Culture of Digital Literacy in Thematic Learning at the Basic Education Level

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A B S T R A K

Pembelajaran masa pandemi belum opimal, literasi menurun maka perlu pembudayaan literasi digital. Penelitian ini bertujuan untuk menganalisis pembudayaan literasi digital serta faktor pendukung dan penghambatnya. Penelitian ini termasuk penelitian kualitatif dengan jenis deskriptif. Subjek penelitian adalah guru, siswa, dan kepala sekolah. Teknik pengumpulan data adalah wawancara, observasi, dan dokumentasi, instrumen berupa pedoman wawancara, lembar observasi dan dokumen. Uji keabsahan data menggunakan teknik triangulasi sumber. Analisis data penelitian yakni analisis interaktif. Hasil penelitian menunjukkan pembudayaan literasi digital dapat melalui kegiatan: 1) pembelajaran berbasis digital, 2) pengenalan penggunaan laptop, 3) edukasi pemanfaatan HP secara bijak. Pembudayaan literasi digital dipengaruhi beberapa faktor pendukung yakni: tersedianya sarana prasarana, komitmen warga sekolah meningkatkan literasi digital, sedangkan faktor penghambatnya adalah kompetensi pendidik, siswa serta orang tua rendah dibidang digital, tidak ada akses internet di rumah, fokus guru dalam literasi digital kurang karena banyaknya tugas, jumlah sarana kurang. Jadi pembudayaan literasi digital dalam pembelajaran tematik di SD perlu ditingkatkan dari segi sarana prasarana, kompetensi pendidik dan peserta didik

A B S T R A C T

Learning during the pandemic hasn't optimally, literacy has decreased so it is necessary to cultivate digital literacy. This study aims to analyse the cultivation of digital literacy and its supporting and inhibiting factors. This research includes qualitative research with a descriptive type. The subjects of the study were teachers, students and principals. Data collection techniques are interviews, observations, and documentation, instruments in the form of interview guidelines, observation sheets and documents. Test validity of the data using source triangulation techniques. Research data analysis is interactive analysis. The results showed that the cultivation of digital literacy can be through activities: 1) digital-based learning, 2) introduction to use of laptops, 3) education on the wise use of cellphones. The cultivation of digital literacy is influenced by several supporting factors, namely: availability of infrastructure, commitment of school residents to increase digital field, the inhibiting factors are the competence of educators, students and parents are low in the digital literacy, there isn't internet at home, the focus of teachers in digital literacy is lacking due many tasks, lack of infrastructure. So the cultivation of digital literacy in thematic learning in elementary schools needs to be improved in terms of infrastructure, competence of educators and students.

1. INTRODUCTION

The Covid pandemic has impacted various lines of life, including education. The pandemic has resulted in online learning through digital media. Often in online learning the teacher only gives questions for students to do. Every day students just do assignments and then collect them, most students just search for answers available on google without understanding the concepts in the given assignments (Astutik & Yuwana, 2021; Okwara et al., 2017). Learning that is carried out online must be able to accommodate students' learning needs, one of which is the need for literacy, which was originally scheduled in mandatory activities to visit the library, reading corner and scribble of literacy pens, with the

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application of online learning is difficult to do, so that literacy activities can still be carried out during the online learning period, students need to be guided in carrying out digital literacy (Astuti et al., 2021; Blevins, 2018; Khalid, 2011). Digital literacy is one of the basic literacy that students must master at this time. Digital literacy is related to the launching of a government program, namely the School Literacy Movement (GLS) (Son et al., 2017; Suryawati et al., 2018). GLS is very important to do considering the low results of reading tests for Indonesian students conducted through the PISA test. In accordance with the development of technology and information, literacy activities can be carried out using digital media. Elementary school age children are starting to be introduced to communication and information technology in order to make good use of the media. Digital literacy is an individual and social skill needed in interpreting, managing, sharing appropriately and creating meaning in various evolving digital communication channels (Sumiati & Wijonarko, 2020 ; Jessica et al., 2020) . The ability to use digital media affects a person's knowledge in relating individually and socially. The development of digital technology must be accompanied by an increase in skills in using it in order to have a positive impact.

