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Digital Literacy Among Elementary School Teachers: Age and Year of Service Perspective Review

Muhammad Fazis[1*], Safrizal[2], Resti Yulia[3]

[1] Manajemen Pendidikan Islam, Universitas Islam Negeri Mahmud Yunus Batusangkar, Tanah Datar, Indonesia
[2] Pendidikan Guru Madrasah Ibtidaiyah, Universitas Islam Negeri Mahmud Yunus Batusangkar, Tanah Datar, Indonesia
[3] Pendidikan Islam Anak Usia Dini, Universitas Islam Negeri Mahmud Yunus Batusangkar, Tanah Datar, Indonesia

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ABSTRAK

Kebijakan pemerintah tentang peningkatan guru dalam aspek penguasaan teknologi merupakan syarat yang harus dipenuhi, hal ini dimaksudkan agar proses pembelajaran dapat dilaksanakan secara lebih efektif dan efisien dengan memanfaatkan teknologi. Penelitian ini bertujuan untuk menganalisis dan mengukur kemampuan literasi digital guru sekolah dasar. Jenis penelitian ini menggunakan metode deskriptif kuantitatif. Subyek penelitian ini adalah 73 orang guru SD yang diambil dengan menggunakan teknik quota sampling. Teknik pengumpulan data yang peneliti gunakan adalah angket untuk mengetahui kemampuan literasi digital guru SD. Data yang telah terkumpul dianalisis dengan menggunakan analisis statistik deskriptif. Hasil penelitian menunjukkan bahwa kemampuan literasi guru SD se-Kabupaten Tanah Datar baik aspek literasi media, literasi informasi, dan literasi teknologi untuk setiap tinjauan (umur dan masa kerja) berada pada kategori rendah, dengan rata-rata pencapaian 2,41 untuk tampilan usia guru dan 2,43 untuk tampilan masa kerja. Sehingga dapat disimpulkan bahwa kemampuan literasi digital guru SD Se-Kabupaten Tanah datar berada pada kategori rendah, baik dari aspek usia maupun dari aspek masa kerja.

ABSTRACT

The government's policy on increasing teachers in the aspect of mastery of technology is a requirement that must be met, this is intended so that the learning process can be carried out more effectively and efficiently by utilizing technology. This study aims to analyze and measure the digital literacy skills of elementary school teachers. This type of research uses a quantitative descriptive method. The subjects of this study were 73 elementary school teachers, who were taken using the quota sampling technique. The data collection technique that the researchers used was a questionnaire to determine the digital literacy abilities of elementary school teachers. The data that has been collected was analyzed using descriptive statistical analysis. The results showed that the literacy skills of elementary school teachers throughout Tanah Datar regency both in the aspects of media literacy, information literacy, and technology literacy for each review (age and years of service) were in the low category, with an average achievement of 2.41 for the view of teacher age and 2.43 for the view of years of service. So it can be concluded that the digital literacy skills of elementary school teachers in Tanah Datar regency are in the low category, both in terms of age and years of service.

1. INTRODUCTION

Big changes occurred in all sectors of life when the Covid-19 pandemic hit Indonesia, both in terms of the economy, socio-culture and even in the education system. This change is marked by changes in systems and learning patterns that occur in the realm of education, in the form of learning that was previously carried out face-to-face, now transformed into online (online) learning (Onyema et al., 2020; Sut & Oznacar, 2017). This policy is a method used by the Indonesian government to break the chain of spread of the virus. As a result, the learning system at all levels of education in Indonesia has changed, including at the elementary school level (Basar, 2021; Setyawati et al., 2021). The change in learning quickly resulted in a learning system that used to be carried out conventionally, now changing to online learning. So that the teacher does not have readiness in the learning process to be carried out in school. Teachers at the time of the pandemic hit and nowadays are required to be able to utilize technology to facilitate learning to be carried out both in terms of explaining material to giving assignments to students during online and face-

Corresponding author
*E-mail addresses: m.fazis@iainbatusangkar.ac.id (Muhammad Fazis)

to-face learning. As also explained by previous study that online learning can be done using a virtual classroom, which is a learning experience in a place by using electronic objects such as laptops or smartphones with internet access (Suchyadi et al., 2021).

