# Technology and Interactive Media Usage to Support Cyber Wellness Education for Kindergarten

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**Abstract.** The COVID-19 pandemic changed the education system in Indonesia from Early Childhood to Higher Education through the application of distance learning (DL). It has an impact on the intensity of Early Childhood Education, particularly, to recognize and access technology and interactive media. Young children need to be educated to surf the internet healthily and protect themselves. Cyber wellness refers to the health/well-being of internet users and involves an understanding of online behavior and awareness of how to protect themselves in cyberspace. This study aims to describe the use of technology and interactive media that supports cyber wellness education for kindergarten. The method used in this research was qualitative through interviews and documentation. The results of this study were to create proactive cultures with technology and interactive media in schools to help students become digital learners by 1) paying attention to safety, cultural suitability, needs, interests, and children development, 2) learning to use technology in kindergarten is active, direct, engaging, and empowering children; 3) controlling over children when accessing technology, 4) using technology in class when discussing themes/materials, and when completing assignments or projects given by the teacher, and 5) communicating how to use the internet safely for children with parents.

Key words: interactive; technology; media; cyber wellness; kindergarten.

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#### **INTRODUCTION**

The government implemented two policies during the pandemic, namely 1) health and safety became a priority in education services, 2) pay attention to children's rights and development during the COVID-19 pandemic. Therefore, the circular letter of the Minister of Education and Culture No. 4 of 2020 was issued with the start of implementing the learning from home program. Furthermore, adjustment of the Joint Decree of 4 ministers for the period of January to the present, states that face-to-face learning is allowed if the local government has given permission and the education unit meets the specified requirements. Based on the field observations, there is an adjustment to the 4 Ministerial Decree, learning in Early Childhood education is carried out through online learning programs (on a network) by utilizing technology and interactive media, home visits, and limited face-to-face meetings at schools.

The implementation of distance learning (online) has a negative impact on children because they begin to recognize technology and the intensity of using it increases. As the results of research by Amri, M.I.A.U, and Pratiwi, D, E. (2020), stated that in the COVID-19 pandemic situation, the negative impact is children playing gadgets more often than playing with friends in the environment so that they become individualistic children. The "anxiety" caused by widespread media exposure to online dangers often leads governments to take hasty solutions that end up trying to "control" young children rather than guiding them (Facer, 2012). Anxious attitudes towards online dangers can lead to the practice of "over-blocking" through internet filters, implying a reactive rather than proactive culture, (Hope, 2008).

As suggested in a joint position statement (NAEYC / Fred Rogers Center, 2012), our focus should be on living well with the media rather than opposing or limiting it. Here are some actionable steps we can take to help learn more about relationships and how to support children, educators, caregivers, and communities as they learn to "live well with media and technology": 1) Focus on the child, the content, and the context at same time; 2) See longitudinally, the developmentally appropriate experiences with technology and media are more likely to have stronger relationships with themselves, other people, and their world which is inherently filled with all kinds of technology and media; 3) Expand the way educators and parents identify and define technology tools for learning. Give children a wider choice of devices as they decide how to explore their world, and help them learn

to match the right tool to the task; 4) Plan an agile design that can build research theory. Deliberately seeking to learn and better understand the intersection of the social and emotional aspects of children's interactions with technology and media; 5) Customize Simple Interaction Tools with experience with technology and digital media; 6) Bring together experts in children development, content development, and other adults who use technology and media with children as part of a formative research process; 7) Work to translate, demonstrate, and "show" how to apply research; 8) Continue to work on curating a sample library where educators, child care professionals, and parents can see the excellent use of technology and media according to the development in contexts that may have a positive impact on the children development; 9) Strive to be socially fair with policies around technology and media in children's lives; 10) Every child needs a media mentor.

The Indonesian government has tried to present various educational programs through TVRI in the learning from home program since April 2020. This is in order to prepare safe content for children. In addition, the government cooperates with various applications in learning from home programs, such as Rumah Belajar, Meja Kita, ICANDO, IndonesiaX, Google for Education, Smart Class, Microsoft office 365, quipper school, Ruangguru, Sekolahmu, Zenius, Cisco Mebex. In addition, distance learning is also faced with the challenge of differences in parental literacy who must accompany children in learning from home (Kompas, May 3, 2021).

