in a store by handing them a cell phone rather than handling the situation in a direct manner, it has taught children that they can get whatever they want even when they are behaving badly. Instant gratification becomes expected rather than a reward. Children begin to realize that they can get rewarded even when they are acting out, and therefore they continue to act out. If devices such as tablets and smart phones are becoming the main way to distract or settle a

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child down, it might become difficult for a child to develop their own instincts when it comes to self-control. With this said, the way a child behaves is directly linked to how they are taught. If parents can model good screen behaviors, their children will learn from them. Interacting with their children and teaching them the correct way to behave can start to balance out the negative effects screen time is teaching the younger generation.

Within the last few years, digital device addiction has become an important issue in today's world. Addiction is when a person is unable to stop using a substance or engaging in a behavior despite its consequences. In an article written by Ben Renner he states, " Researchers behind the study, conducted at San Francisco State University, likened smartphone addiction to opioid dependency, arguing that overuse of a mobile device is no different from substance abuse" (Renner). Since devices have become a forefront in today's world some people have a considerable issue with being able to put them down. While devices like smart phones and tablets have made daily life easier in some respects, the fact that people are becoming so addicted to them that it begins to impact their personal relationships is quite disturbing. The fact of the matter is, children are becoming addicted to devices as well and when a child gets hooked at a young age, that habit is all the harder to break. Children become absolutely obsessed with their devices and would spend all their time on them if they were allowed. When children have been playing on a device and they get it taken away or told to turn it off, they often become angry and throw over the top temper tantrums. Andrew Hough wrote an article about how children are becoming addicted to their devices. In his article he quoted Dr. Richard Graham saying " I've been contacted by

parents who see their children going into a rage when they're told to turn off their devices. Some end up having to call the police" (Qtd in Hough). To hear that police have been called to diffuse a situation between a parent and their irate child over having to turn off their device really puts this form of addiction into perspective. If a parent finds out their child is addicted to drugs or alcohol, they will do anything in their power to help them break the addiction; yet this does not seem to be the case for device addiction. It seems that parents are handing over devices to their children without fully understanding the negative consequences that come with it. The creators of the apps that are used on devices know they are creating addictive applications, that's how they keep their businesses going. The more clicks, the more time spent on the applications, means the more money they make. The creators of apps are fighting to keep the users interest in their app instead of their competitors. Many children's applications become addictive because of all the bright colors, continuous visual feedback, and the satisfaction that they have beat the level. Once they pass a level, they get rewarded with dancing stars, fireworks, and words across the screen like "fantastic", making them eager to play the next level. These creators do not have a personal investment in children's development, all they care about is making money. Some parents have admitted that they have a feeling their children spend too much time on their devices, but when they hear the word addiction, it puts it into a different context. In the past, children used to be excited about being able to go outside and play with their friends, but recently children would rather sit in their room alone playing on their smart phone or tablet.

In addition to children becoming addicted to their devices, smart phones and tablets have also impacted social development in children in many ways.

Before technological devices like these were invented, a person could drive through any neighborhood and see a group of kids playing football or riding their bikes up and down the street, but that isn't the case in today's world.

According to an article titled " Children Losing Social Skills Due to Technology" by Danielle Campbell, " Communication is now slowly decreasing to a point where children and adolescents have trouble even initiating a face to face conversation or holding a conversation, because it is always done through a text message. These children are also developing an inability to read social cues and have empathy" (Campbell). Children in today's world would rather be in front of their screens watching someone else participating in activities than doing it themselves. Spending too much time on smart phones or tablets can cause children to become anti-social, ultimately affecting their social development. According to a Northern Virginia Scan website, they state " Studies show that everyday experiences with parents are fundamental to a child's developing social skill-set. Parents provide a child with their very first opportunities to develop a relationship, communicate and interact. As a parent, you also model for your child every day how to interact with the people around you" (Scan). This is incredibly important because parents should be the most influential thing in a child's life, not a tablet or a smart phone. Parents who spend time talking and interacting with their children will give their child the best outcome in life.

When a young child is growing up, it is extremely important for them to learn how to socialize and interact with other children. If a young child spends a majority of their time on a device, they are not learning how to socialize

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properly which can affect them as they grow up. They won't know how to play and communicate with children when they begin school, and when they advance into their work force, they will have a harder time communicating with their coworkers and bosses. While the beginning stages of device usage may make the child feel happy, frequent long-term usage can cause children to feel isolated. Young children that start off school feeling isolated have a harder time making friends which ultimately lowers their self-esteem.