In the post-covid-19 period, learning was carried out normally again, namely through face-to-face learning. This does not mean that technology is no longer needed. However, the education system must keep up with trends and technology. To be able to balance these two aspects. At this time the education system is known as 21st century learning. 21st century learning is learning carried out by teachers by combining the knowledge possessed with the attitude skills possessed then being able to master technology and information (Bell, 2010; Saputri et al., 2018). 21st century education is education that integrates knowledge, skills and attitudes as well as mastery of information and communication technology As also explained by previous study an innovative 21st century learning framework where knowledge obtained through core subjects is not enough, and must be equipped with skills to support 21st century learning as follows: a) Learning and innovative skills such as critical thinking and problem solving, creativity and innovation, communication, and collaboration, b) Life and career skills include things like flexibility, initiative and independence, productivity and accountability, leadership and responsibility, c) Information, media and technology skills, meaning students and teachers must follow the information, which understand the media, and understand ICT (Chairunnisak, 2020). Thus it can be concluded that the teacher's digital literacy ability is one of the determining factors for the quality of learning in the 21st century.

Digital literacy is an interest in attitudes and individual abilities in using digital technology and communication tools to access, manage, analyze and evaluate information, build new knowledge, communicate with others so that they can participate effectively in society (Asari, Kurniawan, Ansor, et al., 2019). Digital literacy is not just the ability to find, use and disseminate information, however, it requires the ability to make critical information and evaluations, the accuracy of the applications used and an in-depth understanding of the contents of the information contained in the digital content. Therefore teachers are required to have qualified digital literacy skills in order to be able to access, understand and process information obtained from various sources that are accessed via computers and then distributed to students through digital applications used during ongoing learning. As for the benefits of digital literacy according to previous study that there are 10 benefits of digital literacy that we can find in everyday life including: a) saving time, b) learning faster, c) saving money, d) making it safer, e) always getting the latest information, f) always connected, g) make better decisions, h) can make someone work, i) make someone happier, j) and influence the world (Sumiati & Wijonarko, 2020). So that in learning, digital literacy is one of the supporting tools for teachers in conveying the learning material they want to present so that it is easier for students to understand.

The existence of digital literacy, the learning outcomes obtained by students should be well understood, because it can reduce factors that can hinder learning, such as internal factors that come from the students themselves and external factors that come from outside the students themselves, such as family, school and community (Ayoe et al., 2022; Winarno et al., 2022). In the context of using digital technology in learning, the ability of teachers' digital literacy greatly influences student learning success, as expressed by previous study that the most important thing in learning is how a teacher is able to display teaching skills properlytechnology benefits such asusing existing learning media, so that the goals to be achieved in the teaching and learning process can be achieved effectively (Schunk & DiBenedetto, 2020). Given these problems, digital literacy is very important in utilizing digital technology in learning that teachers want to implement in schools.

The condition of teachers' ability to use digital media at this time can be grouped into two, namely those who can use digital literacy well and some who cannot. As explained byseveral opinions of elementary school teachers regarding digital literacy skills in interviews that for digital literacy skills, especially digital technology as a whole, the use and access of digital technology in general cannot, because there are several contributing factors, namely the age factor and learning changes that are so fast that teachers cannot keep up with the times. Furthermore, it was also stated by other elementary school teachers that abilities in digital literacy were quite good at implementing them into learning.

Relevant research conducted by previous study show that digital literacy competence for teachers and students in the school environment is very much needed because they are vulnerable to consuming digital media (Cicha et al., 2021). Digital literacy competence can be achieved by continuous training methods, to overcome problems in the digital era. Basic skills are aspects that must be possessed by teachers and students. Advanced expertise is also required to interpret any information obtained from digital media. Basic and advanced digital literacy competencies are summarized in ten stages as follows: from accessing, selecting, understanding, analyzing, verifying, evaluating, distributing, producing, participating, and collaborating. Therefore, digital literacy skills are something that teachers must have besides teaching abilities (Blevins, 2018; Phuapan et al., 2015). Competence is the ability possessed by the

teacher. The four competencies that must be possessed by teachers contain the necessity for teachers to have digital literacy skills in learning ranging from pedagogic competencies to professional competencies.