Johnson, O., et al. (2020) stated that Cyberwellness (CW) involves an understanding of online behavior and awareness of how to inform and protect oneself in cyberspace. CW's focus on helping students become digital learners and responsible citizens, including how their online behavior and activities affect themselves and others as well as developing skills to critically assess online information, will be important to improve CW in the future. Awareness of the potential dangers when children access the World Wide Web (WWW), is becoming increasingly important. Digital Citizenship and Cyber Wellness need to be considered within a larger framework of a global sociopolitical perspective or within a context of culture, politics, and civil society (Ntebutse and Collins, 2018), and any conversation that addresses these constructs needs to be within a geopolitical-sociological

framework.

CW can be defined as "a positive well-being of Internet users and a healthy cyberculture for the Internet community" (Putnam & Pulcher, 2007, p. 73). The need for socialization in the virtual world requires cyber etiquette, responsibility, and politeness in virtual public spaces. To build Digital Citizenship and Cyber Health, it is necessary to pay attention to the following:

- 1. Skills in assessing whether the information is accurate (trustworthy) or not (false/hoax)
- Considering the skill of assessing whether the 2. information obtained online is reliable or not is an information literacy skill that most young people do not fully possess (Bartlett & Miller, 2011; Larson et al., 2018). Teachers report that this can lead to students presenting based on misinformation work and propaganda (Bartlett & Miller, 2011). The development of young people's information and media literacy skills, including critical thinking, is best approached in a school context (Bartlett & Miller, 2011; Majid et al., 2016; Kimmons & Belikov, 2018). However, this requires that all teachers have proper knowledge of these skills and how best to teach them (Majid et al., 2016; Passey et al., 2018).

Children safety in the digital world Threats to cyber wellness can occur when a child is an intentionally or unintentionally agent, accessing or posting inappropriate information such as pornography, hate speech, downloading criminal software for cyber criminals such as data theft, causing chaos and damage to devices, posting info, misinformation, personal and inappropriate information; or when others target children as victims of cyberbullying, privacy violations, phishing, unwanted solicitation, online fraud, and cyber predation. Livingstone et al. (2015) identified risks faced by children including receiving sexual messages, online contact with strangers, face-to-face encounters with such strangers, harmful content, and misuse of personal data. Cyberbullying and suiciderelated bullving also affect children's awareness (Mark & Ratliffe, 2011; Cohen-Almagor. 2018). Lack of awareness of this danger has the potential for children to acquire inappropriate content or engage in contact with unknown people." On the other hand, participants aged 8 to 18 in Zilka's (2017) study, showed a "medium-high" level of awareness of internet dangers.

3. Increase public awareness of online children protection and cyber health There is an increasing need for cyber health among children in a rapidly changing global society, remembering the risks of allowing children to access and engage with the Internet. To address this issue, many government and private agencies have provided online resources to help raise awareness of threats and concerns, and present strategies to help children avoid potential harm. For example, excellent sources of information can be found at 1) https://www.moe.gov.sg/education/program mes/social-and-emotional-learning/cyberwellness, developed in Singapore, 2) http: //mediasmarts .ca from California, 3) https://en.unesco.org/themes/media-and-

information-literacy, 4) Private organizations have also contributed materials and resources to help raise parent and child awareness.

- Policies to be developed to promote Cyber 4. wellness With regard to macro-level policies, Searson et al. (2011) raise a really salient point regarding the extent to which the development of CW and cyber-citizenship is constrained by national/state identity and other structural factors. At the meso level, each of us develops a personal understanding of the world and our place in it. CW's view is teachable and directs the channel between relativism and human rights to seek-receivedeliver information in the self-monitored and community-monitored virtual public sphere. There is ample literature that advises us on how and what to teach students to develop cyber health and a healthy sense of digital citizenship (see Law, et al., 2018; Cooney, Nugent & Howard, 2018; Hui & Campbell, 2018). At the micro-level, our job is to educate students so that they can safely and fairly participate in online communities, and this participation is seen as critical to student development in our global society.
- 5. Activities and practices that can promote and develop CW

## METHODS

The method in this research was descriptive qualitative through in-depth interviews and

documentation studies. Participants were selected purposive sampling using (Stewart & Shamdasani, 2014). In purposive sampling, researchers select individuals who meet the criteria according to the research objectives, participants need to have experience related to the research topic, namely related to cyber wellness educational material content for kindergarten children and have similar psychosocial characters, namely changes that occur in personality, emotions, and social relationships in schools as a result of the development of information technology as it is today. (Barbour, 2018; Krueger & Casey, 2009; Rabiee, 2004). Indepth interviews were conducted with 12 kindergarten teachers in Central Java, and a document study of the daily lesson plans they developed.