In the digital era like today, it is necessary to develop four competencies, namely Critical Thinking and Problem Solving (critical thinking and solving problems), Creativity (creativity), Communication Skills (communication skills), and Ability to Work Collaboratively (skills to work together) (Damayanti 2019; Khasanah & Herina, 2019). These skills are necessary so that students can work according to the rules, and understand when, how technology is used. Including awareness to think critically about the positive and negative impacts arising from digital technology in life (Benaziria, 2018; Dewi et al., 2021). Digital literacy is closely related to digital ethics in using digital media and the internet, how digital media is used appropriately, safely, ethically, and responsibly, assessing information, reading and writing critically in online media. Digital literacy will develop a critical and creative mindset, so that it is not easy to be instigated by provocative issues, become victims of hoax information, or victims of digital fraud (Damayanti, 2019; Meilinda et al., 2020). Digital literacy needs to be improved in all areas of life, especially education. Skills in digital literacy activities can be reflected in this literate mindset, in understanding a reading, of course, by thinking critically and creatively so as not to be easily consumed by news that is not true and online-based fraud (Arima et al., 2021; Kajin, 2018; Setiyadi et al., 2019). Schools have an important role to play in optimizing digital literacy. One of them is by cultivating digital literacy in thematic learning. Further research states that digital literacy in learning can streamline, facilitate, and strengthen educational processes and outcomes (Harjono, 2018; Yulianti et al., 2021).

Digital literacy improves cognitive, affective, and psychomotor competencies through better, faster, easy, and fun learning activities in a digital learning environment. Learning by integrating digital literacy in it will attract more motivation and interest of students (Maulana, 2015; Wahidin, 2018). In line with research explained that digital literacy has been known in social media that can convey information related to things needed by the community, but it is still optimal to support the improvement of the quality of learning (Masitoh, 2018). Learning must bring positive changes to learners. Changes to better understand the direction of the development of science and technology to produce students who are able to compete globally but do not forget the cultural roots of the nation. The novelty of previous research and current research lies in the variables studied, this research describes efforts to cultivate digital literacy in thematic learning. The cultivation of digital literacy in schools is carried out with a variety of activities that are fun and in accordance with the development of science and technology. Considering that in the field the development of science and technology is not accompanied by the development of the competence of science and technology users. Therefore this study aims to analyses how the cultivation of digital literacy in thematic learning, and analyses the supporting factors and obstacles to the implementation of digital literacy cultivation in thematic learning.

2. METHOD

This research is qualitative research. Qualitative research is the collection of data on a natural background with the intention of interpreting phenomena that occur where the researcher is a key instrument, sampling of data sources is carried out purposively and snowbbaal, collection techniques with trianggulation (combined), data analysis is inductive / qualitative and qualitative research results emphasize meaning rather than generalization (albi & Johan, 2018; Rukajat, 2018). In this study, researchers describe the implementation of digital literacy culture in thematic learning. The application of this design is carried out by collecting data, processing and presenting data objectively. The data collected is in the form of how to implement digital literacy culture in thematic learning. The research was carried out at one of the elementary schools of Giritontro District, Wonogiri Regency. The subjects of the study were teachers, high-end students and principals in the elementary school studied. Researchers use several methods of data collection. Data collection methods in research include interview, observation, and

documentation methods (Lobe et al., 2020; Makbul, 2021). Data collection uses interview techniques to get information directly from research subjects, namely to the Principal, Class Teacher and students. Observation techniques are carried out to observe the implementation of digital literacy culture in thematic learning in the form of learning planning observations contained in RPP and observations during the learning process. Documentation techniques are needed to support information obtained from interview and observation results. The documents needed are RPP and teaching media used by teachers when implementing digital literacy culture in learning and other relevant documents. The instruments used in this study are presented at the digital Literacy Culture as show in Table 1.

Tabel 1. Table in Learning from the Planning and Implementation Stages

Stage	Indicators	Very lacking	Less	Enough	good	Excellent
Planning (RPP)	Determine the technology used in learning	1-2	3-4	5-6	7-8	9-10
	Organizing literacy activities in learning	1-2	3-4	5-6	7-8	9-10
	Integrating technology in learning for literacy activities	1-2	3-4	5-6	7-8	9-10
Implementation	Intensity of digital media utilization in learning	0-19%	20-39%	40-50%	60-79%	80-100%
	The number of variations of reading materials and digital tools	0-19%	20-39%	40-50%	60-79%	80-100%
	Frequency of use of digital media by students	0-19%	20-39%	40-50%	60-79%	80-100%
	Number of presentations of digital information by the school	0-19%	20-39%	40-50%	60-79%	80-100%

Test the validity of the data using source triangulation. Source triangulation can strengthen the data obtained, more reliable if done by checking the data generated during research through several sources (Sugiyono, 2016). In this study, the triangulation of sources was conducted by interviewing more than one subject, namely the principal, teacher and student. Source triangulation is also carried out using various data sources in the form of interviews, observations and documentation. Data analysis in research using Miles and Huberman interactive analysis techniques. Analytical engineering steps: 1) data reduction i.e. summarize, research focuses on the things that are important. Thus the reduced data will provide a clearer picture, and make it easier for researchers to collect the next data, and look for it if needed, 2) the presentation of data in the form of brief descriptions, charts, intercategory relationships, and the like, 3) the findings obtained will then be concluded (Miles et al., 2018).

