

Research Article

# The Role of Parents and Educators in Early Childhood's Digital Literacy

Indriana Warih Windasari\* and Agustiarini Eka Dheasari

Departement of Islamic Education, Institut Ahmad Dahlan Probolinggo, Jawa Timur, Indonesia

\*Corresponding Author: [indrianawarih@gmail.com](mailto:indrianawarih@gmail.com) | Phone: +62 822-2540-3923

## ABSTRACT

The purpose of this study is to explain how the role of parents and educators in addressing the advancement of technology is increasingly advanced. The research method used is study literature from various journals and references related to digital literacy. The results showed that the role of educators and parents in children's digital literacy are: 1) The role of educators in digital literacy is to teach basic technology skills, encourage critical thinking skills, be a role model in the use of technology, integrate technology in learning, increase understanding of cybersecurity, and collaborate with parents. 2) The role of parents in digital literacy is Basic Technology Assistance, Encouraging Critical Thinking, Modeling the Use of Technology, Monitoring & Regulating the Use of Gadgets, Teaching Cybersecurity Skills, and Creating a Supportive Environment. 3) The role of educators in children's digital literacy is more in terms of cognitive, affective, and social skills while parents have a role in affective and social-emotional skills in children's digital literacy.

**Keywords:** Digital Literacy; Early Childhood; Educator; Parents

## 1. INTRODUCTION

Today's information technology and evolving communication tools have had a significant impact on many aspects of life, including communication, working, learning, and accessing information, all of which contribute to social, economic, and cultural changes around the world (Nuryani et al., 2019). The rapid development of information and communication technology has also had a tremendous impact on the world of education in Indonesia. The education system began to adapt to technological advances, involving various types of education levels, both from the Early Childhood Education (PAUD) level to universities in almost all regions. Where all learning now involves technology, both in delivering material and in providing and carrying out tasks. This adjustment is further strengthened by the Covid-19 pandemic, which limits freedom and encourages the application of technology-based systems in education (Zen, 2019).

A wide range of information technologies, including hardware, software and communication networks, have expanded access to information and learning resources. This has expanded teaching methods, and facilitated collaboration between students and educators around the world. One interesting phenomenon in this situation is the rapid information explosion. The increased production and distribution of various types of information through digital media mixes and spreads to the public, so people need skills to sort and select information quickly, precisely and effectively. These skills are often referred to as information literacy skills (Utomo, 2020).

Information literacy is the ability to recognize when information is needed and the ability to find, evaluate and use that information effectively. This ability is an important basic skill to help people solve problems or complete their tasks by utilizing information ethically and efficiently (Setyowati, 2015). In addition to good information literacy skills, digital literacy is equally important to have. In addition, digital literacy can provide enormous potential for teachers and students to access a variety of online learning media, which further expands the opportunity to learn outside of conventional habits. Digital literacy itself refers to aspects of knowledge and skills for the use of digital media, communication, or networking in finding, assessing, using, creating, and utilizing information media in a way that is good, wise, careful, appropriate, and legal in order to support interaction and communication on a regular basis (Kementerian Pendidikan dan Kebudayaan, 2017).

In Indonesia itself, the government's discourse in an effort to prepare a golden generation of 2045 that is qualified, competent and highly competitive in this sophisticated era needs to be accompanied by qualified HR (Human Resources) abilities and skills. This can be started from the most basic level of education, namely PAUD (Early Childhood Education). Early Childhood Education according to Law Number 20 of 2003 concerning the National Education System Article 1 Paragraph 14 itself is a coaching effort aimed at children from birth to six years of age through providing educational stimuli, which aims to help the growth and physical and mental development of children so that they are ready to continue to the next level of education (Nimatuzahroh et al., 2022).

The age of 0 to 6 years is a golden period or often called the golden age, which is based on the fact that the child's brain is developing very quickly and has a high level of plasticity, which means that the brain has an extraordinary ability to absorb and process new information (Sugianti, 2018). The role of teachers or parents in terms of digital literacy has a very important position to guide children in the wise use of technology. Parents should introduce technology, monitor usage, serve as role models and encourage critical discussions about online information. Teachers have the role of teaching digital literacy skills at school, integrating technology in learning, raising awareness of online risks, and working with parents for consistent digital education. Through this collaboration, children can grow into smart and responsible users of technology. Therefore, the role of parents and teachers is very important in guiding, teaching, and providing the right information to early childhood (Lindriyani et al., 2022).

