Children's Media Habits and Positive Impacts on Child Development and Learning

Child Development and Television Exposure

Since the 1950s, the relationship between television viewing and child development has been disputed amongst parents and psychologists alike (Guru, Nabi, & Raslana, 2013). This literature review will examine the impact that television programming has upon child development. In terms of this review, child development will be reviewed under Albert Bandura's social learning theory.

The main tenet of social learning theory is that humans learn through observation. This form of learning takes one of three forms; that of live models, verbal instructional models and symbolic models. In live models, subjects witness a live person demonstrating a behavior. Similarly, verbal instructional models use descriptions and explanations to teach a behavior, while symbolic models involve characters demonstrating behaviors through books, film, television, internet or other media. However, for these behaviors to be successfully learned, certain steps must be followed; that of attention, retention, reproduction and motivation, which will be defined and discussed further in the review (Cherry, 2019). This review will discuss the alternative views on whether television causes positive or detrimental effects to children's development under Bandura's social learning theory. The age range and target demographic of the programs discussed will be children aged five and under.

Television and Disputes Over Leisure Time, Learning and Child Development

One of the main arguments that television negatively effects child development is related to children's use of leisure time. Some argue that watching television limits children's time to take part in activities vital to their development such as playing, reading and socializing (Ford-Jones, Nieman, 2003). However, not all experts in the field agree with this assertion. Media specialists Jennings Bryant and Daniel Anderson conducted a study which found that early exposure to television programming led to positive factors relating to children's leisure time, such as increased levels of extracurricular reading and involvement with after-school clubs. In addition, another study on the topic showed that television did

not displace educationally valuable activities, except in the cases of children with very high amounts of television exposure (Guru, Nabi, & Raslana, 2013). It's a valid standpoint for experts to debate the link between leisure time and television viewing habits. Though activities such as spending time with friends and family, storytelling and playing outdoors may seem extraneous compared to time in the classroom, these pursuits help increase children's vocabulary, build stronger social-emotional regulation and make it easier to learn inside the classroom, all of which are of great importance to healthy child development (Ginsburg, 2007).

Although some experts also worry that language and academic skills are not being cultivated by children who watch television, other studies show a relationship between the development of these skills and moderate television viewing habits. One such study by Judith Van Evra found that moderate television viewing of about one to two hours improved the communication skills of children from disadvantaged backgrounds. A similar study published by the American Educational Research Journal found that moderate television exposure was correlated with increased academic achievement, though extremely high television exposure was found to have the opposite effect (Guru, Nabi, & Raslana, 2013).

In addition to scholastic achievements, television viewing has been found to positively impact social-emotional development. As television can be both emotionally overwhelming and enriching, it is the perfect platform for behavior modeling as seen in Bandura's social learning theory. Television has been proven to teach children how emotions work and improve emotional intelligence. This is especially important during early childhood, when children are known to look for models of how to properly display emotions (Gotz, Schlote, n.d.). Bandura's theory purports that one of the ways children learn is through a symbolic model, in which a character demonstrates a behavior through a type of media (Cherry, 2019). Through the symbolic model of a child's favorite television characters, children can witness healthy social-emotional attitudes. By learning about these healthy viewpoints and actions in

relation to social-emotional health through the observation of the symbolic model, the child can then mimic these actions in their own life.

With the relationship between the symbolic model and the child viewer in mind, it can be understood that television can be used to help support healthy social-emotional development. However, the success of this endeavor heavily depends on how the program depicts emotion. For example, a television program can promote a positive way of dealing with aggression by having characters talk out their issues. Conversely, if the program instead has the character respond with violence, this could harm the child's social-emotional development if they were to model their own behavior accordingly (Gotz, Schlote, n.d.). As children often use media stories to relate to their own lives, with younger children known to be unable to distinguish the difference between the fantasy of a television program and reality, it is of great importance that television programs offer positive examples of social-emotional health for children to model their own behavior after (Ford-Jones, Nieman, 2003).

