

YOUTUBE & YOUNG CHILDREN: RESEARCH, CONCERNS AND NEW DIRECTIONS

Burcu Izci
Florida Gulf Coast University
Early Childhood Education, College of Education, MH 280, Fort
Myers, FL 33965
bizci@fgcu.edu

Ithel Jones
Florida State University
Curriculum & Instruction, School of Teacher Education, STB
2208C, Florida State University, Tallahassee, FL 32306-4450
ijones@fsu.edu

Tuğba Bahçekapılı Özdemir
Trabzon University
Computer Education and Instructional Technologies, Fatih
Faculty of Education, Trabzon University, 61080, Trabzon,
Turkey
tugbahcekapili@ktu.edu.tr

Latifa Alktebi
Florida State University
Curriculum & Instruction, School of Teacher Education, Florida
State University, Tallahassee, FL 32306-4450
lsa14@my.fsu.edu

Eda Bakir
Recep Tayyip Erdoğan University
Computer Education and Instructional Technologies, College
of Education, Recep Tayyip Erdoğan University, 53200, Rize,
Turkey
eda.bakir@erdogan.edu.tr

Abstract

Since the first episode of Sesame Street was aired in the 1960s, video watching has become a daily activity for most young children. Gradually, advances in technology transformed children's video watching practices as well as the preferred video watching devices or platforms (such as educational television, baby DVDs, and computer technologies). As a result, children's video watching has shifted from educational televisions to mobile devices (e.g., tablet and smartphone), streaming media, and online platforms. According to recent research findings, YouTube and YouTube Kids are popular platforms used by children to access a variety of videos for education or entertainment purposes.

In contrast to the decades of research concerning educational television, studies of YouTube and similar platforms are still in their infancy. Our understanding of the nature and extent of children's engagement with this platform and its potential benefits and risks for children's learning and development is limited. Young children (age 8 or younger), as well as older children and teenagers, frequently watch videos on YouTube. In this chapter we review the limited recent research examining young children's use of YouTube and YouTube Kids. In addition, parental and expert concerns, children's digital safety, the commodification of childhood, and new directions are addressed for future studies. **Keywords:** YouTube, children, video, digital safety, parents.

Introduction

The early childhood years are a crucial period for young children's development and foundational skills (National Research Council and Institute of Medicine, 2000). Today's young children are growing up in technology-rich environments (AAP Council on Communications and Media, 2016). For example, it was reported in 2017 that children younger than 8 years old spend an average of 2 hours and 19 minutes a day with both traditional (TV, computer) and emerging digital media (tablets, smartphones, e-readers).

Even though television viewing continues to dominate children's daily media use, their digital media use has increased dramatically in the last few years (Rideout, 2017), and further research is needed to understand how various digital technologies play a role in children's development and learning (AAP Council on Communications and Media, 2016).

In recent years, YouTube and YouTube Kids have become increasingly popular platforms that young children use to watch videos (Marsh et al., 2015; Ofcom, 2017; Rideout, 2017). In this chapter, we consider young children's use of YouTube and YouTube Kids, and review the relevant literature published during the past decade. In reviewing young children's digital media use, we consider research that had been conducted with children from birth to 8 years (Rideout, 2013, 2017). The review of research articles, media reports and online posts was narrowed down by using key terms such as "YouTube and children", "YouTube Kids", "YouTube and young children", "YouTube and families", "YouTube and early childhood", and "online viewing". We summarized the recent literature by providing an overview of research findings from studies of YouTube and YouTube Kids as well expert and parental concerns about children's digital media use, and addressed gaps in the literature by suggesting possible directions for future research.

Youtube & Youtube Kids

YouTube is a video-sharing platform, which has received worldwide attention since it was created in 2005 (Wikipedia, 2018). YouTube provides users opportunities to upload and view videos, rate, share, report or comment on videos, and subscribe to other users' channels (Wikipedia, 2018). As of July 2018, it was listed as the second most popular site in the world (Alexa, 2018). YouTube has been described as "the king of video" wherein children watch a variety of content for helping with school or homework, or for fun and entertainment purposes (Smarty Pants, 2017). The YouTube platform includes numerous channels, which share educational videos as well as unboxing, challenge or game videos created for children (Knorr, 2016). Of such videos, cartoons, animations, funny videos, music videos, game tutorials and "how to" videos have been identified as the most popular videos preferred by 3-7 year old children (Ofcom, 2017).