The use of gadgets cannot be separated from the impact it will have, especially for early childhood, both positive and negative influences for the early years of formation depending on how it is used. Games played by children are usually in the form of core-tan in photo books, guessing searches, and other games that use simple game tools, but nowadays children are more interested in playing with more sophisticated games, especially games on gadgets. Games that are often played by children are usually given through scribbles in photo books or guessing with simple game tools, but nowadays technology is considered to help in developing children's cognitive abilities quickly and better because nowadays games can be done by children on electronic devices such as interactive applications, video games, and other applications based on educational applications available on various types of devices or smartphones (M, 2017).

Increasingly, cases of gadget addiction are rampant, where many parents who do not pay attention to their children often immediately give them a cellphone when the child asks for it, with the excuse of avoiding the hassle of dealing with the child's whining. Parents who tend to be ignorant and reluctant to accompany children when using cellphones are one of the causes of cases of gadget addiction. Whereas the family environment is the foundation of children's learning, especially through parental involvement in supporting and accompanying children in literacy activities (Solichah et al., 2022). In addition, the involvement of educators in schools also has a big role in overcoming this, but based on UNICEF (United Nations International Children's Emergency Fund) data analysis in the field of children's digital literacy states that the lack of teacher capacity is also a pressing challenge in developing children's digital skills.

## 2. RESEARCH METHOD

This study was conducted to better recognize the impact of gadget use on early childhood cognitive abilities. The type of approach in this study is a literature study, where facts are obtained from books or journals that are analyzed based on related problems. Literature study is a method used to obtain information and statistics with the help of various materials available in the library, such as archives, books, magazines, ancient testimonies, and so on. In line with this, literature review is a technique of gathering information by assessing books, literature, notes and reviews related to the problem being solved. It is mainly based on research, especially the impact of gadget use on children's cognitive and social-emotional abilities. This review is a literature study by examining various journals related to children's literacy.

## 3. RESULTS AND DISCUSSION

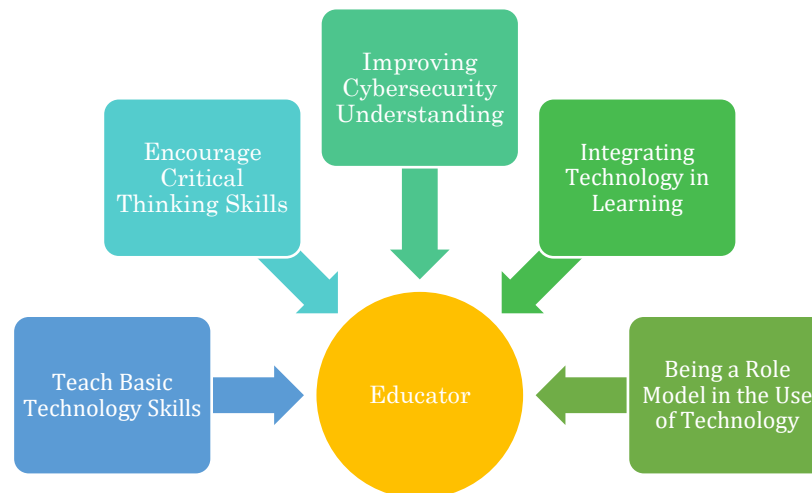
### 3.1 The Role of Educators in Children's Digital Literacy

In today's digital era, digital literacy is becoming a very important skill for children. Educators play a key role in ensuring that children not only master technology, but also use technology in a thoughtful and responsible way. The role of educators in children's digital literacy involves various aspects, including technical skills education, understanding cybersecurity, and developing critical thinking skills (Cruz & Snider, 2009).

Educators have the primary responsibility of teaching children basic technology skills. This includes the use of virtual devices such as computers, tablets and smartphones, as well as commonly used apps and software programs. Educators should introduce children to various technology tools, teach them how to operate them and help them understand how technology can be used to support learning. For example, in a school setting, educators can utilize technology to access subject matter, conduct research or collaborate on group projects (Prayoga & MUryanti, 2021). In addition to technical skills, educators are also responsible for teaching children about cybersecurity. This includes teaching about the importance of protecting personal information, recognizing and avoiding online risks such as scams and cyber bullying, and understanding how to maintain privacy online. Educators should provide an understanding of how to keep personal data safe and report suspicious activity. With this knowledge, children can reduce the risk of becoming victims of cybercrime and behave more safely online. Virtual literacy is not only about using technology, but also about how to analyze and evaluate information found online (Putri & ., 2021).

