

# **The Impact of the Application of Digital Literacy on Teacher Competency Development At State Elementary School 8 Metro**


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**Abstract** - The problem in this study was that educators need to be more competent in digital literacy and be maximal in implementing 21st century education. This study aims to analyze the urgency of digital literacy in the 21st century education era for the competence of educators at SD Negeri 8 Metro Timur. This research uses descriptive methods and qualitative research types. The data collection technique was carried out by purposive sampling through observation, interviews, and documentation.. The data sources were educators, school principals, and education staff. The results showed that educators' understanding of digital literacy and 21st century education is quite good, with a percentage of educators who understand as much as 72%, while those who do not understand are only 28%. Educators are still at a medium level regarding skills in using digital media in the learning process. There are supporting and inhibiting factors in the implementation of 21st century education, such as facilities, parent educators, and students. Literacy Digital plays an important role and is a component of literacy that must exist in schools because good mastery of digital literacy can improve the professional competence of educators

**Keywords** – 21st century education, digital literacy, educator competence.

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education in the 21st century is the biggest challenge for educators, especially for elementary schools that must prepare themselves and have an important role in global competition. In addition to being required to master the 4 competencies contained in Law No. 14 of 2005 article 8, educators are also required to have the ability to master digital literacy so that education runs according to its goals and still maintains the quality of education in the midst of dynamic changes.

The Ministry of Education and Culture's Pustekkom conducted a survey in 2018 with the results that 40% of educators are already literate in information and communication technology, while 60% of educators are still stuttering with progress in the digital era. This is influenced by the age of senior educators, the content of educational technology that is still minimal, and the need for adequate facilities. The spread of technology in Indonesia is not evenly distributed, there are still many remote areas that are isolated and have not felt the benefits of technology so that a digital divide occurs.

Educators play an important role as role models and drivers in learning management, so adequate digital skills are needed to integrate ICT into learning. Educators must conduct learning in an adaptive, creative, collaborative and innovative manner and utilize digital technology to increase students' learning motivation.

The focus of this research is the urgency of digital literacy in the 21st century education era on the competence of educators at SD Negeri 8 Metro Timur with the aim of analyzing educators' understanding of digital literacy and 21st century education, analyzing educators' proficiency in the use of digital media in the 21st century learning process, analyzing supporting and inhibiting factors in the implementation of 21st century learning based on digital literacy, and analyze the important role of digital literacy in improving educator competence.

## **1. INTRODUCTION**

Welcoming the era of super smart society 5.0 as an anticipation of the turmoil of the disruption of the industrial revolution 4.0, the challenges are increasingly complex so that they demand transformation in all fields. The implementation of

## **2. METHOD**

The type of research carried out is qualitative research with a case study research design. In this study, the researcher acts as an active instrument (key instrument) that makes careful observations and collects data. This research was carried out at SD Negeri 8 Metro Timur in the even semester of the 2022/2023 school year until it was completed. The stages of research carried out include: pre-field stage, field stage, data analysis stage, and reporting stage.

The sampling technique used by the researcher is purposive sampling using 2 data sources, namely primary and secondary. The data collection techniques used in this study are observation, interviews and documentation. The data analysis carried out by the researcher followed an interactive analysis model by Milles and Huberman in the form of data collection, data reduction, data presentation, and conclusion drawn. The validity test of the data was carried out by a credibility test using triangulation of sources and techniques, transferability (external validity), dependability (reliability), and confirmability (objectivity).

## **3. RESULT AND DISCUSSION**

### **Educators' understanding of digital literacy and 21st century education**

Educators' understanding of digital literacy and education in the 21st century is quite good, as evidenced by calculations using a descriptive analysis method by Agung & Muryanti (2021) where it was found that 72% of educators understood while only 28% did not. This can also be seen from the answers to the interview results given by the informants in accordance with the definition of digital literacy and 21st century education in general and those presented by experts. Educators know and can explain in detail by using their own words according to existing concepts.

Educators can associate digital literacy and education and can classify the types of digital literacy. Educators have implemented 21st century education in the learning process and taught students related to digital literacy. An educator who has a better understanding of digital literacy will have the competence, skills, and creativity to overcome learning problems in the 21st century education era.

### **Educators' skills in the use of digital media in the 21st century education process**

The proficiency of educators in using digital media based on the results of interviews and observations is known that educators are at the medium level and have mastered the basic level, this is evidenced by educators who have met each of the criteria for classifying digital literacy competencies by Rosmalah (2018: 18) including being able to use various learning support applications and being able to create digital-based learning products but have not been able to use learning management system (LMS) with a maximum which is one of the criteria in the advanced level so that educators have not reached this level.