Based on the explanation above the need for digital technology in learning continues to increase. However, these needs are not comparable to the digital literacy skills possessed by the teacher so that learning takes place ineffective, monotonous and does not attract children's learning interest. So having digital literacy skills is a solution so that learning needs for digital technology can be fulfilled and learning objectives can be achieved (Egeli & Sağdinç, 2021; Spires et al., 2018). Teachers who do not have technological literacy skills will not be able to form technology-literate children. stuttering using technology is a problem for children considering that children at this age will live in an era where the use of digital technology is very dominant in various lines of life (Afriliandhi et al., 2022; Ayhan, 2019; Iskandar et al., 2022). This is certainly not expected, considering that one of the goals of education is to prepare a generation that has the knowledge and skills. The failure of teachers to have technological literacy skills ultimately thwarts the achievement of educational goals. Based on this urgency, the teacher as the spearhead of ideal learning does have technological literacy skills, specifically digital technology literacy. This is certainly not expected, considering that one of the goals of education is to prepare a generation that has the knowledge and skills. Based on this urgency, the teacher as the spearhead of ideal learning does have technological literacy skills, specifically digital technology literacy (Maxwell, 2020; Nascimbeni, 2018). This is certainly not expected, considering that one of the goals of education is to prepare a generation that has the knowledge and skills. Based on this urgency, the teacher as the spearhead of ideal learning does have technological literacy skills, specifically digital technology literacy.

This study aims to analyze the digital literacy abilities of elementary school teachers as part of the actors in implementing classroom learning. The novelty of this study provide a real picture of teachers' digital literacy abilities from various aspects, both media literacy, information literacy, and technology literacy in terms of two aspects, namely the teacher's length of service and age. The mapping resulting from this research is used as a consideration for the government in alleviating educational problems, especially for teachers regarding digital skills.

2. METHOD

The type of research used is descriptive quantitative. Research conducted to determine the value of the independent variable, either one variable or more (independent) without making comparisons or connecting with other variables (Han et al., 2022). This research was conducted to describe the digital literacy abilities of elementary school teachers in Tanah Datar District, West Sumatra Province. The sample in this study were elementary school teachers in Tanah Datar district, totaling 73 people. The sample was selected using a quota sampling technique, namely taking samples from members of the population using a certain quorum without regard to the representativeness of the sample. Based on the total population of teachers at Madrasah Ibtidaiyah throughout Tanah Datar Regency, there are 73 teachers in the population, so the sample is taken 100% of the total population. This is as stated that if the number of objects is less than 100 then the whole population should be taken as a sample, while if the total population is more than 100 then the number of samples taken is 10-15% or 20-25%. or more than the total population (Arikunto, 2010).

The instrument used by researchers is a questionnaire sheet. The research development that will be used in this study is a questionnaire to determine teachers' digital literacy abilities. The alternative answers used in this questionnaire consist of 4 alternative answers, namely always (SL), often (SR), sometimes (KD) and never (TP). Scoring on this aspect uses a Likert scale with a range of 1-4. The questionnaire was prepared based on a theoretical study of the deep digital literacy componentAcross the Curriculum(Themes, 2013), starting from describing the variables consisting of eight variables to formulating statement items used to measure teachers' digital literacy abilities. Researchers used questionnaires to collect data and information about digital literacy. The instrument use is show in Table 1.