A recent marketing research study reported that YouTube is the most well-known brand in children's lives in the United States. A majority of children (96%) between 6-12 years of age reported that they were aware of YouTube, and more than 80% of those children used YouTube on a daily basis. Out of those participants, 65% of the children used YouTube several times a day (Smarty Pants, 2017). YouTube's popularity by children seems to be universal. For example, Marsh and her colleagues (2015) and the Ofcom (2017) reported similar results for children in the United Kingdom. The YouTube application (app) was one of the most popular applications preferred by preschool aged children (age 5 or younger) and their families (Marsh et al., 2015). Ofcom (2017) also reported that since 2016, the use of YouTube by 3-4 and 5-7 year-old children has increased significantly. Researchers report similar findings concerning this platform's popularity among young children and their families in various other countries such as Turkey (Izci, Jones, Yalcin & Bahcekapili, in preparation), India (Yadav, Chakraborty, Mittal, & Arora, 2018), and Israel (Elias, & Sulkin, 2017).

YouTube Kids is an application (app) designed specifically for young children age 5 or younger. It has been promoted as "a world of learning and fun, made just for kids" (YouTube Kids, 2018). YouTube Kids is available on Google Play and App Store for its users. As of July 21, 2018, it has received 4.7/5 stars on Apple Store, as well as 4.5/5 stars on Google Play (Apple Store, 2018; Google Play, 2018). In addition, it has been made available in 37 countries and has had more than 70 billion views and more than 11 million weekly active viewers as of November 2017 (YouTube Kids, 2017). Young children and their families seem to prefer the YouTube Kids platform, an application that is similar to YouTube but aimed at young

children (Ofcom, 2017).

According to its developers, YouTube Kids was created “to make it safer and simpler for kids to explore the world through online video”, and as such it includes “a whole suite of parental controls, so you can tailor the experience to your family’s needs;” (YouTube Kids, 2018). The videos on YouTube Kids are filtered by the target audience’s age. Its algorithm shows videos on the surface of the app based on a user search and viewing history, as well as other data (Lafrance, 2017; Wamsley, 2017). There is, however, considerable variation in the quality of the videos on the platform based, in part depending on the entity (e.g., individual user or commercial) that was responsible for uploading the content. This is possibly why the YouTube Kids algorithm has been frequently criticized by (Lafrance, 2017; Maheshwari, 2017; Wamsley, 2017). In order to address those criticisms, the following information has recently included on the YouTube Kids website: “We use a mix of filters, user feedback and human reviewers to keep the videos in YouTube Kids family friendly. But no system is perfect and inappropriate videos can slip through, so we’re constantly working to improve our safeguards and offer more features to help parents create the right experience for their families” (YouTube Kids, 2018).

YouTube and YouTube Kids are popular, but relatively new media platforms that young children and their families use to watch online videos. It is believed that when used intentionally and appropriately, technology and digital media (such as YouTube), can contribute to young children’s learning (NAEYC & Fred Rogers Center, 2012). On the other hand, without parental monitoring, young children using the YouTube and YouTube Kids platforms could be placed at risk of being exposed to inappropriate content or language, violence or videos with limited or no educational value. To our knowledge the research designed to understand possible positive or negative effects of these platforms on children’s development and learning is limited. In the following section, we review relevant research findings published during the past decade.

Prior Research

During the past few years, the popularity of YouTube and YouTube Kids has captured the attention of researchers from a variety of academic disciplines. In this section, we review a limited number of research studies conducted with young children and their families in an effort to understand children’s media use (including YouTube), as well as the ways in which media platforms, such as YouTube, influence children’s lives. Preliminary research suggested that YouTube is a universally well-known platform used by children and families for a variety of reasons including educating children, keeping them busy, or for their entertainment (e.g.,

Elias & Sulkin, 2017; Ofcom, 2017; Marsh et al., 2015; Yadav et al 2018).