Child Development and Type of Television Programming

Along with the knowledge of how child development is affected by television exposure, it is important to take into consideration the quality of television programming that a child is watching. While educational television (programs which intend to teach children lessons) can positively impact a child's academic, social and emotional development, non-educational television (programs which are only intended to entertain) can have the opposite effect. For example, several studies have been carried out investigating such educational programs as *Sesame Street* or *Mister Rogers' Neighborhood*. These studies show that in addition to reading and learning skills, these programs help promote positive emotional and social skills (Ford-Jones, Nieman, 2003). Conversely, however, some studies have also shown that children experience a decrease in their educational skills shortly after viewing non-educational television programming (Zimmerman, Christakis, 2005).

Ensuring the quality of television consumed by a child is of great importance to both their educational and social development. Quality educational television programs have the potential to enrich children's emotional and social lives. These programs can help children better understand themselves and the world, help them develop rich emotional lives and teach them how to deal with feelings in a healthy manner (Gotz, Schlote, n.d.). The success of social-emotional development in children that view educational television programs is due in part to the fact that the messages that children see on television effect how they see others (Guru, Nabi, & Raslana, 2013). Once again, Bandura's theory can be utilized, as children act out the behaviors of the symbolic model (Cherry, 2019). If characters in a television program treat one another with respect despite personal differences, the child can then model their own behavior accordingly, for example. In addition to developing these skills, a study by Edgar and Edgar showed that educational television programs can stimulate a child's imagination as well as aid in emotional development and social development by teaching lessons about how to live in a community (Guru, Nabi, & Raslana, 2013).

In addition to social benefits, educational television can also improve children's academic skills. Educational programming that is structured around a curriculum can teach both academic and social skills to children and have been proven to successfully teach the program's intended lessons (Guru, Nabi, & Raslana, 2013). With the educational potential of television programs in mind, a proper balance between entertainment and lessons must be made for a show to successfully teach children. As Bandura's theory notes, the success of learning is contingent upon attention and retention of information (Cherry, 2019). A study by Daniel Anderon showed that children pay more attention to engaging television shows than aspects of television viewing that were seen as dull in comparison, such as commercials. With this study in mind, the concept of attention under Bandura's theory can be seen. Children's attention spans are notoriously short and although children are known to focus on television programs, this is dependent upon whether the child finds the program to entertaining. Simply put, for a

show to successfully teach children lessons, it must be entertaining enough to capture the child's attention in addition to being educational. With the child's attention focused upon the program, they can then retain the information, another tenet of Bandura's theory. In fact, audio-visual information is known to last long in a child's memory, meaning that the combination of engaging sights and sounds of a children's television program can ensure that the information is retained (Guru, Nabi, & Raslana, 2013). With the relationship of attention and retention in mind, television makes for a powerful tool in teaching children various skills.

Television Viewing Habits and Developmental Outcomes

Despite negative stereotypes, television can have strong positive effects upon children's educational and social-emotional development via Bandura's social learning theory. However, the type of television (educational or non-educational), screen time and watching habits must be taken into consideration. To ensure heightened academic and social-emotional development, young children should mainly watch educational television programs. Educational television programs such as *Sesame Street* or *Mister Rogers' Neighborhood* have been associated with higher levels of academic and social-emotional achievement, while non-educational programming has been shown to have the opposite effect (Zimmerman, Christakis, 2005). The amount of time spent watching television also plays a large role in a child's development. Television viewing habits of moderate length (1 to 2 hours) have been shown to positively impact numerous aspects of child development. However, when children watch more than a moderate amount of television per day, their scores on academic, social and emotional tests drop (Guru, Nabi, & Raslana, 2013).

