



Digital Literation as A Teacher Solution in Learning The Digital Era and Pandemic Covid-19

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Abstract

This study aims to determine teachers' problems in managing learning and to provide efforts to increase teacher competence in managing learning in the era of digital technology and the COVID-19 pandemic. The method used in this research is descriptive quantitative describing, explaining a phenomenon in various conditions or various research variables. This research was conducted in 5 public high schools in Pemalang Regency for the 2019-2020 school year. With a sample of 24 teachers who were randomly selected. Collecting data in this study were observation, interviews and documentation which were then analyzed by calculating the percentage of sample answers and tested using various theories. The results of this study indicate that the teacher actually already has the ability to plan the lesson as stated in the lesson plan (RPP), but in its implementation the teacher has difficulty managing learning. Other findings show that teachers' mastery of digital technology in managing knowledge during the COVID-19 pandemic is not optimal. Based on the research results, learning in the digital and pandemic era requires the digital literacy of teachers in managing effective learning by providing training to teachers in the field of digital technology.

How to Cite

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INTRODUCTION

The uncertainty caused by the Corona Virus Diseases 19 (COVID-19) pandemic in December 2019 in Wuhan City, Hubei, China (Lee, 2020; Li et al., 2020; Phan, 2020; Wang et al., 2020), which has an impact on all aspects of life, where never before experienced, (Farid et al., 2020). It has caused many deaths because it has infected millions of people in the world (Lin et al., 2020). The emergence of COVID-19 coincides with the year of the world's largest human migration, namely the Spring Festival season, resulting in a rapid national and global spread of the virus (Sheeren et al., 2020). The significant increase in the number of confirmed cases in China and abroad led to the WHO's announcement on January 30, 2019 that the event became an International Public Health Emergency (WHO, n.d.).

Not only health, economy, politics but also a very significant impact on the education sector so that it poses a very big challenge. As well as (Bahasoan et al., 2020; Onyema, 2020) stated that the Covid-19 outbreak has presented its own challenges for educational institutions. The coronavirus pandemic outbreak has increased inequality in the education sector globally and has a major impact in the future (Chick et al., 2020). Although the Coronavirus pandemic is new, it is already having dangerous effects on mankind. As a result of the pandemic, currently many educational institutions cannot carry out the face-to-face learning process due to being affected by distance restrictions (Dubey & Pandey, 2020).

Various efforts have been made by the government to break the chain of spreading this virus, including issuing Government Regulation Number 21 of 2020 concerning Large-Scale Social Restrictions in the Context of Accelerating Handling of Covid-19 which results in restrictions on various activities. In line with this policy, Schwartz et al., (2020) mentions that there are 5 main pillars for designing strategies that are in line with breaking the chain of distribution as well as providing

education to the community, namely: (1) patient safety and health facility providers, (2) providing the necessary care in a sustainable manner, (3) system sustainability. (4) flexibility as the situation develops, and (5) maintenance of command and control. The Indonesian government itself has declared the Corona Virus or Covid 19 outbreak a national disaster since March 14, 2020, which was announced by the President through the Head of the National Disaster Management Agency based on Law Number 24 of 2007. Not only that, the President also formed a Task Force for the Acceleration of Handling Covid-19 (Thorik, 2020).

Meanwhile, the Minister of Education and Culture also issued policies related to learning during the pandemic through the Minister of Education and Culture Circular Number 36962 / MPK.A / HK / 2020 regarding online learning and working from home to prevent the spread of Corona Virus Disease (COVID-19, (Kurniati et al., 2020). This policy creates a new pattern in the learning process, namely distance learning, which is done online (online learning) as well as (Sun et al., 2020), which states that the COVID-19 outbreak urges distance education to be carried out, which has never been carried out comprehensively simultaneously before. As well as (Cahyani et al., 2020) said the education system in Indonesia is experiencing new challenges due to the Covid-19 virus outbreak, which has caused all learning systems in educational institutions to be shifted to online learning methods. The disruption of the teaching and learning process causes several changes in students, which ultimately affect learning motivation.

This, of course, makes the world of education in Indonesia change to 180 degrees so that it can cause shock therapy for teachers and students because they are not used to using the distance learning system. Teachers as the spearhead in the learning process must adapt quickly to follow the changing patterns of learning that were previously carried out conventionally or face-to-face to distance education, which is carried out online (Bao,

2020; Basilaia & Kvavadze, 2020; Cahyani et al., 2020). Based on the Higher Education Law number 12 of 2012, article 31 concerning Distance Education (PJJ) explains that PJJ is a teaching and learning process carried out remotely through the use of various communication media. PJJ will provide educational services to community groups that cannot attend face-to-face education.