While it is well established that children of all ages use YouTube, one of the preliminary studies reported that children as young as 2-3 years old are able to use YouTube (Buzzi, 2011). Not only were these young children able to play the videos, but they were also adept at moving from one video to another on the playlist. Then, more recently, researchers found that children as young as 6 months are exposed to videos on the YouTube platform. Before reaching the milestone of their first birthday, children seem to be attracted to music videos (Yadav et al., 2018). Then, by the time they are 12 months old children have an interest in watching other types of videos with different content (Yadav et al., 2018). For example, according to the same study, young children enjoyed watching dance videos, advertisements, as well as videos that portrayed toys and balloons. It has also been claimed that although YouTube videos do entertain young children and keep them busy, it seems that children between 6-24 months are not able to learn anything from those videos (Yadav et al., 2018). Then, an Israeli study examined the online video watching of children aged 18-36 months. The researchers found that parents used online video platforms (such as YouTube) for several purposes including calming children, entertaining or educating their children, and as something to watch during meal times (Elias & Sulkin, 2017). Such activities seem consistent with researchers' assertion that parents use YouTube and other platforms as a form of "digital babysitter" (Elias & Sulkin, 2017). Similar findings have been reported in studies conducted in the United States (Rideout, 2017). It seems that the majority of children under 8 years of age use tablets and similar devices to regularly watch videos online (Rideout, 2017). In the study, Rideout (2017) reported that children use various online platforms (such as YouTube and Netflix) and spend an average of 17 minutes a day watching videos. Using these online platforms children can select from wide range of different types of videos. Educational videos were watched most often (64%), followed by animal videos (46%), how to do it videos (38%) and unboxing videos (34%). It seems, however, that children are also interested in other types of video content. In a case study, Marsh (2015) found that young children also enjoy watching other children's YouTube channels that were related to their interest areas.

The consideration of young children's access to YouTube and YouTube Kids is not valid unless we also include their parents. It is well established that parents' attitudes (being scaffolder or gatekeeper) play an important and significant role in the extent to which their children have access to digital media (Dias et al., 2016). According to a marketing research (2017), parents, as well as children, believe that YouTube is a popular brand in their lives. A majority of parents (94%) reported that they either loved or liked YouTube, and almost 70% reported that they used YouTube on a daily basis. In addition, in a recent study, 74% of children reported that their parents allowed them to watch

YouTube, and 43% of children between ages 6-12 often watched YouTube with their parents or with their whole family (Smarty Pants, 2017). Since YouTube and YouTube Kids platforms are relatively recent topics of study, few studies have been conducted with young children and their parents. In the following section, we discuss parental and experts' concerns regarding YouTube and YouTube Kids as reported in the literature.

Concerns

Advances in technology and the affordability of tablets and similar devices have made video watching particularly easy and convenient for young children. Livingstone and colleagues (2011) believe that children's total media exposure increased as a result of the ease with which online content can be accessed. Relatedly, Rideout (2017) reported that video viewing is an activity that takes up approximately three-quarters of young children's total screen time. For example, children aged 8 or younger watch TV/videos for an average of 1 hour and 40 minutes per day. During that time, they spend 21 minutes with tablets or other mobile devices (including 17 minutes a day watching videos on YouTube, Netflix and other platforms).

When young children's use of YouTube and YouTube Kids use are considered, parents and researchers seem to have several concerns regarding the platform's algorithm, finding high quality content, as well as online advertising, commodification of childhood, and protecting their children's rights. One concern is that young children like to watch the same videos over and over again, and the algorithm of YouTube recommends children videos that are similar to the ones they have previously watched (LaFrance, 2017). Burroughs (2017) claims that YouTube and YouTube Kids' algorithms consider infants as consumers, and as such they are labeled as "algorithmic infants." For example, if they like watching toy car videos, similar videos including toy cars appear on their screen as a result of the algorithm. Relatedly, video makers continue to make those videos, and children continue to "click" on those videos (LaFrance, 2017) which often includes commercial products with limited or no educational content.