#### **RESULT AND DISCUSSION**

The use of healthy interactive technology and media for learning in kindergarten, based on the results of interviews showed that teachers stated the use of technology in schools did not harm kindergarten children, most teachers (96%) controlled when children were accessing technology, such as paying attention to cultural compatibility, religious norms, social, for example, the selected spectacle was a story about the prophet's exemplary, the recognition of manners according to the nation's culture, children were not allowed to watch western culture that had a negative effect on children and chose stories and songs according to the children's culture. Internet content that had been accessed by children and teachers in learning at school, such as: YouTube, Sanford harmony, Class dojo, Dodo - Syamil film, Pinterest, learning videos, stories of the prophet, children's creative gymnastics, google, Clean and Healthy Living Habits, Teacher sharing, Natural geographic kids, The kids page. Surely, in technology integration, the selection of materials in kindergarten classes was adjusted to the children's development. needs. interests. language background, and abilities of each child.

Based on the analysis of the Daily Learning Implementation Plan (DLIP) document made by the teacher, it showed that the selection of learning materials with technology integration is shown in the following table:

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No	Theme	Materials	Integration of Technology and Interactive Media in Learning Materials	Playing Activities
1	Corn Plant	Functions and	How to make processed corn	Make cheese milk corn
		characteristics of corn	https://www.youtube.com/watch?v=2Rb0HpWD5uY	
2	Citrus Fruit Plant	Benefits of Citrus Fruits	What are the benefits of citrus fruits for the body? https://www.youtube.com/watch?v=t2lWNqb6T9w	Play the role of "citrus ice seller"
3	Mango Fruit Plant	Benefits and parts of mango tree	Get to know the benefits and parts of mango tree https://www.youtube.com/watch?v=epA7maQGqzQ	Make candied mango
4	Jamu Beras	How to make	Jamu Today	Make jamu beras
	Kencur	jamu	https://www.youtube.com/watch?v=eRqB8- KphZE&t=24s	kencur packaging
5	Tomato	Characteristics of	Characteristics of tomato fruit	Compare the
	fruit plant	tomato fruit	https://youtu.be/ozyWfzjZ_yY	characteristics of
				tomatoes (weigh and measure diameter)
6	Papaya	Characteristics	Papaya Plant	Make papaya pudding
	Fruit Plant	and processed papaya fruit	https://www.youtube.com/watch?v=-hdiuN2WGwM	
7	Rice Crops	Characteristics of	How to plant and harvest rice	Make puppets from
0	Cat Dat	rice crops	https://youtu.be/Sgeq5WpQpmE	straw Make wetfood
8	Cat Pet	cats and their	https://youtu.be/4_9gA770v5Y	Make wellood
		place to live		
9	Kangkong	Get to know	Get to know kangkong plants	Make animal food
	Vegetable Plants	kangkong plants	https://youtu.be/4SXkr8J8T6M	from kangkong
10	Duck Pet	Duck	Duck Characteristics	Make a duck egg nest
		Characteristics	https://www.youtube.com/watch?v=QmCAx_aAjFI	creation with straw
11	Guava Fruit	Benefits of guava	Benefits of guava	Make guava juice
	Plants		https://www.youtube.com/watch?v=9hTu-UmqCWI	
12	Potato	Benefits of	Benefits of potatoes	Make potato balls
	Plants	potatoes	https://youtu.be/sYl4i-RuFa4	

Table 1. Integration of Technology and Interactive Media in Learning Materials in Kindergarten

The use of technology as learning material in kindergarten classes is direct, activates students, attracts, and empowers children. There were several differences in the completion of tasks or projects given by the teacher, namely: 1) children used technology (65%), 2) children did not use technology (5%), and 3) children sometimes used technology (30%). So the usage of technology was not limited to opening activities only when discussing learning materials/themes but to the completion of tasks/projects given by the teacher.