This is supported by the opinion of Zaenudin et al., (2020) who stated that the ability to use technology is seen from the selection and application of technology that is effective and commonly used in daily life. As one of the competencies in the use of digital media is distribution techniques, namely the ability to convey messages and conduct assessments in the teaching and learning process, where an important point that indicates digital proficiency is content evaluation, namely conducting online assessments through the information identification and verification stages.

The ability of educators to utilize technology will be very helpful in learning so that a conducive atmosphere and good social interaction between educators and students are formed. Educators can master and operate technology to support the learning process. In line with the opinion of Kristiawan et al., (2021) that the current learning model requires innovation in the use of various kinds of media and learning applications that make it easier for educators. The advanced level shows the competence to analyze the use of digital media in learning and combine it with other relevant media. There are four indicators that mark digital literacy skills, namely (1) the ability to use LMS; (2) perception of the use of information technology in the learning process; (3) internet capabilities; and (4) the skill of using various computer applications in completing tasks (Raimanu, 2020).

### **Supporting and inhibiting factors for the implementation of 21st century education based on digital literacy**

The results of data exposure and research findings show that the implementation of 21st century education based on digital literacy is inseparable from 2 influencing factors, namely: supporting factors and inhibiting factors. The supporting factors are digital literacy support facilities, educators who master

information and communication technology so that they are able to teach students well, full support from parents and work together, and the ability of students to be actively involved in the learning process. Meanwhile, the inhibiting factors are inadequate facilities and infrastructure where there are no computer laboratories to support digital literacy, passive students in learning and the limitations of educators in supervising students when using technology.

There must be good cooperation between stakeholders in the implementation of 21st century learning so that it can run as it should. In line with the opinion of Lesmana (2021) who stated that learning in the 21st century must be able to prepare the Indonesian human generation to welcome the advancement of information and communication technology in social life. The implications for learning in Indonesian schools require all education stakeholders to master ICT literacy skills.

Educators, students, and even parents of students must be literate in technology and communication media, be able to communicate effectively, think critically, be able to solve problems and be able to collaborate. The learning model will shift significantly towards the application of digital technology. The TPACK (Technological Pedagogical Content Knowledge) framework model is a new type of knowledge that must be mastered by educators in order to be able to integrate technology into learning. Relevant to the research conducted (Affandi 2019) with a qualitative approach shows that educators must have 4C skills (critical thinking, collaboration, creativity, communication) and be able to utilize technology through skills.

#### **The important role of digital literacy in improving educator competence**

Based on interviews with various informants, it was found that digital literacy plays an important role and is one of the components of literacy that must be in schools, because with a good mastery of digital literacy, it can improve the competence of educators, especially their professional competence. Educators as the subject of learning activities are still required to master information and communication technology, especially for the sake of the smooth learning process. Responding to these conditions needs to be followed by increasing the competence of educators, especially the development of digital literacy skills.

Improving the competence of educators developed through training related to creativity in managing learning in the classroom. Educators' creativity in managing learning is one of the keys to educational success. This means that the mastery of competence, skills, and creativity mastered by educators goes hand in hand with the motivation of students. After mastering competencies and having skills, the task of educators is to create a teaching and learning atmosphere that is easy to understand and not boring (Jaya et al., 2021).

Thus, even though the learning system is online, the essence of a conducive and effective learning process is not lost and the learning goals will be achieved. Through the facilitation of school leaders by providing training related to digital literacy to develop the professional ability of educators in carrying out their duties. In line with research conducted by (Dinata, 2021) states that there are various things that school leaders can carry out in developing educators' digital literacy skills, namely (1) digital literacy training; (2) instilling digital literacy in schools; (3) forming a school literacy driving team.

#### **4. CONCLUSION**

discussion on the urgency of digital literacy in the 21st century education era, it can be seen that educators' understanding of digital literacy and education in the 21st century is quite good, where 72% of educators understand while only 28% do not. Educators have implemented 21st century education in the learning process and taught students related to digital literacy. Educators' proficiency in using digital media based on the results of interviews and observations is known that educators have passed the basic level and are at the medium level, this is because educators have been able to use various learning support applications and can create digital-based learning products but have not been able to use LMS optimally so they have not reached the advanced level.

The supporting and inhibiting factors of education in the 21st century include: facilities, educators, parents, and students are artists. Digital literacy plays an important role and is one of the components of literacy that must exist in schools, because with a good mastery of digital literacy, it can improve the competence of educators, especially their professional competence.

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