One popular category of videos frequently watched by young children are toy-unboxing videos. Unboxing videos include other children's or adults' reviews of a set of objects inside a box (Craig, & Cunningham, 2017). Since young children seem to like a mystery or surprise, unboxing videos capture young children's attention (Marsh, 2015). The popularity of unboxing videos, however, is somewhat concerning because young children are seen as producers and consumers of digital content; that is a concern that it contributes to the commodification of childhood. For example, Dredge (2016) addressed increasing numbers of toy unboxing channels on YouTube and shared an example of one famous child YouTuber and his channel. Ryan ToysReview channel had 2.5 million

subscribers with 4 billion views at that time. Two years later, in July 2018, the same channel has almost 15 million subscribers and 23 billion views (Ryan Toys Review, 2018). Similar channels, which are either owned by individuals or companies, have millions of viewers per day. YouTube channels with unboxing videos or product reviews might provide free entertainment for young children and their families, but the quality or educational content of those videos is somewhat questionable. For some cases, it may be even similar to toy advertisements on TV channels, and may encourage young children and their families to buy the video's promoted toys and products. Relatedly, several researchers conducted studies to identify advertising in children's videos on YouTube. For example, Jorda (2016) reported that 37.5 percent of the advertisements in children's videos were unsuitable for children because they included physical danger or a moral hazard. In another study, Tan and colleagues (2018) indicated that food and beverage adverts (more than half of them were about unhealthy foods) targeted children. Another important point is that the transition from television watching to using touch screen devices make it difficult for parents to monitor their children because of the smaller screen size, portability, and internet connections provided through the devices that children use (Uhls & Robb, 2017). In considering this aspect, Tan and colleagues (2018) claimed that children can access YouTube videos any time they want to through various digital devices, as opposed to broadcast television where children's programs are presented according to a specific schedule. In addition, children can choose from a variety of videos that are available on YouTube and repeatedly watch those same videos. A recent study (2017) conducted in the United Kingdom found that parents were more concerned about children's access to online content than about television or gaming content (Ofcom, 2017). Furthermore, they had some possible strategies to prevent children from accessing inappropriate content. It has been reported that half of parents of 3-4 and 5-7 years old children were aware of YouTube's restricted mode to filter inappropriate content (Ofcom, 2017). Given parental and experts' concerns, further action should be taken to protect young children from possible risks of being exposed to inappropriate content and advertisement on YouTube and YouTube Kids. In addition, further research should be conducted with young children and their families to further our knowledge of children's online viewing practices as well as the importance of providing age-appropriate, high quality, digital content for children on YouTube and similar platforms. The following section presents our perspectives concerning new directions for future studies.

New Directions

As a result of the availability and affordability of touch screen devices and young children's increasing use of media, the American Academy of Pediatrics (AAP) revised guidelines for children's media use. According to the revised guidelines, digital media use, excluding video chatting, should be avoided for children younger than 18 months. Children between 18 and 24 months can use digital media, but they should do so with a parent, and they should only use high-quality programs. Furthermore, their use of digital media should be restricted to 1 hour per day of high-quality programs. Then, it is recommended that children ages 2 to 5 years co-view with their parents (AAP Council on Communications and Media, 2016). Another recommendation is that parents should use digital media wisely as opposed preventing their children from using it. Moreover, parents are encouraged to jointly engage in digital media activities with their children by introducing them to high-quality content that is educational and prosocial. It is considered the parents' role and responsibility to monitor media content to prevent children from distracting and violent content. Furthermore, keeping screen-free time for bedrooms, mealtimes, and parent-child play can contribute to better parent-child interactions as well as healthy eating and sleeping habits (AAP Council on Communications and Media, 2016). Reports of children's media use, marketing research findings, and several studies recently published provide a glimpse of how YouTube and YouTube Kids play an important role in children and families daily lives. Yet, information concerning how these media platforms influence children's learning and development during the early childhood years is limited. Thus, there is a need for studies, either qualitative or quantitative, concerning children's increasing use of YouTube and YouTube Kids. Empirical studies examining young children's preferences and behaviors while watching YouTube videos, including observations in naturalistic contexts (e.g., home, school) could extend our knowledge of the possible benefits and risks of online videos for young children. For example, interviewing YouTuber children and their families would shed light on this topic and further our understanding of the extent to which children's lives are becoming commodified. Conducting further research such as focus groups, interviews and survey research would also provide insights into the nature and extent of young children's YouTube use as well as their parents' perspectives. In addition, further research should include parents and educators to understand their knowledge of high-quality or educational videos, children's digital safety and digital rights.