Educators should encourage children to think critically about the sources of information they encounter, distinguish between accurate and inaccurate information, and understand the biases and perspectives that may influence the content they read. Educators can use various methods, such as class discussions, research assignments and source evaluation activities, to help children develop critical thinking skills. Educators should be able to integrate technology effectively in the learning process. This means using virtual tools and applications to improve the quality of teaching and learning and create interactive and engaging learning experiences. Technology can be used for a variety of purposes, from providing varied subject matter, to conducting simulations, to developing practical skills. Educators must ensure that the use of technology supports educational objectives and does not replace human interaction which is important in learning (Putra et al., 2023).

Educators should also be role models in the use of technology. Children often copy adult behavior, so educators should show them how to use technology wisely and productively. This includes managing screen time, using technology for educational purposes, and behaving appropriately online. By setting a good example, educators can influence children to follow their lead in using technology responsibly (Manik, 2022).



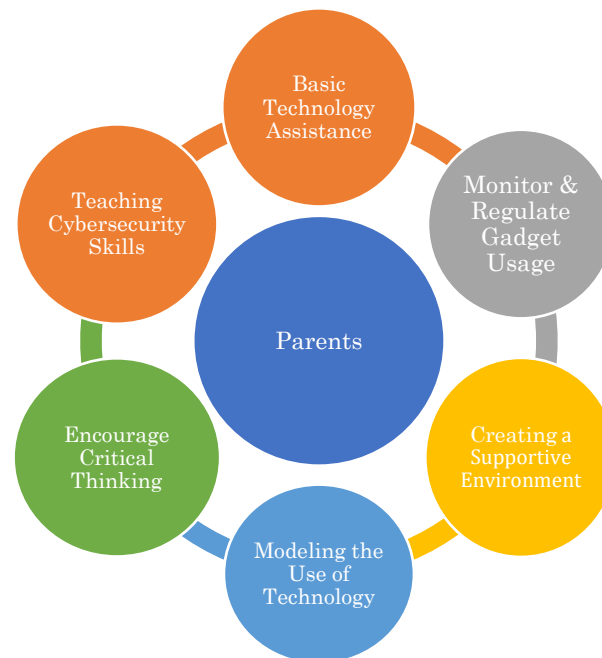
**Figure 1. Educator Role in Digital Child Literacy**

### 3.2 Parents' Role in Children's Digital Literacy

Parents have a responsibility in educating their children, including the introduction of digital literacy in this era of digital technology. Many young children are now addicted to gadgets. Parents who do not pay attention to their children tend to immediately give them a cellphone when asked. This is often done on the grounds that it saves them the hassle of dealing with whining children who want the gadget. With this reason, many parents just give electronic devices to their children without any assistance (Basyiroh, 2017). When children access digital sites where at the time of introduction and child assistance is really needed, intensive assistance is needed. Starting from the selection of content accessed, time management allowed to access to tuning the cellphone. With the habituation and restrictions on the use of gadgets by parents and teachers to children, it is hoped that it can realize skills in the wise use of digital technology by early childhood and to protect children from the negative impact of using digital technology in the new normal period (Safitri, 2021).

It is important to limit children's use of digital and other electronic media. Some of the steps that parents and teachers need to take are to introduce and give children an understanding of different types of media, so that they are not only focused on digital devices, but can also enjoy a variety of other media. This requires active parental involvement to limit, guide and remind children. In addition, children can also experience fun through access to educational digital media, such as educational games (Fatmawati et al., 2022). It is important for parents to monitor the content accessed by their children. Parents can accompany their children when they use digital devices by sitting together and providing direction regarding their online activities. Children today are very skillful when accessing a variety of digital media content, be it you tube or online video games, including content that contains elements of violence and material for adults. For this reason, it is very important for parents or an educator to be able to guide children in using digital media to prevent them from consuming inappropriate or excessive content (Silawati et al., 2018).

