

The Correct Way to Use Technology in the Early Childhood Classroom

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Abstract: Technology use in the education setting is an ongoing controversy and there are mixed reviews on its positivity and negativity of exposure and use in early childhood classrooms. Because technology is prevalent in society today, exposure at young ages is important for children to succeed. Instead of asking if technology should be used in early childhood classrooms, we should model the correct way to use it there. The use of technology in the early childhood classroom should include tools and experiences used to prepare students for formal classroom instruction and the development of their different domains of learning. It will additionally help facilitate scaffolding and extension of learning while supporting connections between school and home.

Introduction

Ms. Stacy is sitting on the carpet with her 4-year-old children in the dramatic play area of a preschool classroom. This time of day is center time, where the children can decide what they would like to do. The kids start putting together blocks on the ground stating that they are making a stage and that they should do a play. One of the girls, Sarah, says that she is going to be a singer and starts lining chairs up for people to sit in. Ms. Stacy helps facilitate the play further and gives people different jobs so that they all have a role. Some children are in charge of designing programs on the computer for the performance, others are creating tickets with a program on the computer to get into the performance, some oversee taking people to their seats, some are in charge of announcing the singer using a microphone, some work at videoing the whole event, and others take pictures with a camera. Ms. Stacy grabs the classroom karaoke machine with a microphone for the children to take turns using and off the children go, having fun but learning crucial skills and knowledge about technology while they are interested in this type of play and learning.

Technology use by all human beings is very prevalent in the 21st century and is here to stay. We use technology every day for an abundance of things, and it continues to change and progress by the hour. There is still plenty of negativity associated with technology use by young children today, whether at home or in a school setting. A lot of that has to do with the conflicting views on how people think it affects children's overall learning and development (Kaynar et al., 2020; Leung et al., 2020). Children can be introduced to many diverse types of technology in the classroom, such as tablets, smartboards, and digital cameras, but what the children do with the technology depends on the adults taking care of them. When technology is not used for learning purposes, but more for entertainment, it is called passive media (Fowler, 2017; Sweetser et al., 2012). An example of passive media would be a teacher that parks her children in front of a television set to watch a movie so that she can clean the room, catch up on lesson plans and get materials ready to be sent home for the

day. There is no one there with the child to extend learning or to make sure any type of educational learning takes place. It is simply out of convenience so that the adult in the situation can get something done.

If we are not on board with getting our children this much-needed technology knowledge at young ages to live in our digital world, they could potentially be behind when they start their elementary school journey or join the workforce later in life. There has been a lot of controversy over the last several years on whether technology use in early childhood classrooms is appropriate and whether it has positive or negative side-effects on children (Kaynar et al., 2020; Leung et al., 2020). Even if we believe that technology should be introduced to children at young ages, we still struggle with what it should teach and what they should ultimately learn from it. Instead of asking if technology should be used in early childhood classrooms, we should be pursuing the correct way to use and model technology use in the early childhood classroom and how to prepare our children for success in their later school years (Donahue & Schomburg, 2022; Hirschy, 2016; NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2012).

This paper will reaffirm that technology use should be developmentally appropriate for each child's age and stage of life (Donahue & Schomburg, 2017; Hirschy, 2016; NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2012). It will show how technology grows the different domains of development, including social-emotional and cognitive areas, along with literacy enhancement (McDonald, 2020; Quesenberry et al., 2016; Xie et al., 2019). It declares that adults are a crucial part in nurturing technology use in the early childhood classroom to facilitate, enhance and scaffold learning in every way (Donahue & Schomburg, 2017; Fowler, 2017; Hirschy, 2016). And finally, it will show why and how we need to foster school and home connections between teachers, children, and parents to bring the experience full circle and form bonds while the children are learning (Donahue & Schomburg, 2017; Fantozzi et al., 2018; Fowler, 2017).

Definitions

Developmentally appropriate technology use, or DATU, was a term coined through the NAEYC or National Association for the Education of Young Children. Like DAP, or developmentally appropriate practice, DATU is a set of guidelines meant for educators that show the correct way to use technology in their early childhood classroom settings. Teachers that are using technology in their early childhood classrooms should adhere to these guidelines for the children to get the most out of it. Most importantly, use of technology with youngsters should not replace traditional methods of teaching and learning but should enhance and extend learning by taking it to the next level. In addition, learning with technology should always include hands-on activities (NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2012).

Preparing Children for School

Technology, when used in the right way, can enhance learning in different domains of development, especially the social-emotional and cognitive areas, which help pre-

pare children for later formal schooling (Donahue & Schomburg, 2022, p. 75). There are many correct ways that using technology in the early childhood classroom can expand and develop social-emotional skills to help children flourish and learn in a unique way. Some of those ways are through “sharing, helping peers, interacting cooperatively, seeking information, and asking questions” (Quesenberry et al., 2016, p. 75). Although it is true that technology use can be one on one in the classroom setting, it does not always have to be, especially in the early childhood classroom. There are many activities that foster collaboration and interactions with other children and requires them to work together to make decisions, problem-solve, and complete a task (McDonald 2020; Quesenberry et al, 2016).