Conclusion

YouTube and YouTube Kids have received worldwide attention from young children and their families in recent years. Young children, as well as older children, enjoy watching videos on YouTube or YouTube Kids platforms. Even though available media research examined an average time spend by watching online videos (either YouTube or similar platforms), and type of the videos are viewed by young children, research studies identifying its potential benefits and risks for children's learning and development are still limited. In our chapter, we summarized the recent literature by providing an overview of research findings from studies of YouTube and YouTube Kids, expert and parental concerns about children's digital media use and addressed gaps in the literature by suggesting possible directions for future research. We believe that further research should be conducted in a timely manner in order to expand our knowledge about potential benefits and risks of online videos as well as educating parents about the well-being of young children in this digital age.

References

- AAP Council on Communications and Media. (2016). *Media and Young Minds Pediatrics*, 138(5):e20162591
- Alexa. (2018). *Youtube.com traffic statistics*. Retrieved from <https://www.alexa.com/siteinfo/youtube.com>
- Apple Store. (2018). *YouTube Kids*. Retrieved from <https://itunes.apple.com/us/app/youtube-kids/id936971630?mt=8>
- Burroughs, B. (2017). YouTube kids: The app economy and mobile parenting. *Social Media+ Society*, 3(2), 2056305117707189.
- Buzzi, M. (2011). What are your children watching on youtube?. In *International Conference on Advances in New Technologies, Interactive Interfaces, and Communicability* (pp. 243-252). Springer, Berlin, Heidelberg.
- Craig, D. & Cunningham, S. (2017): "Toy unboxing: living in a (n unregulated) material world". *Media International Australia*, 163 (1), pp.77-86.
- Dias, P., Brito, R., Ribbens, W., Daniela, L., Rubene, Z., Dreier, M., Gemo, M., Di Gioia, R., & Chaudron, S. (2016). The role of parents in the engagement of young children with digital technologies: Exploring tensions between rights of access and protection, from 'gatekeepers' to 'scaffolders'. *Global Studies of Childhood*, 6(4), 414-427. doi: 10.1177/2043610616676024.
- Dredge, S. (2016). How toy unboxing channels became YouTube's real stars. *The Guardian*. Retrieved from <https://www.theguardian.com/technology/2016/apr/28/children-toys-unboxing-channels-youtube-real-stars>
- Ellias, N., & Sulkin, I. (2017). YouTube viewers in diapers: An exploration of factors associated with amount of toddlers' online viewing. *Cyberpsychology:*

Journal of Psychosocial Research on Cyberspace, 11(3), article 2. <https://dx.doi.org/10.5817/CP2017-3-2>

Google Play. (2018). *Youtube Kids*. Retrieved from <https://play.google.com/store/apps/details?id=com.google.android.apps.youtube.kids&hl=en>

Izci, B., Yalcin, Y., Bahcekapili, T., & Jones, I. (in preparation). *Parental Decisions about Young Children's Tablet Use-A Comparison of Turkey and the United States*.

Jordá, M. P. (2016). Advertising in the Cartoons in Youtube. *Revista de Comunicación Vivat Academia*, 19(135), 57-72.

Knorr, C. (2016). *What Kids Are Really Watching on YouTube*. Retrieved from <https://www.common sense media.org/blog/what-kids-are-really-watching-on-youtube>

Lafrance, A. (2017). *The algorithm that makes preschoolers obsessed with YouTube*. Retrieved from <https://www.theatlantic.com/technology/archive/2017/07/what-youtube-reveals-about-the-toddler-mind/534765/#Algorithm%20>

Livingstone, S., Haddon, L., Görzig, A., & Olafsson, K. (2011). *Risk and safety on the internet. The perspective of European children. Full findings from the EU Kids Online survey of 9-16 year olds and their parents*. LSE, London: EU Kids Online.

Maheshwari, S. (2017). *On YouTube Kids, startling videos slip past filters*. Retrieved from https://www.nytimes.com/2017/11/04/business/media/youtube-kids-paw-patrol.html?_r0

Marsh, J. (2015). 'Unboxing' videos: co-construction of the child as cyberflâneur. *Discourse: Studies in the Cultural Politics of Education*, 37(3), 369–380.

