# RECENT TRENDS IN THE USE OF TECHNOLOGY IN EARLY CHILDHOOD LEARNING

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***Abstract:*** *Technological developments have affected all aspects, especially in the field of education. It also stimulates teachers to use learning technology in teaching and learning activities. Therefore, this study aims to examine the use of technology, especially educational technology in teaching activities in PAUD. The research method used is a descriptive qualitative procedure. Data collection techniques used were observation and interviews involving 5 parents of students. Data analysis includes the stages: collection, reduction, display, and drawing conclusions. The results of previous research studies state that the forms of technology applied in learning vocabulary are learning tools which include video games, AR, tablets, and applications made by researchers with the aim of improving vocabulary learning. Furthermore, in terms of the application of learning resources, YouTube is a learning resource used in learning vocabulary, namely foreign languages. Which shows the importance of digital literacy for early childhood and parents in training children's intelligence, psychologically, language skills, cognitive, emotional, social, academic and critical, children's cognitive abilities increase and language skills get better and make it easier for parents to find content contains stories, pictures, songs, and others that are suitable for early childhood.*

***Keywords:*** *Early Childhood, Technology, Parents*

## Introduction

The development of science and technology which is marked by progress in the field of information media and technology is currently running so rapidly, that in placing a nation in the position of how far the nation is advanced is based on how far the nation has mastered these two fields. The Indonesian nation is a nation that lives in a global environment, so inevitably it has to be involved in the ups and downs of the mastery of information media and technology, especially for the interests of the nation itself. To achieve this goal, the government put it into one of the forms of the goals and direction of National Development, namely the science sector, where the goals to be achieved from efforts to develop information media and technology are among others to increase the nation's competitiveness, to increase sustainable and environmentally sound national development, as well as to create a quality society. Achievement of these targets can be pursued through several programs that include the development of dynamic, effective, efficient and productive information media and technology institutions. This program can be realized through various alternatives, one of which is through optimizing the use of information services to the wider community that can influence their attitudes and mindsets.

As a concrete example that exists in life today is how the role of parents in providing and directing information media and technology in children so that it becomes a benchmark for children's development in the future. Future civilization is a reflection of the attitudes and mindsets formed by these individuals through information media and technology acquired early on. This is because information and technology media services have become the main commodities in human interaction based on modernization. Indonesia is currently trying to prepare for the 2045 golden generation of Indonesia. Efforts to prepare for the golden generation are carried out in various ways, for example through education.

Compared to other developed countries, education in Indonesia is still far behind (Wahyuningsih et al., 2019). The quality of education can be improved to form a generation of Indonesians who are able to compete in all aspects that will occur in the future. Improving education starting from Early Childhood which is the initial foundation for the formation of children's character, therefore learning in early childhood is packaged in the form of playing while learning (Siti et al., 2021). In everyday life, we can easily find internet users who are underage in public places in the home environment. , playgrounds, shopping centers or recreational areas, even though you can usually find young children who are seen busy with the gadgets they have with various kinds of applications or games that are in their gadgets. In a study by Novitasari & Khotimah (2016), the use of gadgets in early childhood states that "using gadgets is more fun than playing with their peers.

From the habits of children who easily record and imitate the activities of people around them, family members, especially parents who have early childhood, must be able to supervise and guide children when using digital devices such as gadgets, it is hoped that with guidance and supervision from parents, children can take advantage and use the internet positively and well. At present, we can easily find various kinds of studies regarding internet use and families which usually revolve around a description of a trend of internet use and digital literacy in society, such as the amount of time that is released while using the internet, how are the attitudes of children and adults in this is parents when face to face or using the internet, and also how the internet can change social functions in families in digital life (Kurnia et al., 2019).

According to Davidson (2012) to be able to use the internet positively, children are very requires parental guidance and supervision. Children in this case really need guidance and direction from their parents in using digital media wisely. Therefore, parents need to understand the main values regarding the digital world that is directing daily life today. As for being able to use digital media wisely and positively, there are three important values, namely creativity, collaboration and thinking (Kurnia et al., 2019). Giving material literacy to early childhood will result in the birth of children who are good at reading and writing. Also intelligent in academics, intelligence, and emotional and spiritual. A child who is used to writing and reading will make himself more creative and think very logically, critically and be able to solve every problem he faces. Digital literacy education for early childhood will make a child smarter psychologically, linguistically, cognitively, emotionally, socially, academic and critical. So far, digital literacy education for early childhood has only been running in schools with the help of a teacher. Even though there is something more important than that, namely early childhood digital literacy education at home through the help of family or parents. Parents and teachers at school must work together in increasing educational literacy for children. To prohibit educational literacy for early childhood at home is very easy to do. One way is to regularly read fairy tales or stories to children.

The challenge is how as parents can prepare early childhood to adapt to technology. Digital parenting is one of the terms studied in this article, that parents must not only be literate in

technology but on the other hand, parents who are fond of technology also indirectly hinder the nature of the interaction between parent and child.