Using technology in the early childhood classroom can also strengthen cognitive development for young children, including nourishing their evolving literacy skills (Eutsler et al., 2020; McDonald, 2020; Xie et al, 2019). Literacy skills are defined as being aware of sounds that make words and then having the ability to form those sounds (Shifflet et al., 2020, p. 2). Some other key areas of literacy are phonological awareness, print awareness, and oral language development, all of which are imperative to becoming experts in our own language (Shifflet et al., 2020, p. 2). Cognitive and literacy skills are improved or enhanced through correct technology use by young children in early childhood classroom settings (Kaynar et al., 2020). Shifflet et al., 2020; Xie et al, 2019). In addition, tools like electronic books also help with building literacy skills such as “word meaning, word recognition and phonological awareness” (Kaynar et al., 2020, p. 911).

Teacher’s Role is Key

Teachers of young children have one of the most important roles in correctly using technology within the classroom, but they do not always have the best training or preparation. The biggest barriers that teachers face with using technology appropriately are lack of time, no support from administration, unavailability of motivation, thinking that they cannot incorporate it, opposition from families and/or families of diverse cultures, absence of support and scarce professional development in this area (Hirschy, 2016, p. 91). If it is used correctly, however, technology can be a tool for teachers that can help to solve problems while also enhancing and extending learning while fostering communication (Fowler, 2017, p. 43). This will enable the children to play, explore, and express themselves while growing their skills in different areas. It is the ongoing teacher’s role to make sure that it is used correctly. It is also the teacher’s role to set limits and know what kind of technology the children are using, go to as many in-service development classes as possible, and to be mentors to children by scaffolding learning and showing them the right way (Donahue & Schomburg, 2022, p. 77).

In addition to the above, the AAP (American Academy of Pediatrics) also shares many strategies teachers can use to be successful in this area. These include knowing all specific components about developmentally appropriate practice, taking time to investigate and learn about the technology they want to use in their classrooms, continuing to explore with technology themselves so that they are comfortable with it, and showing their children ways to use it in a safe manner (Fowler, 2017, p. 43). In the same line of thinking, use of technology implementation by teachers

should always enhance and extend what is going on in the classroom and should never be used to replace any traditional methods of learning (NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2012, p. 5). The goal of teachers being gatekeepers of technology in the early childhood classroom is to have "digitally literate educators who have the knowledge, skills, and experience to select and use technology tools and interactive media that suit the ages and developmental levels of the children in their care and know when and how to integrate technology into the program effectively" (Donohue & Schomburg, 2017, p. 73).

School to Home Connection

Making family connections through technology use in the classroom is the key to bringing everything full circle between teachers and children in the classroom and parents at home. It is a positive way to bridge any gaps to children being gone and out of their parents care all day. Parents can now see or be a part of what is going on through email, video chats, pictures downloaded onto the computer or blogs and newsletters that the teacher can post about their child's day. Through sharing daily information with parents digitally, teachers have the chance to build trust and relationships with all family members in a non-threatening way and parents have opportunities to feel like they are a part of the classroom (NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2012, p. 7). Active parent engagement with technology use "improves learning. Talking about what the child is seeing and doing and connecting what is on the screen with real-life experiences, builds language skills and vocabulary, encourages interactions, and strengthens relationships" (Donahue & Schomburg, 2017, p. 76). Family engagement through correct technology use can be used by teachers to share resources for typical developmental stages, concerns regarding atypical development of a certain child and/or connecting families to different support systems for something that they are going through or need help with. On the other hand, parents can also use technology to reach out to teachers and ask questions or get advice regarding their children in a more timely and convenient manner (NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2021, p. 7). "Engaging families improves outcomes for children" (Donahue & Schomburg, 2017, p. 77).

Conclusion

Technology becomes more important to our world every day and it is clear we need to learn the correct way to use it when working with young children so that they can thrive in this ever-changing 21st century. Instead of asking if technology should be used in early childhood classrooms, we should be seeking out the correct way to use it in our classrooms since it is becoming more of a staple and positive entity to teaching (Donahue & Schomburg, 2017; Hirschy, 2016; Teichert et al., 2021). Being exposed to technology at an early age gives children the tools that they will need to succeed in school and the adult workforce later in life (Hirschy 2016; Teichert et al., 2021). There has been a lot of negativities surrounding technology use over the past several years. Many educators are now trying to show how to correctly use it with young children and are putting a more positive spin on it.