Since the beginning of 2020, there have been drastic changes in education in Indonesia, so that several policies have emerged for the learning process to be carried out online, and teachers are given the opportunity to work from home or what is known as (work from home). Even though working through each educator's home is expected to present a fun learning process for students (Sari et al., 2020). However, the problem is that both teachers and students must well control the adjustment of the use of technology in the learning process so that the learning process can run conducive and learning objectives are achieved.

There were many responses in the application of distance education when this policy was delivered, both from parents, students, and teachers (Megawanti et al., 2020). The dominating responses are the obstacles students, and teachers face related to mastery of technology and the different conditions in each region, which are the biggest obstacles to distance education. Although digital technology advancement is unstoppable and supports the distance learning process carried out by teachers, it still takes time to adapt. Several studies have stated that teachers' information, communication, and technology competencies in Indonesia are not evenly distributed across regions (Widodo & Riandi, 2013). Moreover, the gap in education quality in the various areas in Indonesia, especially between Java and outside Java (Muttaqin, 2018; Azzahra, 2020).

This situation reinforces that the teacher's role is a role that cannot be easily replaced (Jajat Sudrajat, 2020), especially in imparting academic knowledge and character building to students. That is why teachers

deserve to be called merit heroes. The dignity and honor are very comparable to the challenging task they carry, starting from educating, training, teaching, guiding, and evaluating students' learning outcomes. (Lubis, 2016). A challenging task must be accompanied by an increase in teacher competence, especially in developing digital literacy skills. As well as research conducted by (Wahyono et al., 2020) states that teacher competencies and skills must be continuously enriched, supported by school policies that encourage teachers to continue learning. Also, the need for periodic evaluations on online learning so that learning objectives are achieved. Another thing that needs to be considered is students' learning load that must be calculated and measured in terms of material and time.

Teacher competence can be developed through pieces of training related to creativity in managing classroom learning during a pandemic. For example, the introduction of various digital platforms such as google classroom (Herianus, 2020), Edmodo, Kahoot, and a learning management system (LMS) will increase teacher competence. Creativity is the key to successful education. In this Covid-19 era, high teacher skills and creativity will foster high learning motivation for students. This means that the mastery of competence, skills, and creativity that the teacher controls goes hand in hand with students' motivation. After mastering competencies and having skills, the teacher's job is to create a teaching and learning atmosphere that is easy to understand and not boring. Thus, even though the learning system is far away, the essence of a conducive and effective learning process is not lost, and the learning objectives will be achieved.

Based on the description above, it can be seen that the need for adaptation during a pandemic, especially in distance education. Competence development, skills, and creativity are needed to improve teacher competence in providing creativity in the learning process, significantly strengthening digital literacy competitions. Furthermore, the teacher must explore the school's platform, the education

office used in the learning process. Thus, a teacher who has competence, skills, and creativity will overcome problems in the era of the COVID-19 pandemic.

METHOD

This research uses the descriptive quantitative method. The research sample was 24 teachers from 5 SMANs in Pemalang Regency who taught Social Sciences (IPS) subjects who were grouped into groups of certified teachers through portfolios (10 people), certified education and training (5 people), and not empowered (9 people). Sampling using purposive sampling method where the sample is following the needs of the researcher. Data collection is done through giving questionnaires, interviews, and observations on learning media that the teacher has ever made during online meetings.

The research instrument consisted of RPP analysis sheets, learning observation sheets, teacher questionnaires, teacher creative thinking skills tests, and student learning outcomes. The analysis used in this study was to calculate the percentage of sample answers. It was tested using various theories to determine the extent to which teachers planned and managed learning and mastery of digital technology in the digital era and the COVID-19 pandemic

RESULTS AND DISCUSSION

Efforts to improve competency for teachers need to be the main focus. The changing pattern of times makes education must be able to adapt to conditions. Competency improvement focuses not only on teachers' main competencies, namely, pedagogical, professional, personal, and social competencies, but there is an increase in competence in mastering digital technology. So that later teachers have the skills and creativity in managing learning. This research is the development of several similar studies related to the competencies that a teacher must possess. However, in the era of

digital technology and the COVID-19 pandemic, a teacher must have additional competencies to support online learning, namely digital literacy competencies.

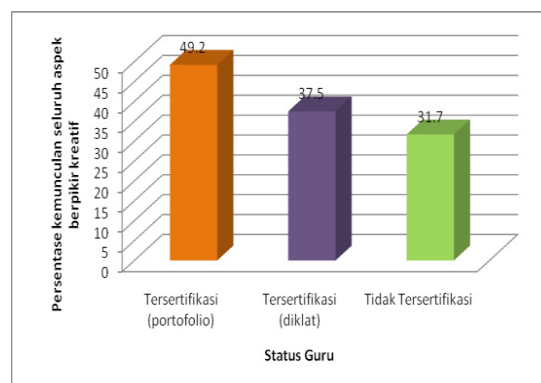


Figure 1. Each group of teachers carried out RPP analysis amid the Covid-19 pandemic