Marsh, J., Plowman, L., Yamada-Rice, D., Bishop, J.C., Lahmar, J., Scott, F., Davenport, A., Davis, S., French, K., Piras, M., Thornhill, S., Robinson, P., & Winter, P. (2015). *Exploring play and creativity in preschoolers' use of apps: Final project report*. Sheffield: University of Sheffield. Retrieved from www.techandplay.org.

National Association for the Education of Young Children & Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. (2012). *Technology and interactive media as tools in early childhood programs serving children from birth through age 8*. Washington, DC, & Latrobe, PA: National Association for the Education of Young Children & Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. Retrieved from https://www.naeyc.org/sites/default/files/globally-shared/downloads/PDFs/resources/topics/PS_technology_WEB.pdf

National Research Council and Institute of Medicine. (2000). *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press.

Ofcom (2017). *Children and parents: Media use and attitudes report*. Retrieved from https://www.ofcom.org.uk/_data/assets/pdf_file/0020/108182/children-parents-media-use-attitudes-2017.pdf

Rideout, V. (2013). *Zero to eight: Children's media use in America 2013*. Common Sense Media. Retrieved from <https://www.commonsensemedia.org/research/zero-to-eight-childrens-media-use-in-america-2013>

Rideout, V. (2017). *The Common Sense Census: Media use by kids age zero to eight*. Common Sense Media. Retrieved from <https://www.commonsensemedia.org/research/the-common-sense-census-media-use-by-kids-age-zero-to-eight-2017>

Ryan ToysReview (2018). *Ryan ToysReview*. Retrieved from https://www.youtube.com/channel/UChGJGhZ9SOOHvBB0Y4DOO_w

Smarty Pants. (2017). *2017 Kid & family trends: A year of spinning, sliming, streaming, shipping and snapping*. Retrieved from https://daks2k3a4ib2z.cloudfront.net/5435eb4d1e426bb420ac990f/5a316f4f4a2f7d000196532b_2017%20Kid%20and%20Family%20Trends%20Report%20EXCERPT.PDF

Smarty Pants. (2017). *2017 Clicks, taps, & swipes*. Retrieved from https://daks2k3a4ib2z.cloudfront.net/5435eb4d1e426bb420ac990f/5a316f6a4a2f7d0001965336_2017%20Clicks%20Taps%20%26%20Swipes%20EXCERPT.PDF

Tan, L., Ng, S. H., Omar, A., & Karupaiah, T. (2018). What's on YouTube? A Case Study on Food and Beverage Advertising in Videos Targeted at Children on Social Media. *Childhood Obesity*, 14(5), 280-290.

Uhls, Y. T., & Robb, M. B. (2017). How parents mediate children's media consumption. In Blumberg, F.C., & Brooks, P.J. (Eds.). *Cognitive development in digital contexts* (pp. 325-343). Waltham, MA: Academic Press.

Yadav, S., Chakraborty, P., Mittal, P., & Arora, U. (2018). Children aged 6–24 months like to watch YouTube videos but could not learn anything from them. *Acta Paediatrica*, 107(8), 1461-1466. doi: 10.1111/apa.14291.

Youtube Kids. (2018). *A world of learning and fun, made just for kids*. Retrieved from <https://www.youtube.com/yt/kids/>

Wamsley, L. (2017). *Is YouTube's algorithm endangering kids?* Retrieved from <https://www.npr.org/sections/thetwoway/2017/11/27/566769570/youtube-faces-increased-criticism-that-its-unsafe-for-kids>

Wikipedia. (2018). *Youtube*. Retrieved from <https://en.wikipedia.org/wiki/YouTube>

Yadav, S., Chakraborty, P., Mittal, P., & Arora, U. (2018). Children aged 6–24 months like to watch YouTube videos but could not learn anything from them. *Acta Paediatrica*, 107(8), 1461-1466. doi: 10.1111/apa.14291.

Youtube. (2017). *Introducing kid profiles, new parental controls, and a new exciting look for kids, which will begin rolling out today!* Retrieved from <https://youtube.googleblog.com/2017/11/introducing-kid-profiles-newparental.html>

Youtube Kids. (2018). *A world of learning and fun, made just for kids*. Retrieved from <https://www.youtube.com/yt/kids/>