**Literature review**

Previous research was conducted bySisca Nurul Fadila, SC., & Ratna Faeruz, R. (2022) Entitled "Exploration of the Use of Information Technology in Early Childhood Learning in Bunga Bangsa Kindergarten"Distance learning is carried out by utilizing information technology. Among them is the application*watsapp, Youtube, Video, Voicenote*And*Zoom.*In addition to these applications, teachers also study and use various specific applications for making learning videos and video tutorials. This information technology is very helpful in the learning process, especially learning during a pandemic. Without information technology, distance learning at Bunga Bangsa Kindergarten cannot run optimally. Furthermore, in the process of preparing technology-based distance learning plans, teachers should be able to arrange learning activities by looking at WHO guidelines and research results.*American Academy of Pediatrics*related to the guide*screen time*in children.

Isrofah, Sitisaharia, Hamida (2022). Digital media-based learning in early childhood in the era of the industrial revolution 4.0 is very much needed in the current times and conditions. The application of digital media in the online or distance learning process between educators and early childhood can run with the help and collaboration between educators and parents, good collaboration between educators and parents in digital media-based learning results in children's development developing optimally. These problems can be faced with adjustments and efforts such as setting the time for using digital media, limiting internet access, monitoring activities while online, planning lessons, etc.

Djarmah and Aswan (in Putry, M, E, H., et al., 2020 p.14), namely classifying video-based learning media based on their existence, namely into two types, namely: motion-based video-based learning media and silent video-based learning media. Video-based learning motion media is a medium that displays two elements that can move, namely elements of sound and elements of images. Examples such as; 1) Television, which is an electronic system capable of displaying images and sound simultaneously by means of a cable or room as an intermediary; 2) Video, which is a part of audio-visual media that moves by displaying images and sound while moving;

Novitasari & Khotimah (2016), the use of gadgets in early childhood states that "using gadgets is more fun than playing with their peers. Most early childhood who are aged 2 to 7 years are able and able to use various features of existing applications and can operate their own gadgets on their own without the help of others, this ability children usually get just by looking at and paying attention to people around them. surroundings such as father, mother, older sibling or those closest to the child in their environment while using a smartphone or other digital device.

**Method**

This research uses a qualitative approach, namely descriptive research. Data collection procedures through observation and interviews. The observation subjects were five early childhood children ranging from 2-7 years in the writer's neighborhood. Then interviews were conducted on five parents, this was done because of the importance or participation of parents in

supervising their children. Retrieval of data by interviews and observations, because this research is qualitative and does not use instruments. So the structured interview guidelines and open observation focus on three important aspects as measurement guidelines, namely: social media support, network or access conditions, and increased academic results. These three important aspects are used as guidelines for measuring tools in collecting data and information through observation and interviews. In addition, the author also acts as the main instrument, informant in monitoring and gathering information in the field. Data analysis uses source triangulation to explore the importance of in-depth information with research designs (Aeni et al., 2020). The data obtained from the field was immediately written down and analyzed using four interacting components, namely: data reduction, data presentation, drawing conclusions (verification) and triangulation. Data analysis uses source triangulation to explore the importance of in-depth information with research designs (Aeni et al., 2020). The data obtained from the field was immediately written down and analyzed using four interacting components, namely: data reduction, data presentation, drawing conclusions (verification) and triangulation. Data analysis uses source triangulation to explore the importance of in-depth information with research designs (Aeni et al., 2020). The data obtained from the field was immediately written down and analyzed using four interacting components, namely: data reduction, data presentation, drawing conclusions (verification) and triangulation.

## Results and Discussion
## Results
Research Results The results of the research show that most of the gadgets that parents give to their children are based on their children's wishes, for specific purposes such as introducing technology earlier or just to keep their children from getting bored. For parents like this, they think that with early childhood gadgets they can expand their friendship network because they can easily and quickly join the social media that has been provided (Nurrachmawati, 2014). Sometimes gadgets can also be used by parents to divert children so they don't interfere with the work of their parents so that parents provide facilities in the form of gadgets for their children who are still at an early age (Widiawati & Sugiman., 2014).

### Table 1.1 Parental Activity Observation Sheet for Early Childhood

| NO | Activity | SS | S | STS | Total |
|---|---|---|---|---|---|
| 1 | Children are very interested in gadgets | 5 | | | 5 |
| 2 | Children are able to operate their own gadgets | 5 | | | 5 |
| 3 | Parents tend to give gadgets with the aim of making children calmer | 1 | 3 | | 4 |
| 4 | The effect of gadgets on children's development is increasing | 2 | 3 | | 5 |
| 5 | Parents accompany children when playing gadgets | 4 | 1 | | 5 |