Tabel 1. Lattice of Instrumen for Measuring Teacher's Digital Literacy Capabilities

Dimensions/Variables	Indicator
Information Literacy	Access information effectively and efficiently Evaluate information critically and skillfully use and manage information Use information appropriately and creatively to solve problems Manage the flow of information from a wide variety of sources Demonstrate a basic understanding of ethical or legal issues regarding access to and use of information

Dimensions/Variables	Indicator
Media Literacy	Understand how and why media messages are created Interpret messages differently, be aware of the values and viewpoints of messages that can be accepted or rejected and be aware of the media can influence beliefs and behavior Apply a basic understanding of ethics and law relating to access and use of media Understand and utilize the media tools and characteristics that are most appropriate to use with Understand and effectively utilize the most appropriate expression and interpretation in a diverse and multi-cultural environment
ICT literacy	Using technology as a tool to access, manage, evaluate, integrate, create and communicate information Using digital technology (computers, digital applications, etc.), communication media and network devices and social networks appropriately to access

After preparing the questionnaire for the operational definition of the research variables, a validation questionnaire was carried out. Questionnaire validity test was carried out with construct validity with reference to the Pearson product moment correlation.This validity test is used to determine how effective a measuring instrument is in collecting data. This was used to rate the questions on the questionnaire in this study. Instrument trials were carried out on 30 non-sample teachers, then measurements were made based on the Pearson product moment correlation which were processed with the help of SPPS. The results of the instrument validity test are shown in Table 2.

Tabel 2. Digital Literacy Instrument Validity Test Results

Item No	Digital Literacy Teacher			
	r_{table}	r_{count}	Conclusion	Information
1	0.361	0.871	Valid	Used
2	0.361	0.564	Valid	Used
3	0.361	0.550	Valid	Used
4	0.361	0.710	Valid	Used
5	0.361	0.710	Valid	Used
6	0.361	0.585	Valid	Used
7	0.361	0.828	Valid	Used
8	0.361	0.773	Valid	Used
9	0.361	0.634	Valid	Used
10	0.361	0.634	Valid	Used
11	0.361	0.818	Valid	Used
12	0.361	0.704	Valid	Used
13	0.361	0.867	Valid	Used
14	0.361	0.682	Valid	Used
15	0.361	0.738	Valid	Used
16	0.361	0.812	Valid	Used
17	0.361	0.449	Valid	Used
18	0.361	0.588	Valid	Used
19	0.361	0.243	Invalid	Not used
20	0.361	0.743	Valid	Used
21	0.361	0.555	Valid	Used
22	0.361	0.763	Valid	Used
23	0.361	0.568	Valid	Used
24	0.361	0.478	Valid	Used
25	0.361	0.683	Valid	Used

Based on Table 2, the results of the validity of the data obtained using SPSS output, namely there are 24 valid questions and 1 invalid question. Then the statement on the number is declared invalid and not used. Valid questions are in the question number statements: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,

17, 18, 20, 21, 22 , 23, 24, while invalid questions were found in statement number 19. Invalid questions would not be used for research.

The data analysis technique that will be used in this study is descriptive statistical analysis proposed. Where researchers are only looking for the average digital literacy ability of Madrasah Ibtidaiyah teachers as respondents who are in Limo Kaum Batusangkar District. After obtaining the average of each digital literacy dimension, it is then analyzed and interpreted into sentences as an explanation. Once the average of the respondents' answers is known, the researcher performs calculations using the mean formula to find out the average of each statement item, so that the scale range as the answer is 0.8 (Creswell, 2014; Sugiyono, 2018), thus the criteria for the mean value obtained for each variable and aspect can be arranged as show in Table 3.

Table 3. Score Value and Categorization

No.	Score	Category
1	4.4 – 5.2	Very high
2	3.5– 4.3	High
3	2.6 – 3.4	Middle
4	1.7 – 2.5	Low
5	1.0 – 1.8	Very low

3. RESULT AND DISCUSSION

Result

Based on the results of the research that has been done, data on the digital literacy abilities of elementary school teachers in Tanah Datar District were obtained. The description of the teacher's digital literacy abilities will be broken down based on years of service and age. The frequency distribution for each category is shown in Table 4.

Table 4. Age Frequency of Elementary School Teachers in Tanah Datar District

No	Intervals (Age)	Frequency	%
1	20–28	9	12.33
2	29 – 33	5	6.85
3	34 – 39	20	27.40
4	40 – 45	11	15.07
5	46–51	18	24.66
6	52 - 58	10	13.69

Based on Table 4, it can be described that the highest percentage for the age range of elementary school teachers in Tanah Datar District is 27.40% with an age range of 34-39 years, while the lowest age frequency is 6.85% with a range of 29-33 years. The distribution of research results related to the years of service of elementary school teachers in Tanah Datar regency obtained the data as show in Table 5.