Furthermore, feelings of loneliness caused by isolation have been linked to anxiety and depression. In an article on the James Fridman Foundation website titled, "Is Technology Making Children Lonely" he states, "Technology is making our children more alone because instead of interacting with their friends in person, they are dependent on using their phones or tablets... loneliness makes our kids unhappy, it can lead to a lack of confidence and mental health problems like depression, stress and anxiety" (Fridman). The recent spike in adolescence depression and suicides over the past few years is alarming, and people are beginning to think it might have something to do with the technology they are using. Suicide is the third leading cause of death in young teens, and the ages of children reporting suicidal thoughts are getting younger and younger each year. Now even though the discussion of young adolescence depression and suicide linked to technology is all conjecture, it's a starting point for parents to think about the negative effects digital technology can cause to their children's intellectual, behavioral, and social development. Society will have a hard time expecting the outcome to be any different if their young children are becoming even more intertwined with this form of technology.

However, despite the negative effects intellectually, behaviorally, and socially, recently there has been a debate whether electronic devices can be a benefit when it comes to children's educational learning. Children are not only starting to use tablets and smart phones at a younger age, it's also becoming more common to see them being used in the classroom setting. There was a study that was done following teachers and pre-teachers involving their thoughts and uses with devices in their classrooms. Trisha Ainsa, a student at the University of Texas in El Paso, wrote an article about the study and states, " In the reported study, eight of sixteen kindergarten classrooms were randomly given iPads for learning use for nine weeks. The iPad users showed increased improvement results over the non-iPad group. Although the same learning targets were addressed, the iPad group was given apps which promoted number and letter identification, story sense, counting rhythm, and socialization" (Ainsa). Since children are already interested in tablets, teachers have seen an increased interest in learning when tablets are used in their classrooms. There are many " educational" learning programs that are being implemented with young children such as, ABC Mouse, Khan Academy, as well as different learning apps. These programs aim to teach young children how to write their ABC's and numbers through tracing bright outlines of each letter or number. Many parents and teachers have said that these programs have helped improve children's literacy and math skills, but some of these benefits come with unseen costs to children's development. While some teachers may be jumping on the bandwagon of tablets in the classroom, there are other teachers that believe that incorporating tablets can cause children to become lazy when it comes to their academic studies. Children will have a harder time learning how to

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read and write effectively when it isn't done on a screen. Some teachers also think that using devices such as tablets can interfere with children interacting with their peers and educators. If children are already using technological devices at home, then using them at school will mean they are never able to escape the digital realm. Nicholas Carr, author of *The Shallows* stated, " The intellectual ethic of a technology is rarely recognized by its inventors. They are usually so intent on solving a particular problem or untangling some thorny scientific or engineering dilemma that they don't see the broader implications of their work. The users of the technology are also usually oblivious to its ethic" (45). When technological devices like tablets and smart phones were first invented, they were created to make people's daily lives easier. Nobody could have ever expected the negative effects intellectually, behaviorally, and socially that would follow excessive use of these devices. Even though schools are starting to incorporate digital technology into their classrooms, it is still important to remember all the negative effects it can have on young children and their developing brains. While some teachers may have seen improvements in their students learning skills while using educational programs and applications, it is necessary to understand that children of all ages need to have social interaction and independence from technology. Using these devices could improve children's literacy and numerical skills, but if they are to be utilized, they should be used in moderation and with peer and teacher interaction. If parents choose to use these learning applications with their children at home, it should be noted that the parents should be active in their children's learning and not just give their children the device to play on. Parents that actively engage in their children's learning by discussing what is being done

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on the device can have a far better impact on the child's development. While it might seem as though tablets can benefit student's learning in some respects, there is still the issues with how these devices are affecting children's overall intellectual, behavioral, and social development.

Even though technological devices such as tablets and smartphones have become benefitting tools, that help adults manage their daily lives, these devices are detrimental to a young child's intellectual, behavioral, and social development. Since technology has altered the way the human adult brain works, the impact it can have on a young child's developing brain can be detrimental. These devices can impede a young child's learning and early development and can cause infants and toddlers to have slow language and speech developments. Children using tablets and smart phones are having behavioral issues and are becoming addicted to their devices. Even after hearing about the reports of improved learning skills with young children in schools, it is still important to think about the negative impacts technological devices can have on a child's intellectual, behavioral, and social development. While it may seem more convenient to hand a child a tablet or a smart phone, the overall negative effects it can have on a young child's developing brain seems to outweigh the convenience factor.

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