**Information :**

**SS**        **: Totally Agree**
**S**          **: Agreed**
**STS**       **: Strongly Disagree**

## Discussion

Early childhood digital literacy where at this time children are very sensitive in receiving stimuli and are even able to receive various stimulations and educational efforts from the surrounding environment, both intentional and unintentional. The characteristics of early childhood are individuals who have a relatively fast level of development in responding (capturing) everything from various aspects of existing development. While the characteristics of early childhood according to Kuntojo (2010) are as follows: a) egocentric, b) have high curiosity, c) social beings, d) the unique person, e) rich with fantasy, f) short concentration power, g ) the most potential learning period. The phenomenon that occurs is that parents tend to use gadgets as a medium for childcare, because children tend to be quiet when using gadgets. Meanwhile, the impact children experience concentration problems, speech delays (speech delays), are aggressive, tend to be alone, when home visits are carried out it is known that the child is used to being cared for by gadgets. As Khuzma, RR & La Kahija (2018) that technology is a means of entertainment when children cannot play with friends outside, and is used as a tool for raising children because children become calm when parents are not accompanying children. The results of the use of this technology cause: 1) children to become aggressive (hitting or kicking which children imitate from YouTube); 2) it is difficult to call a child who is using a gadget (child does not heed the call, focuses more on the gadget); and 3) the interaction between children and parents is reduced because children focus on gadgets. Parental involvement in digital literacy education for children has not reached an agreement, such as: 1) There is an agreement between the school and parents to control healthy internet programs for children; 2) There is information regarding content that is safe for children; 3) There is an agreed time on the internet and alternative activities that children can choose when they are not playing with gadgets; 4) Parents have not used the parental control application.

Livingstone & Leslie (2009) shows several efforts that parents can make to monitor children's use of gadgets, such as asking what activities children are doing with their gadgets, being near the child, and sitting together when the child is using the gadget. Furthermore, Nurrachmawati (2014) revealed several efforts that parents can make in supervising the use of gadgets in children, such as accompanying and guiding in the use of gadgets, limiting the use of gadgets, controlling the contents or data in children's gadgets, giving light punishment to children with approaches, not scolding children when they make mistakes, understanding children's abilities by taking the time to assess how sharp children are at sorting out new things, creating a learning environment according to the wishes of children, being patient and active in educating children, and spending a lot of time for children. Steps for good digital parenting according to Herlina, Setiawan and Jiwana (2018): 1) Maintain communication with children so that a good relationship can be achieved between parents and children; 2) Equip the parents themselves and keep learning so they can accompany their children to access the internet; 3) Use the Parental Control application, to help parents monitor children's activities on the internet, manage the time to use devices every day, carry out the process of filtering negative content, view applications used, and parents must also know how to activate security features in some

apps, like safe search feature on google, restricted mode feature on youtube and so on; 4) Make basic rules related to the internet at home by involving children, including agreeing on sanctions; 5) become friends and follow children on social media to build a good digital reputation, because digital footprints cannot be hidden and will greatly affect the child's future; 6) Explore, share and celebrate together for parent child communication; 7) Be a good digital role model; 8) Producing positive and productive content together; 9) Participate in productive activities related to digital media; 10) Collaborating to create digital content, collaborating is the culmination of digital literacy skills. According to Hasugian (2018) the steps to building digital literacy are: 1) Increasing parental knowledge, parents know which sites provide benefits on the internet for family members; 2) Commitment to healthy digital technology, parents make rules that are obeyed together in the use of digital technology. For example, all family members may not use devices while eating, or do not open sites that are not useful, limiting hours of gadget use, especially during children's study hours; 3) Providing a variety of recreational activities, digital technology is no longer the only choice; 4) Increased public awareness, all norms and ethics that apply in the real world should also be applied in the digital world. This is the goal of strengthening digital literacy in the family.

The wise direction of a father and mother is expected to be able to foster a culture of literacy in the family. In addition, to improve literacy culture in the family, it is also hoped that they will add expertise in managing digital media wisely, smartly, smartly and precisely in building communication between family members in a harmonious and useful way for the wishes of the family. However, what digital literacy wants to achieve in families and specifically is (1) adding various kinds of digital literacy materials that families must have, (2) being able to carry out reading activities every day by adding digital literacy channels, (3) reading literacy needs to be increased, (4) increasing the intensity of using digital materials in every family activity, and (5) practicing any digital literacy activities related to family. The openness of parents and children is very necessary in running a good and safe internet program. Parents who become the first madrasa for their children should have media literacy skills so that children get guidance and direction in media, especially the internet. The positive impact of digital technology makes it easier in many ways, For example, to obtain information and communicate. As revealed by Setiawan (2017), the digitalization era makes it easier to obtain information quickly, the growth of innovation in various fields that make work and activities easier, the availability of various learning resources such as digital libraries, technology-based discussions that can improve the quality of education.

**Conclusion**

The use of technology can actually have a positive effect on the learning process. One of the impacts of using technology is increasing the motivation of students in participating in the learning process. In addition, the use of technology can also increase student participation in learning in class. Of course, with some of the positive impacts of technology in the educational process, it is necessary to be precise in choosing the form of technology, and how to approach the right technology in certain areas. Educational Technology is categorically divided into 4 categories, namely learning tools, educational resources, learning environment, and learning methods. Utilization of gadgets is in the form of reciting, coloring, drawing, recognizing letters and numbers, reading, counting, and educational games. Parents play an important role as mentors, educators, and supervisors in addressing the use of gadgets by children. This is done so that children do not misuse gadgets for other activities. Parents can accompany their children

when operating gadgets as a form of caring attitude towards their children. The results of this study can be used as a guide for parents in utilizing technology so that parents can maximize their role with all the developments that occur.

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