There are various forms of negative impacts due to the use of gadgets by children due to dependence on gadgets at an early age, showing how important it is for parents or educators in continuous assistance. Dependence on gadgets has impacts, such as; 1) children have a tendency to become less concerned with the surrounding environment, 2) children become more likely to ignore parental orders because they are too engrossed in their gadgets 3) although they are able to manage information well, there are difficulties when they communicate it with parents, 4) it is difficult to form warm relationships with parents because children are too busy with their gadgets. With the role of parents in digital literacy, these negative impacts can be minimized (Savitri et al., 2019).



**Figure 2. Parental Role in Digital Literacy**

### 3.3 Synthesis of the Role of Educators and Parents in Children's Digital Literacy

Digital literacy has become an important aspect of child development, including at an early age. Both educators and parents have an important role in ensuring children can access and use technology wisely and responsibly. Educators and parents have clear differences in context and approach, but both have equally important roles. Educators focus more on teaching technical and academic aspects at school, while parents are responsible for supervising and guiding children at home. The different roles of educators and parents can be illustrated in the [Table 1](#).

**Table 1. Differences in Educators' and Parents' Capacity in Digital Literacy**

	Role		Difference	
	Educators	Parents	Educators	Parents
Teaching Basic Technology Skills	Basic Technology Assistance	Cognitive Skill	Affective Skill	
Encourag Critical Thinking Skills	Encourage Critical Thinking	Cognitive Skill	Cognitive & Affective Skills	
Being a Role Model in the Use of Technology	Modeling the Use of Technology	Affective Skill	Affective & Emotional Skills	
Integrating Technology in Learning	To Monitoring & Regulating the Use of Gadgets	Cognitive, Affective, & Social Skills	Affective & Emotional Skills	
Improving Cybersecurity Understanding	Teaching Cyber Security Skills	Cognitive Skill	Cognitive & Emotional Skills	
Collaborate with parents	Creating a Supportive Environment	Cognitive, Affective, & Social Skills	Affective & Social Emotional Skills	

Based on the **Figure 1**, we can assess that educators have the main responsibility in teaching digital literacy skills (cognitive skills) in formal environments such as schools or education centers. Educators are tasked with providing a deep understanding of technology, as well as teaching the technical skills needed for children to operate digital devices and understand their functions. Educators are also tasked with teaching children about digital ethics, cybersecurity and how to think critically about the information they find online. Meanwhile, parents play a different role in children's digital literacy, which is more informal and takes place at home. Parents are responsible for guiding children in their daily use of technology, monitoring the content they access and ensuring that children are not exposed to age-inappropriate material (Affective Skill). Parents should also manage children's screen time to prevent dependency and ensure a balance between digital and non-digital activities.

One of the important roles of parents as well as educators is to be a role model in the use of technology. Children tend to imitate the behavior of adults around them, so parents must show how to use technology in a productive and responsible way (Affective and Emotional Skills) and teachers in addition to also integrating technology with learning materials (Cognitive, Affective and Social Skills) but also show daily activities using gadgets wisely. No less important than educators and parents is their role in how teachers collaborate with parents of students (Cognitive, Affective, & Social Skills) and parents who have more time with children by creating a supportive environment for children (Affective & Social-Emotional Skills) because children directly witness their activities and imitate all the behavior of their parents. The challenge that parents often face is limited knowledge or awareness of digital literacy, especially if they themselves are not familiar with the technology their children use. The main difference between the roles of educators and parents lies in the context and scope of their responsibilities. Educators focus on academics and teaching technical skills in a structured environment, while parents play a role in supervising and mentoring technology use at home, which is more personal and emotional.

#### 4. CONCLUSIONS

Based on the results and discussion above, it can be concluded that the role of educators and parents in children's digital literacy is: 1) The role of educators in digital literacy is to teach basic technology skills, encourage critical thinking skills, be a role model in the use of technology, integrate technology in learning, increase understanding of cybersecurity, and collaborate with parents. 2) The role of parents in digital literacy is Basic Technology Assistance, Encouraging Critical Thinking, Modeling the Use of Technology, Monitoring & Regulating the Use of Gadgets, Teaching Cybersecurity Skills, and Creating a Supportive Environment. 3) The role of educators in children's digital literacy is more in terms of cognitive, affective, and social skills while parents have a role in affective and social-emotional skills in children's digital literacy.

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