3. RESULT AND DISCUSSION

Result

The pandemic period that brought the online learning system had an impact on the dependence of teachers and students in doing learning. In a planned way, teachers integrate digital literacy activities in learning. The culture of digital literacy in thematic learning through 2 stages, namely planning, and implementation. The implementation of digital literacy culture in learning is carried out in a planned manner, as evidenced by the RPP (Learning Implementation Plan). RPP contains the learning steps that will be carried out during one meeting, the media to be used and what materials will be delivered when learning takes place. Based on the results of the interview with the Principal, it can be described that the RPP made by the teacher in addition to being evidence of learning administration, is also a planning that becomes a reference in learning. The learning steps contained in the RPP are guidelines designed by teachers by adjusting the learning materials, learning environment, and characteristics of learners creatively and innovatively so that learning becomes meaningful and can achieve learning goals. Based on The Attachment of Permendikbud No. 22 of 2016 concerning Standards of Basic and Secondary Education Process Rpp Components consist of: 1) identity of educational units, 2) identity of subjects or themes / subthemes, 3) classes / semesters, 4) principal materials, 5) allocation of time, 6) learning goals, 7) Basic competencies and indicators of competency achievement, 8) learning materials, 9) learning methods, 10)

learning media, 11) learning resources, 12) learning steps, 13) assessment. RPP makes learning more targeted. The model, format and completeness of RPP developed in accordance with the times, such as currently RPP must integrate character education and literacy activities and contain ICT (Information and Communication Technology)."The competence of teachers in packaging learning and utilizing technology is an important factor. Elementary School Teachers strive to improve their abilities by participating in various self-development activities ranging from KKG (Teacher Working Group), participating in training, training on the use of technology in learning carried out online. Often teachers also exchange information with colleagues or look for guidance on youtube" This was confirmed by the Principal when conducting an interview that not only students who improve their abilities in the field of technology, teachers are always learning and developing themselves. The results of interviews with teachers can be described that each teacher plans the implementation of digital literacy innovatively, in accordance with the ability and skills of teachers in using digital media and the facilities available in schools. The characteristics and ability of students in using digital media are also considered by teachers in preparing learning plans related to digital literacy activities. Digital literacy activities are included in the learning steps made by teachers. Learning media is the main thing in the implementation of digital literacy culture. The results of observations on RPP compiled by teachers are seen in Table 2.

Table 2. Learning Plan

Stage	Indicators	Very lacking	Less	Enough	good	Excellent
Planning (RPP)	Determine the technology used in learning				√	
	Organizing literacy activities in learning				√	
	Integrating technology in learning for literacy activities			√		

Base on Table 2, digital literacy culture planning has been discussed together in the teacher council meeting that the activities that will be carried out to cultivate digital literacy activities in thematic learning are 1) learning using digital media, 2) every two weeks students are introduced using laptops, 3) education on the use of smartphones wisely. The implementation of digital literacy culture in learning begins with pursuing teachers to utilize digital learning media in learning. The media used is in the form of LCD Projectors, Laptops, HP with applications that are in accordance with learning materials. Applications that can be used include whatsap, profpost brain game, google clasroom, google form etc. Provision of literacy reading materials through whatsap groups in the form of photos and documents, introduction of laptop digital media, providing links to thematic learning materials for students to read. In the implementation of literacy activities, students are not only given the task of reading materials but also given the task of making videos to tell what has been read at the time of literacy activities this can foster creativity and increase students' confidence. The results of interviews with class V teachers "Digital literacy activities are carried out periodically according to the predetermined time, namely once every two weeks at the high-end level, by introducing students about the use of laptops (how to turn on, introduction to typing applications (word), typing practices, storing documents and how to turn off the laptop correctly). Class V students are still very unfamiliar with the use of laptops. The introduction of laptop use is carried out in turn considering that the availability of laptops in elementary school has not met the needs, there are only five laptops even old model laptops, and do not have a computer laboratory". Laptop use practice of digital literacy is show in Figure1.
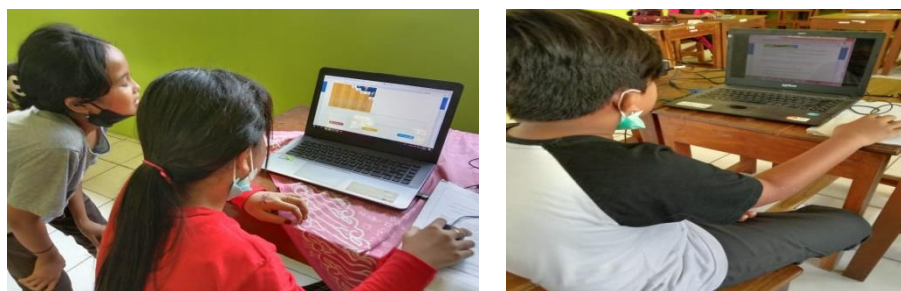