Taking these findings relating to viewing habits and child development into consideration, young children should view television programs with their parents present. Pediatricians suggest that parents watch television with their children not only to ensure the quality and amount of time that a child is watching, but to also take the opportunity to teach their children how to think critically about the

program's messages. Using this method, over time children will learn how to watch television shows more critically, aiding children in developing critical thinking skills and learning to critique media when they are exposed to more forms of entertainment (Ford-Jones, Nieman, 2003). In addition to building a dialogue between parent and child and improving a child's critical thinking skills, a study by Freidrich and Stein found that parent-child viewing led to a higher level of retainment in educational lessons provided by the television program (Guru, Nabi, & Raslana, 2013).

Bandura's social learning theory can be linked to the practice of parental viewing and control over children's television consumption. The steps of attention and retention have been previously discussed in this review. However, the final two steps, reproduction and motivation, can be successfully carried out using parental guidance. As parents critically discuss the program with their children, they can encourage them to copy the positive behaviors that they witnessed, thus completing the step of reproduction. Following the step of reproduction, parents can then witness these behaviors in action and offer positive reinforcement, thus motivating the child to continue using the behavior, successfully completing the final step of motivation in Bandura's theory (Cherry, 2019). In conclusion, with the right combination of moderate screen time, educational programming and parental involvement, television can have a strong beneficial effect upon all aspects of child development.

Internet Use, User Experience and Learning: An Introduction

While the connection between television exposure and child development has been widely studied since the 1950s, in recent years a new and even more powerful entertainment mogul has since emerged: the internet. As technology continues to grow and advance, an increasing number of children are gaining access to internet-enabled devices. Despite the growing number of child-centered sites and apps, access to the internet has parents and experts feeling apprehensive. This apprehension is not unfounded, as while the Federal Communications Commission (FCC) regulates what children are exposed to via television programming, there are not similar restrictions for the internet. As a result, an

increasing number of children with unlimited internet access are being exposed to explicit content (Sullivan, 2019).

However, the internet can also be used as a valuable tool for children to learn digital skills in addition to academic and social-emotional ones (Sullivan, 2019). While television can help children gain development skills related to academic and social-emotional content under Bandura's theory, the internet is much more interactive and thus Bandura's model doesn't apply in terms of social modeling. Instead, this part of the literature review will discuss the influence that user experience, user interface and access to the internet has on generalized learning practices for children under the age of five.

UI, UX and Children's Learning Outcomes

To begin to understand how using the internet can help promote child learning, one must have a basic understanding of user interface (UI) and user experience (UX). Simply put, UI refers to the graphical layout of a website, app or other interface. UI designers create visual elements of an interface that users interact with, such as buttons, text, images, sliders, etc. The main goal of a UI designer is to make sure that an interface is visually stimulating, attractive to the user and themed appropriately ("What is UI vs. UX design? What's the difference?", 2019). UX, on the other hand, is focused upon the interaction between human users and the interface. UX designers are concerned with making the interface usable, enjoyable and accessible for users (White, 2020).

Both UX and UI play a large role in how well an interface serves its intended purpose for its intended audience. Children are particularly sensitive to user experience and user interface, as they have not yet developed the digital skills necessary to competently operate a piece of technology such as a computer or iPad. Due to these needs, UX and UI designers must adhere to certain principles to keep children engaged with interfaces meant specifically for them, such as educational games and simulations, 3D learning environments or mobile learning apps (Peters, 2012).

UX/UI Design for Child-Friendly Learning

In order to best accommodate children and their unique learning needs, several UX/UI design alterations must be made. One major roadblock for young children is that they are typically unable to read. As such, a combination of short text and visuals should be used to label certain buttons. The simple combination text and image allows the child to operate the system as desired, no matter what their reading level (Peters, 2012). Eliminating this obstacle, children can more easily operate the interface.