Table 5. Creativity Ability to Utilize Technology in Learning

No	Years of service	Frequency	%
1	15 years	13	17.8
2	6 – 10 Years	8	10.96
3	11 – 15 Years	21	28.77
4	>16 Years	31	42.47

Based on Table 5, it can be illustrated that the frequency of working years over 16 years has the greatest frequency and dominance among the other tenure frequency data, with a frequency of 31 and a percentage of 42.47%. While the distribution of data on teacher tenure with a range of 6-10 years has the smallest frequency of 8 with a percentage of 10.96%. In addition, based on the table above, the tenure of elementary school teachers in Tanah Datar district is more dominant at 11-15 years and more than 16 years. This means that elementary school teachers in Tanah Datar regency have had a long working period. Data from the tabulation of teachers' digital literacy abilities on aspects of media literacy in terms of age distribution, are described in Table 6.

Table 6. Frequency Distribution of Digital Security Capabilities among Elementary School Teachers

No	Age Range	Average	Category
1	20–28	2.08	Low
2	29 – 33	2.45	Low
3	34 – 39	2.26	Low
4	40 – 45	2.29	Low
5	46–51	2.36	Low
6	52 - 58	2.30	Low
	Average	**2.29**	**Low**

Table 6 show the results of the digital literacy skills of elementary school teachers throughout Tanah Datar regency in terms of media literacy in terms of teacher age obtained an average of 2.29 in the low category. Based on these data, it can be interpreted that in terms of age, starting from the young age range (23-28 years) to the old age range (52-58 years) shows that the gains are not much different, as well as the categorization obtained based on the average the answer. This shows that the digital literacy skills of elementary school teachers throughout the Tanah Datar regency are still in the low category. The results of the research on the teacher's digital literacy skills on aspects of media literacy in terms of years of service are obtained as show in Table 7.

Table 7. Distribution of Teachers' Media Literacy Capabilities in Terms of Service Period

No	Years of service	Average	Category
1	15 years	2.13	Low
2	6 – 10 Years	2.38	Low
3	11 – 15 Years	2.30	Low
4	>16 Years	2.32	Low
	Average	**2.28**	**Low**

Based on Table 7, the average value of the teacher's media literacy ability in terms of years of service is in the low category. This applies to all years of service, starting from new years of service (1-5 years) to those who have worked for a long time (> 16 years) to obtain an average response that is still in the low category. Therefore, it can be interpreted that the ability of digital literacy in the aspect of media literacy of elementary school teachers in Tanah Datar regency, both in terms of age and years of service, is still in the low category. The results of the research on the digital literacy skills of elementary school teachers throughout Tanah Datar Regency on the Information Literacy Aspect in terms of age, are described in Table 8.

Table 8. Information Literacy Ability in Terms of Age

No	Age Range	Average	Category
1	20–28	2.76	Middle
2	29 – 33	2.74	Middle
3	34 – 39	2.73	Middle
4	40 – 45	2.68	Middle
5	46–51	2.67	Middle
6	52 - 58	2.59	Low
	Average	**2.70**	**Middle**

Base on Table 8, teacher's digital literacy abilities in the aspect of information literacy in terms of age, as shown in table 4.5. above are generally in the moderate category, with an overall average score of 2.70. of the six age ranges that have been determined, there is only one age range that has an average of 2.59 in the low category, while 5 of them are in the medium category. This can be interpreted that the digital literacy skills of elementary school teachers in Tanah Datar regency, especially in terms of age, are in the medium category. The results of collecting data on teachers' digital literacy abilities in the aspect of information literacy in terms of years of service have similarities with the results in terms of age. This can be seen in Table 9.