Figure 1. Implementation of Digital Literacy (Laptop Use Practice)

Base on Figure 1, the implementation of smartphone use education wisely is carried out by providing knowledge of the positive and negative impacts of HP, time management so that students are not addicted to gadgets, the ethics of using hp, and cyber bullying. This education is also carried out with the introduction of various learning applications so that students can easily access learning materials. The introduction of learning applications will reduce the negative impact of HP abuse. The variety of applications today can be used as a useful learning medium. Supported by the results of observations of the implementation of digital literacy carried out by teachers using digital media. Observation is made when learning takes place. In student learning enthusiastically in listening, students seem to actively participate in activities. This is reinforced by the documentation in the form of RPP which contains the steps of students' activities in carrying out digital literacy. Various activities are pursued in the culture of digital literacy. Indicators of the implementation of digital literacy carried out in elementary school in research. The results obtained from the application of digital literacy culture in elementary thematic learning are show in Table 3.

Table 3. Culture of Digital Literacy

| | Indicators | Category | | | | |
		Very lacking	Less	Enough	good	Excellent
1	Intensity of digital media utilization in learning	-	2%	12%	68%	18%
2	The number of variations of reading materials and digital tools	-	4%	26%	58%	12%
3	Frequency of use of digital media by students	-	4%	28%	62%	6%
4	Number of presentations of digital information by the school	-	2%	22%	56%	20%

Base on Table 3 show the achievement of digital literacy indicators after activities 1) learning using digital media, 2) every two weeks students are introduced using laptops, 3) education on the use of smartphones wisely. The literacy movement has long been implemented but Digital Literacy which in fact in accordance with the times has not been implemented as expected, many factors inhibit its implementation but also many supporting factors so that digital literacy can be implemented in thematic learning. Supporting factors for Digital Literacy activities in thematic learning in elementary school are, the availability of supporting facilities for digital literacy activities in the form of LCD Projectors, laptops and internet networks. The commitment of principals, teachers, students and parents to improve literacy, especially digital literacy in accordance with the times so that students are wiser in utilizing their communication technology. Students and parents are enthusiastic about digital literacy activities carried out, mainly related to the addition of insights related to thematic learning in the classroom. Most students already have a digital communication tool in the form of HP which is used as the main tool for the implementation of digital literacy. While some factors inhibit the implementation of digital literacy in thematic learning in elementary school such as the competence of teachers or educators is still low in using technology. Most students use mobile phones with their parents and are often used by parents to work when hours of effective learning activities are carried out, so often students do not participate in digital literacy activities. There is no availability of quotas or internet access at students' homes. The teacher's focus on integrating digital literacy in thematic learning is less due to the many additional tasks of teachers as BOS managers, administrators, and OPS. The laptop used has not met the needs of students because there are only five laptops, and does not have a computer laboratory.