The need to teach children how to rely on technological resources when learning new skills is increasing. Children must become more proficient in using the web and other tools to explore, evaluate sources of information, and collect data. Thus, it is very important to provide a good introduction to technology in the kindergarten classroom (https://www.misshumblebee.com).

The use of technology in learning has different effects on children compared to learning without technology integration, such as 1) children are more interested in learning, 2) the communication is more active, 3) children have more curiosity, 4) children's creativity increases, 5) children understand the learning materials quickly, 6) create a fun learning for children, 7) children

always want to try, 8) children more focus on activities, 9) children are enthusiastic when they see impressions from laptops, 10) technology helps children in the learning process, for example constructing will increase children's ability to create and be creative, 11) the interaction of technology in learning also supports children in role-playing. In addition, other benefits of technology integration in learning are further clarifying the content of the material during Learning From Home; strengthen teacher-parent relationships, and improve the quality of learning practices in kindergarten.

This is in accordance with Hamalik's statement in Azhar Arsyad (2006: 15) that the use of learning media can generate new desires and interests, generate motivation and stimulation of learning activities, and even bring psychological effects on children. The use of learning media in early childhood education also allows children to interact directly with the environment, allows for uniformity of observations or perceptions of learning in each child, generates learning motivation, presents information consistently and can be repeated or stored consistently, presents messages or learning information simultaneously for all children, overcome the limitations of time and space as well as control the direction and

speed of children's learning.

There are many researchers who have emphasized the positive effects of using interactive media in the learning process. By using interactive media, a student will be able to choose from a variety of learning methods such as educational games, websites, chat rooms, forums, internet games, social networks, etc. (Kuprienė &egunienė, 2017). For younger students such as those in kindergarten, it is very important to guide and monitor them when they use interactive media.

Radesky et al. (2015) also recognize that interactive media can support the learning process by demonstrating ideas for parent-child activities, or by modeling teaching strategies (eg, dialogic reading, phonetics, or sound integration skills). While research by Flynn and Richert (2015) shows that using new interactive media allows children to perform better in writing and number recognition and knowledge.

In order to support healthy internet education (cyber wellness), teachers have communicated how to use the internet that is safe for children including 1) how to use and abuse technology (gadgets/laptops), 2) what the appropriate behavioral norms are when using technology, and 3) Effect on using technology. However, teachers have not yet discussed how to be responsible and ethical regarding rights, roles, identities, and online rights as well as online safety, security, and communication.

According to NAEYC (2015), several ways to support the habit of using technology and interactive media in cyber wellness education for young children are: 1) consider total screen exposure throughout the day and in all places, 2) switch from "how much" children watch to " what they watch", 3) use media "equipped with" traditional play materials and activities rather than "not equipped with", 4) limit passive use and avoid inappropriate content, 5) seek interactive media experiences, include positive interactions, and give control to the children. This is in accordance with the results of this study in which teachers paid attention to what interactive media children would watch and was equipped with playing activities that provided opportunities for children to actively explore and reduce passive media use.

There are three frames of thinking about teaching with digital media for early childhood learning: 1) the quality of digital media must maintain the overall health, well-being, and children development, 2) the quality of digital

media for young children must consider the needs, abilities, interests, and development stages of each child; material content in digital media must educate, develop specific skills, help children engage, express, imagine or explore, and the context of using digital media is only complementary and does not interfere with children's natural play, for children aged 5 years or younger, media products must encourage shared engagement (for example, by parents or teachers with children, by children with siblings or peers), 3) quality determination must be based on an evidence base that can be used by parents, educators, policy makers, and others to make decisions about the selection and use of certain digital media products. (Fred Rogers Center, 2012, pp 1-2).

Principles for Guiding Appropriate Usage of Technology and Interactive Media as Tools in Early Childhood Programs are: 1) Usage of technological tools and interactive media should not harm children. 2) Developmentally appropriate practice should guide decisions about whether and when to integrate technology and interactive media into early childhood programs. 3) Professional judgment is required to determine whether and when the use of certain technologies or media is age-appropriate, individualappropriate, and culturally and linguistically appropriate. 4) Developmentally appropriate teaching practices should always guide the selection of any classroom material, including technology and interactive media. 5) Appropriate usage of technology and media depends on each child's age, developmental level, needs, interests, language background, and abilities. 6)The effective use of technology and media is active, direct, engaging, and empowering; gives control to the children; provides adaptive scaffolding to facilitate task completion, and is used as one of many options to support children's learning. 7) If used properly, technology and media can improve children's cognitive and social abilities. 8) Interaction with technology and media should be fun and support creativity, exploration, pretend play, active play, and outdoor activities. 9) Technological tools can help educators create and strengthen home-school connections. 10) Technology and media can improve early childhood practice when integrated into their environment, curriculum, and daily routines. 11) Assistive technology should be available as needed to provide equitable access for children with special needs. 12) Technological tools can be effective for bilingual learners by providing