In order to keep a child's full attention, UI and UX designers need to use bright colors, large and simplified buttons in addition to engaging sounds and visuals (Gallavin, 2015). While each of these factors serves the initial purpose of keeping the child engaged with the product, these design decisions also aid in increasing children's learning capabilities. In terms of gaining necessary digital skills, designing large and colorful icons allows young children with limited motor skills to learn how icons work, as well as what visual icons correspond to what action of the interface (Boyd, 2018). For example, children may not associate a large triangle icon with the "play" function as adults do. To help children learn the function of this icon, children's app Storybots places a large, cartoon-like triangle icon over each of its videos (Cantuni, 2018). The cartoonish nature of the "play" icon encourages children to click on it and through this action, children then can learn to associate the triangle icon with the play function.

Similar skills in terms of using a site's menu and returning to the home page can be taught to children through allied functions. Although these are simple skills, they are vital to gaining an understanding of how online interfaces work. Studies show that children who have more access to internet-based activities gain more complex technological skills as they age (Sullivan, 2019). Keeping this study in mind, introducing children under age five to simple internet apps and encouraging them to participate in more complex internet-based activities as they age will allow them to gain the digital skills necessary for today's world.

In addition to digital skills, proper UX and UI design can aid children in improving academic skills. In fact, learning games and simulations with strict lesson plans have been shown to successfully teach children intended learning goals. These learning strategies are accomplished in a variety of ways. For one, learning games and simulations may offer children a more engaging way to interact with educational material than a straightforward lesson or video. In addition, internet sites or apps for children can serve as academic tools if virtual agents or characters deliver instructional content in entertaining ways, such as games or videos (Peters, 2012). By using familiar and fun characters, children become more engaged and therefore pay closer attention to the material.

Another reason behind the success of these games is the interactive format. Studies have shown that when learning, children want visual and auditory feedback on whether they did something right or wrong (Boyd, 2018). Internet-based learning and simulation games can easily meet this need. UX and UI professionals can design pop-ups, sounds or even physical sensations such as vibrations to correct the user and encourage them to try again, thus engaging the child (Gallavin, 2015). By turning lessons into exciting games that engage the audience, internet-based learning games and simulations can successfully teach intended lessons to children and serve as a powerful learning tool.

Child Internet Consumption Habits and Learning

While the internet is undoubtedly a dangerous place for children, it can also provide crucial digital and academic learning opportunities. As with television consumption, parent supervision related to child internet access is crucial to the success of these learning opportunities. In addition to being able to enforce lessons, parental supervision can also teach children important lessons about using the internet. Research has shown that when parents discuss and engage their children with internet content, learning and digital skills are improved and digital risk decreases. In addition, children's resilience to potential explicit digital content increases (Sullivan, 2019).

Balance is key to ensuring positive learning outcomes for children. After starting with simple educational games and apps, children should be allowed to explore different internet activities. However, parental supervision must remain present to ensure that children don't fall privy to explicit content. In addition, parental supervision can help improve the academic and digital skills cultivated by internet use. The internet is a powerful tool for children in terms of learning and development. Rather than shield children completely from this necessary tool, a positive relationship should be cultivated.

Discussion

In conclusion, both television programs and internet interfaces can benefit child learning and development. While television programs of the right viewing length and educational genre can help children gain academic and social-emotional skills through a symbolic model of social learning, proper UX and UI design can encourage children to develop more straightforward academic and digital skills through internet-based learning games and simulations.

However, what determines the success of internet or television exposure and child learning/development is parental involvement. Parents need to supervise the media that young children consume not only to ensure the quality of these materials, but to also engage children in a dialogue about what they're viewing. Together, parents and children can discuss content, reinforce lessons and teach children to approach media more critically. These lessons will aid children as they age and are exposed to different (and potentially explicit) media.

Overall, despite stereotypes, when used in the correct contexts, television and internet use can be vital for a child's development and learning processes. Instead of giving a child free reign or barring them from interacting with media entirely, allowing children to have appropriate relationships with television and internet interfaces will serve as a powerful tool for growth.

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