Table 9. Teacher Information Literacy Ability in terms of Service Period

No	Years of service	Average	Category
1	15 years	2.79	Middle
2	6 – 10 Years	2.82	Middle
3	11 – 15 Years	2.73	Middle
4	>16 Years	2.60	Middle
	Average	**2.74**	**Middle**

Table 9 shows that in general the teacher's digital literacy skills in the aspect of information literacy in terms of years of service are in the moderate category. This is shown in the average value seen in each indicator of teacher tenure, which has a result of 2.59 which means it is in the medium category. In this session, the information literacy of elementary school teachers in Tanah Datar regency was in the moderate aspect. The ability of teachers' digital literacy in aspects of technological literacy, as the results of the study were obtained as shown in Table 10.

Table 10. Technology Literacy Ability in Terms of Age

No	Age Range	Average	Category
1	20–28	2.43	Low
2	29 – 33	2.29	Low
3	34 – 39	2.25	Low
4	40 – 45	2.19	Low
5	46–51	2.13	Low
6	52 - 58	2.27	Low
	Average	**2.26**	**Low**

Based on Table 10, the digital literacy abilities of teachers in aspects of technological literacy are mostly in the low category, both from the youngest to the oldest age level. Acquisition of admission at each age is still in the range of 2.13 – 2.43. This can be interpreted that at the age level, the technological literacy skills of elementary school teachers in Tanah Datar regency are still in the low category. The findings of other research data are also seen in digital literacy abilities in aspects of technological literacy. A review of the years of service to see the technological literacy aspects of elementary school teachers throughout Tanah Datar regency in detail can be seen in Table 11.

Table 11. Distribution of Teacher Technology Literacy Capabilities in Terms of Service Period

No	Years of service	Average	Category
1	15 years	2.41	Low
2	6 – 10 Years	2.36	Low
3	11 – 15 Years	2.19	Low
4	>16 Years	2.17	Low
	Average	**2.26**	**Low**

Based on Table 11, the teacher's digital literacy skills in the aspect of technological literacy have an average score of 2.26 in the low category. The results of the technological literacy ability data as in the table above, can be described both relatively new working years and relatively long working years in terms of acquisitions which are in the range 2.17 – 2.41 and are in the low category range. Data from research on teacher digital literacy skills as obtained both in the aspects of media, information, and technology in terms of age, obtained an average value as shown in table 12.

Table 12. Digital Literacy Ability in Terms of Age

No	Aspect	Overview	Average	Category
1	Media Literacy	Age	2,29	Low
2	Information Literacy		2.69	Middle
3	Technology Literacy		2,26	Low
		Average	**2,41**	**Low**

Based on Table 12, the distribution of teachers' digital literacy abilities in the three aspects in terms of age. The acquisition of media and technology literacy as shown in table 12 shows the acquisition of categories which are still in the range of 2.26 – 2.29 with the low category. However, the data obtained from measuring the information literacy abilities of teachers as shown in the table above were obtained in the medium category with an average score of 2.69. These three abilities get an average of 2.41 in the low category. Therefore, in general, the digital literacy skills of elementary school teachers in Tanah Datar regency, in terms of age, are still in the low category. An overview of digital literacy capabilities in three aspects as the results of research in terms of years of service, in detail, are obtained as show in Table 12.

Table 12. Teacher's Digital Literacy Ability in terms Years of Servise

No	Aspect	Overview	Average	Category
1	Media Literacy		2,28	Low
2	Information Literacy	Years of service	2.74	Middle
3	Technology Literacy		2.28	Low
Average			**2.43**	**Low**

Based on Table 12, digital literacy skills in the three aspects viewed from work experience obtain the same results as the results of the review at the age of the teacher. The acquisition of media and technology literacy which is in the range of 2.28 – 2.43 still indicates the ability possessed is in the low category. Unlike the case with information literacy, an average value of 2.74 is obtained in the medium category. However, the average achievement of the three aspects of acquiring digital literacy skills including media, information and technology was 2.43 with a low category. This can be interpreted that the digital literacy ability of teachers in terms of the aspect of working period is still relatively low.

Discussion

Based on the results of the research that has been done, it is found that teachers' digital literacy abilities in the aspects of media literacy, technology literacy, and media literacy are on average still in the low category. This achievement applies to reviews on the aspects of teacher age and tenure. The ability of teachers' digital literacy which is in the low category indicates the need for attention to increasing teacher competence in developing their professional abilities to explore and have sufficient knowledge about the management of digital-based learning (Ahman et al., 2019; Diputra et al., 2020). This skill is one of the skills that is currently the main pillar in implementing online-based learning and implementing an independent curriculum (Asari, Kurniawan, & Ansor, 2019; Dinata, 2021).