access to the language and culture of family origin while supporting English language learning. 13) Digital literacy is essential to guide early childhood educators and parents in the selection, use, integration, and evaluation of technologies and interactive media. 14) Digital citizenship is an important part of digital literacy for young children. It refers to the need for adults and children to become responsible digital citizens through an understanding of the use and abuse of technology and ethical behavior norms which are responsible related to rights, roles, identities, and online rights, safety, security, as well as communication. 15) Early childhood educators need training, professional development opportunities, and examples of successful practice to develop the technology and media knowledge, skills, and experience necessary to meet the expectations set out in this statement. 16) Research is needed to better understand how children use and learn with technology and interactive media and also to better understand any short-term and long-term effects (NAEYC and Fred Rogers Center, 2012).

NAEYC and Fred Rogers Center (2012) recommended early childhood educators to:1) Select, use, in tegrate and evaluate technology and interactive media tools in a deliberate and developmentally appropriate manner, pay careful attention to the appropriateness and content quality, children's experiences, and opportunities for co-engagement. 2) Provide a balance of activities in the program for children by recognizing that technology and interactive media can be valuable tools when used intentionally with children to expand and support active, direct, creative, and authentic engagement with people around them.3) Prohibit passive use of television, videos, DVDs, and other noninteractive technologies and media in early childhood programs for children under 2 years old, and avoid passive and non-interactive use with children aged 2 to 5 years. 4) Limit all use of technology and interactive media in programs for children under 2 years of age to those that support responsive interactions between caregivers and children and that strengthen adult-child relationships. 5) Carefully consider screen time recommendations from public health organizations for children from birth to 5 years when determining appropriate limits on the use of technology and media in early childhood settings. Screen time estimation should include time spent in front of screens in early childhood programs and, with input from parents and family, at home

and elsewhere. 6) Provide leadership in ensuring equal access to technology and interactive media experiences for children in their care and for parents and families.

Thus it can be said that incorporating technology in the education of kindergarteners is possible and beneficial but must be done wisely. If properly applied, the use of technology for kindergarteners can increase children's academic and social success, but achieving this goal requires careful guidance from teachers: it is their job to enforce age-appropriate boundaries on time and content as well as give good behavioral examples for children to imitate (Galvis, Natalia 2019).

# CONCLUSION

The conclusion in this study is there is a need to create a proactive culture with technology and interactive media in schools to help students become digital learners by 1) paying attention to safety, cultural suitability, needs, interests, and children's development, 2) learning to use technology in kindergarten is active, direct, engaging. and empowering children; 3) controlling over children when accessing technology, 4) using technology in class when discussing themes/materials, and when completing assignments or projects given by the teacher, and 5) communicating how to use the internet safely for children with parents.

## REFERENCES

- Amri, M. I. A. U., Bahtiar, R. S., & Pratiwi, D. E. (2020). Dampak Penggunaan Gadget terhadap Kemampuan Interaksi Anak Sekolah Dasar pada Situasi Pandemi Covid-19. *Trapsilia: jurnal Pendidikan dasar*, 2(2), 14-23.
- Ainley, J. (2018). Students and their computer literacy: Evidence and curriculum implications. In J. Voogt, G. Knezek, R. Christensen & K.-W. Lai (Eds). Second handbook of information technology in primary and secondary education (pp.69-88). Switzerland: Springer.
- Azar Arsyad. 2006. Media Pembelajaran. Jakarta: PT Raja Grafindo Persada.
- Bartlett, J. & Miller, C. (2011). Truth, lies and the internet: A report into young people's digital fluency. London: Demos.
- Cohen-Almagor, R. (2018). Social responsibility on the Internet: Addressing the challenge of cyberbullying. *Aggression and Violent Behavior*, *39*, 42-52.