As shown above, technology use should be developmentally appropriate for each age and stage of child that uses it, and it should always extend or complement learning whenever possible (Donahue & Schomburg, 2017; McDonald, 2020; NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2012). Correctly using technology in the classroom aids in social-emotional and cognitive development and can strengthen literacy skills for young children all while contributing to brain development and future learning. Because of this, young children are learning to collaborate with their peers, take turns, communicate with others, and are provided the beginning tools needed for reading and writing (Eutsler et al., 2020; Shifflet et al., 2020; Teichert et al., 2021; Xie et al., 2019). Correct technology use in the early childhood classroom must be fostered by adults in a positive way so that children can gain the most from the exposure and experience to better develop all their skills. It will always be the role of the teacher to introduce new technology to children, whether it is a new learning game they can play on a tablet or a program to create something on the computer, such as a movie or video with pictures. Teachers should also extend and scaffold learning to be meaningful and developmentally appropriate while always guiding children (Hirschy, 2016; Kewalramani et al., 2020; Quesenberry et al., 2016). And finally, technology use should be used to nurture the connections we see between teachers and children in the early childhood classroom as well as those of parents and the child's family at home. By connecting with parents, educators are reinforcing safe practices done in the classroom and are encouraging that same, consistent use at home. School to home connections also help parents to be present and engaged in their child's learning (Donahue & Schomburg, 2017; Fantozzi et al., 2018; Fowler, 2017).

By remembering and implementing all the above activities, we can help our young children be successful and thrive in an ever-changing world of technology immersion. Giving them the positive tools to learn when they are young should be our mission as educators so that they become successful in grade school, in high school, and in the workforce later in life. As stated in the position statement for developmentally appropriate technology use for young children, "it is the role and responsibility of the educator to make informed, intentional, and appropriate choices about if, how, and when technology and media are used in early childhood classrooms for children from birth through age 8" (NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2012). When technology is deployed and fostered by trained teachers in the classroom, it can also improve the quality of the experience and positively benefit every child (Hirschy, 2016; NAEYC & Fred Rogers Center for Early Learning and Children's Media, 2012).

References

- Donahue, C., & Schomburg, R. (2017). Technology and interactive media in early childhood programs: What we've learned from five years of research, policy, and practice. *Young Children*, 72–78.
- Eutsler, L., Mitchell, C., Stamm, B., & Kogut, A. (2020). The influence of mobile technologies on preschool and elementary children's literacy achievement: A systematic review spanning 2007–2019. *Educational Technology Research and Development*, 68(4), 1739–1768.
- Fantozzi, V. B. (2018). Play and technology: An important intersection for developing literacy. *Young Children*, 88–93.
- Fowler, A. (2017). Practicing technology explorations in the early childhood classroom: Practical advice for administrators. *Technology in the Classroom*, 90–93.

- Hirschy, S. T. (2016). *Developmentally appropriate technology integration*. In C. Donahue (Ed.), Family engagement in the digital age: Early childhood educators as media mentors (Chapter 2). Routledge.
- Kaynar, N., Sadik, O., & Boichuk, E. (2020). Technology in early childhood education: Electronic books for improving students' literacy skills. *TechTrends*, 64(6), 911–921.
- Kewalaramani, S., Palaiologou, I., & Dardanou, M. (2020). Children's engineering design thinking processes: The magic of the robots and the power of blocks (electronics). *Eurasia Journal of Mathematics*, 16(3), 1–14.
- Leung, S. K. Y., Choi, K. W. Y., & Yuen, M. (2019). Video art as digital play for young children. *British Journal of Educational Technology*, 51(2), 531–554.
- McDonald, A. (2020). Balancing the use of digital technologies for developmentally appropriate learning. *Educating Young Children*, 26(2), 19–22.
- National Association for the Education of Young Children, NAEYC. (2022, October 30). *Developmentally appropriate practice (DAP) position statement*. <https://www.naeyc.org/resources/position-statements/dap/contents>
- NAEYC & Fred Rogers Center for Early Learning and Children's Media. 2012. "Technology and interactive media as tools in early childhood programs serving children from birth through age 8." Joint Position statement. Washington DC: NAEYC; Latrobe, PA: Fred Rogers Center at St. Vincent College. www.naeyc.org/content/technology-and-young-children.
- Quesenberry, A. C., Mustian, A. L., & Clarke-Bischke, C. (2016). Tuning in: Strategies for incorporating technology into social skills instruction in preschool and kindergarten. *Young Children*, 74–80.
- Shifflet, R., Mattoon, C., & Bates, A. (2020). Using tablets in a prekindergarten classroom to foster phonological awareness. *International Research in Early Childhood Education*, 10(1), 1–20.
- Sweetser, P., Johnson, D., Ozdowska, A., & Wyeth, P. (2012). Active versus passive screen time for young children. *Australasian Journal of Early Childhood*, 37(4), 94–98. <https://doi.org/10.1177/183693911203700413>
- Teichert, L., Anderson, A., Anderson, J., Hare, J., & McTavish, M. (2021). Access and use of digital technologies in early childhood: A review of mixed messages in popular media. *Language and Literacy*, 23(3), 106-129.
- Xie, K., Vongkulluksn, V.W., Justice, L. M., & Logan, J.A. (2019). Technology acceptance in context. Preschool teachers' integration of a technology-based early language and literacy curriculum. *Journal of Early Childhood Teacher Education*, 40(5), 275-295.



About the Author

Tara Parker holds an associate degree in Early Childhood Education and bachelor's degree of ECE Interdisciplinary Studies. She is working on her M. Ed. and will graduate spring of 2024. Tara has a passion for teaching and coaching others and one day hopes to educate students at a college level.