Discussion

Digital skills are the initial capital to be able to compete in the global era, such as research that suggests that students must prepare themselves with digital literacy so as not to stutter to welcome the era of society 5.0 which is the impact of the industrial revolution 4.0 (Asari et al., 2019; Kivunja, 2014). It is important for schools to prepare educators and students to welcome the digital revolution in order to increase digital literacy and provide provisions for students in strengthening character education. The understanding of digital literacy can be improved by implementing digital literacy as a form of cultivation. The cultivation of digital literacy in learning goes through two stages, namely planning and implementation. Planning is carried out by designing the learning that will be carried out in the form of rpp that will be used. The preparation of the RPP must pay attention to and integrate 1) Strengthening Character Education (PPK) in learning, 2) literacy, 3) 21st century skills and Hots (Hima et al., 2021;

Stehle & Peters-Burton, 2019). Current rpps must integrate technology as an effort to introduce and familiarize teachers and students with technology. The existence of educational activities on the use of smartphones provides understanding and self-control for children to be able to make good use of smartphones. In line with research that proves that the cultivation of digital literacy in learning will be optimal if there is control over the use of social media of students and provide motivation to find information through various research references (Saputra & Syahputra, 2021). The cultivation of digital literacy in thematic learning will have a good impact on students' digital abilities. In line with research that states that with the cultivation of GLS which is impliedly integrated in lessons Indonesian have a positive impact on students' information literacy competencies and are better applied to each subject in elementary schools (Dinata, 2021; Fauziah & Lestari, 2018; Prayogi, 2020). Integrating digital literacy in each subject will be able to improve the digital skills of elementary school students. Mastery of digital literacy in learning is able to facilitate, and improve learning processes and outcomes. Some of the roles of teachers in GLS are as role models, motivators, facilitators and creators, providers of facilities and infrastructure, as well as providing gifts and punishments (Dasor et al., 2021; Tharikh et al., 2016). This role can improve students' digital literacy culture. Indicators related to the role of teachers are the use of digital media that obtains good results (68%), variations in reading materials or teaching aids with good results (58%) and the number of presentations of digital data by schools that achieve good results (56%). Meanwhile, students' skills in the form of frequency of using digital media obtained good results (62%).

Indicators of literacy cultivation include: the intensity of the use of digital literacy in learning, the variety of reading materials and digital teaching aids, the frequency of digital book lending and the number of school activities that utilize digital media or page sites (Blevins, 2018; Pratama et al., 2019). This indicator is one of the references in determining indicators of digital literacy cultivation in thematic learning that researchers carry out. Indicators of the implementation of digital literacy carried out in elementary schools in this study include: 1) the intensity of the use of digital media in learning by teachers, 2) the number of variations in reading materials and digital teaching aids, 3) the frequency of use of digital media by students, 4) the number of presentations of digital information by schools. Based on these indicators, an average of 61% of each indicator is obtained. This shows the achievement of the implementation of digital literacy cultivation by students and educators in thematic learning. In cultivating digital literacy, there are certainly supporting and inhibiting factors. Supporting factors for Digital Literacy activities in thematic learning in elementary schools are: the availability of supporting facilities for digital literacy activities in the form of LCD Projectors, laptops and internet networks, the commitment of principals, teachers, students and parents to improve literacy, especially digital literacy in accordance with the times so that students are wiser in utilizing their communication technology, students and parents are enthusiastic in digital literacy activities carried out, mainly related to the addition of insights related to thematic learning in the classroom (Sutrisna, 2020; Yunianika & Suratinah, 2019). One of the obstacles to digital literacy is the skills teachers have in using digital media. This is in line with research that states that the inhibiting factors for digital literacy come from inside and outside the teacher. Teachers' efforts to reduce barriers to digital literacy by following optimal self-development such as workshops, peer tutors, clusters, managing time proportionally, collaborating with peers, maintaining endurance, improving school infrastructure to support digital literacy, and appropriate budgeting (Hashim, 2018; Mutohhari et al., 2021). Teachers have a central role in the implementation of digital literacy in thematic learning. The self-development of teachers in managing learning and digital literacy needs to be improved by participating in various trainings, seminars, workshops, etc. In addition, teachers must be able to work together in managing additional tasks in order to focus on implementing digital literacy in thematic learning. The implication of this research can help educators understand the cultivation of digital literacy in thematic learning by increasing the competence and variety of literacy activities through digital media. Student competence with the cultivation of digital literacy in the field of technology will increase making students more active and motivated in participating in learning. This research is similar with other studies, but there are some differences and updates in this study, because the previous study did not discuss more specifically about the indicators used in cultivating digital literacy as used in this study. So this research was carried out as an update of previous research to be able to describe the cultivation of digital literacy applied in thematic learning in elementary schools.

4. CONCLUSION

The culture of digital literacy in thematic learning needs to be applied, to improve understanding, critical thinking skills and creativity. Therefore, teachers need to improve digital capabilities in order to design and implement digital literacy culture in innovative learning and students are actively involved in activities and have good digital knowledge.

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