Improving teachers' digital literacy skills is a must, to ensure that policy changes in the implementation of learning that require technology management skills can run optimally. Besides that, the teacher's digital literacy skills in several learning patterns both online and outside the network can be accommodated properly. Several relevant studies that examine digital literacy and its benefits in various learning situations reveal that digital literacy is a must for a teacher as one of the superior abilities that must be mastered in the industrial revolution era, so that the learning process can take place effectively and efficiently (Kurniati et al., 2021; Mardiana et al., 2022; Sudyana & Surawati, 2021). Other things were also revealed that strengthening digital literacy skills for teachers, apart from being useful in learning effectiveness, is also an additional professional ability for teachers, especially in fulfilling curriculum changes and learning systems that change from time to time (Kholid, 2020; Nahdi & Jatisunda, 2020; Sunarmintyastuti et al., 2022).

Furthermore, the development of teachers' digital literacy skills is an important point in supporting government programs through the implementation of the independent learning curriculum at every level, especially at the madrasah ibtaiyah level. The learning process that is in accordance with the stages of child development, as well as learning experiences that require concrete learning media can be represented by the teacher's ability to manage learning media through their digital literacy skills (Irhandayaningsih, 2020; Kusumaningrum & Hafida, 2021). Therefore, the effectiveness of learning carried out, especially in the fulfillment and suitability of learning with the development of students, requires qualified abilities (Çam & Kiyici, 2017; Pratolo & Solikhati, 2020; Spires et al., 2018). Studies on the importance of digital literacy for teachers in fulfilling the learning process have been studied by many researchers (Dinata, 2021; Kholid, 2020; Sudyana & Surawati, 2021). This shows that digital literacy skills are a must for all teachers without exception, both at the age level and during the working period. This support is mentioned in several relevant studies that there are several abilities that must be prepared in responding to 21st century learning, namely critical thinking, creative thinking, and literacy which includes many things including one of them is technological literacy (Kuncoro et al., 2022; Nahdi & Jatisunda, 2020). Some of the explanations above are related to digital literacy, it is clear that this skill is a fundamental thing that must be possessed by a teacher

to facilitate the learning and education process (Kurniati et al., 2021; Mardiana et al., 2022). Other things can also be seen in the aspect of developing learning media that makes it possible to meet the needs of students in terms of understanding and making it easier to capture the learning messages presented during the learning process in class (Diputra et al., 2020; Tomczyk & Fedeli, 2021). The development of media that is used as a form and manifestation of teachers' digital literacy abilities has broad insights. Openness of insight related to information, as well as advantages and uses, convenience obtained, and the ability to operate technology for teachers is an indicator of qualified digital literacy skills.

The results of this study contribute to the form of knowledge and basic considerations for stakeholders to pay serious attention to teacher needs in terms of mastery of technology in learning, so that it will become a provision for teachers in preparing themselves to welcome the implementation of an independent curriculum. In addition, this research can be used as a basis for teacher mapping, so the researchers advise the government or the Education Office specifically to design programs that are in accordance with the teacher's digital literacy competency level. The limitations of this study are only focused on quantitative measurements, so for further research it is necessary to examine the teacher's digital literacy abilities with other variables that can be developed from various perspectives.

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4. CONCLUSION

The description of the literacy skills of elementary school teachers in Tanah Datar district both in the aspects of media literacy, information literacy, and technology literacy for each review (age and years of service) is in the low category. The low digital literacy abilities of elementary school teachers throughout Tanah Datar Regency, both in terms of age and years of service, as the results of this study suggest, appropriate formulations are needed to improve teachers' digital literacy skills. This is because digital literacy is one of the urgent and important skills possessed by teachers in the era of the industrial revolution 4.0 and the development of the Free Learning curriculum which requires teacher expertise in developing various media and learning resources.

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