- Cooney, C., Nugent, K., & Howard, K. G. (2018). Embedding digital citizenship in higher education institutions. *All Ireland Journal of Higher Education*, *10*(2), 360.1-360.8.
- Facer, K. (2012). After the moral panic? Reframing the debate about child safety online. *Discourse: Studies in the Cultural Politics of Education, 33*(3), 397–413. DOI: 10.1080/01596306.2012.681899
- Flynn, R. M., and Richert, R. A. (2015). Parents support preschoolers' use of a novel interactive device. *Infant Child Dev.* 24, 624–642. doi: 10.1002/icd.1911
- Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. 2012. A Framework for quality in digital media for children: considerations for parents, educators and media creators. Latrobe, PA: Fred Rogers Center.
- Galvis, Natalia. (2019). The benefits of starting to use technology in kindergarten. https://www.robotlab.com/blog/the-benefitsof-starting-to-use-technology-inkindergarten
- Hope, A. (2008) Internet pollution discourses, exclusionary practices and the 'culture of over- blocking' within UK schools. *Technology, Pedagogy and Education*, 17(2), 103-113
- Hui, B. & Campbell, R. J (2018). Discrepancy between learning and practicing digital citizenship. *Journal of Academic Ethics*, *16*(2), 117-131. https://doi.org/10.1007/s10805-018-9302-9
- Johnson, Q., Saito, T., Sakamoto, A., & Castillo-Valenzuela, N. (2020). Thematic Working Group 5. Learners and learning contexts: New alignments for the digital age, 137.
- Kimmons, R. & Belikov, O. (2018). Cultural and social issues in using social media to support learning. In J. Voogt, G. Knezek, R. Christensen & K.-W. Lai (Eds). Second handbook of information technology in primary and secondary education (pp.181-198). Switzerland: Springer.
- Kuprienė, L,. & Žegunienė, V. (2017). Integration Of Interactive Media Into Foreign Language Learning To Support Efficiency Of Study Process. Society Integration. Education Proceedings of the International Scientific Conference
- Law, N., Chow, S.-L. & Fu, K.-W. (2018). Digital citizenship and social media: A curriculum perspective. In J. Voogt, G. Knezek, R.

Christensen & K.-W. Lai (Eds). Second handbook of information technology in primary and secondary education (pp.53-68). Switzerland: Springer.

- Livingstone, S., Mascheroni, G., Dreier, M., Chaudron, S., & Lagae, K. (2015). *How* parents of young children manage digital devices at home: The role of income, education and parental style. London, England: EU Kids Online.
- Majid, S., Chang, Y.-K. & Foo, S. (2016). Auditing information literacy skills of secondary school students in Singapore. *Journal of Information Literacy*, *10*(1), pp. 44-66.
- Mark, L., & Ratliffe, K. T. (2011). Cyber worlds: New playgrounds for bullying. *Computers in the Schools*, 28(2), 92-116.
- Misshumblebee.com. (2020). The Benefits of Technology in the Kindergarten Classroom. Accessed on April 2nd 2021 from .https://www.misshumblebee.com/blog/i ndex.php/how-effectively-integratetechnology-classroom-pre/
- NAEYC and Fred Rogers Center. (2012). Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8.
- NAEYC. 2015. Technology and Digital Media in The Early years – Tools for Teaching and Learning edited by Chip Donohue. New York: Routledge Taylor and Francis Group.
- Passey, D., Shonfeld, M., Appleby, L., Judge, M., Saito, T. & Smits, A. (2018). Digital agency: Empowering equity in and through education. *Technology, Knowledge and Learning*, 23, 425-439.
- Puynam, J., & Pulcher, K. L. (2007). An E-Learning strategy towards a culture of cyber wellness and health for WMSCI. *Systemics, cybernetics and informatics,* 5(6), 73-76.
- Radesky, J. S., Schumacher, J., and Zuckerman, B. (2015). Mobile and interactive media use by young children: the good, the bad, and the unknown. *Pediatrics* 135, 1–3. doi: 10.1542/peds.2014-2251
- Searson, M., Jones, W. M., & Wold, K. (2011). Reimagining schools: The potential of virtual education. *British Journal of Educational Technology*, 42(3), 363-371.
- Zilka, G. C. (2017). Awareness of eSafety and potential online dangers among children and teenagers. *Journal of Information Technology Education: Research, 16*, 319-338.