Based on the data in Figure 1, it is obtained an average of 39.5% of the teachers' skills aspects at Pemalang Senior High School. When viewed from these data, it is known that the average percentage of the lesson plans is around 39.5%, which means that teachers do not develop their skills and creativity optimally. The initial gift that the teacher must do is how to plan to learn properly through making lesson plans (RPP). In the current pandemic condition, the teacher needs to adjust to the learning needs. This requires teachers to improve competence and creativity, especially skills in mastering digital technology. So that the lesson plan (RPP) can be adapted to the circumstances and needs of students. In the picture above, the skills development and creativity of the teachers in the sample are still far from what was expected. From the two criteria for teachers, namely teachers who are certified both in the portfolio and approved by education and training and teachers who are not certified, it is known that certified teachers develop more skills in the preparation of lesson plans. This, of course, explains that planning learning skills are essential in the learning process. If the learning planning is not well prepared, the learning objectives will likely be challenging to achieve optimally. From the two criteria for teachers, namely teachers

who are certified both in the portfolio and approved by education and training and teachers who are not certified, it is known that certified teachers develop more skills in the preparation of lesson plans. This certainly explains that planning learning skills are essential in the learning process. If the lesson planning is not well prepared, learning objectives will likely be challenging to achieve optimally. From the two criteria for teachers, namely teachers who are certified both in the portfolio and approved by education and training and teachers who are not certified, it is known that certified teachers develop more skills in the preparation of lesson plans. This certainly explains that planning learning skills are the most essential thing in the learning process because if the lesson planning is not well prepared, it is likely that learning objectives will be challenging to achieve optimally.

In addition to planning learning, a teacher must also be able to manage the class well and be able to choose media or learning models well. The following is a picture that shows the results of research findings related to the ability of teachers to provide creativity in the classroom.

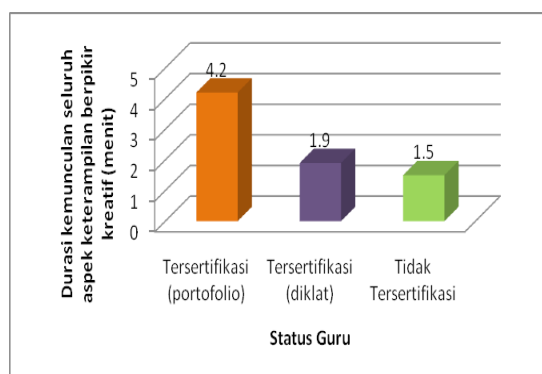


Figure 2. Data on the Observation of Lessons for Each Teacher Group

Based on Figure 2, it can see that each teacher develops every aspect of skills and creativity in varying numbers. The element of originality is very little developed. Besides, teachers' flexibility in the online learning process also does not provide a stimulus to students' mastery of science and technology.

So that student participation is even less developed. The time duration used by the teacher to develop creative thinking skills in learning averaged only 2.5 minutes. Activities that are carried out in 2.5 minutes to develop creative thinking skills are very lacking, especially in the middle of learning online, which has many obstacles such as networks and the tools used. If the teacher in delivering the material does not develop flexibility, It would be better if the teacher distracts them by inviting students to make optimal use of technology. Suppose the teacher can use a learning video, which is much more useful than delivering it spontaneously.

In research observations, it is also known that the most dominant activity that teachers do in increasing student participation is by using the question and answer method. However, this method does not fully contribute to increasing student participation in the learning process. Lack of creativity in managing classes in distance education will result in sub-optimal student learning. For example, the media used in learning is only fixated on one application such as WhatsApp. Of course, it is challenging to know student participation and activeness and understand the extent to which students master the material being taught.

Educational demands changed along with technological advances coupled with the Covid-19 disaster, which requires learning to be done online. Online learning methods are new to teachers. There needs to be an effort to develop competence and skills, especially in managing online learning or better known as the distance education system. According to Government Regulation Number 19 of 2005, Article 28 paragraph (3) concerning National Education Standards states four competencies must be possessed by a teacher of pedagogical competence, professional competence, personal competence, and social competence. Competence is rational behavior in achieving goals, which refers to the ability to do something obtained through the education process (Mulyasa, 2013). Furthermore, teaching competence is a skill in demonstrating every teach-

ing, including the ability to ask, investigate, explain, understand, manage class and assign assignments (Shukla, 2014).

Pedagogic Competence

The current curriculum requires teachers to be able to become student facilitators in the learning process. The approach inherent in the 2013 curriculum is a scientific approach in which the implementation of student learning is required to acquire relevant learning experience to improve their abilities independently (Bentri, 2017). One of the competencies related to the power of teachers to manage to learn is pedagogical competence. According to Handayani (2020), the pedagogic ability is the ability to understand students' characteristics, understand the material being taught, and understand the philosophy of education being implemented.

Furthermore, pedagogical competence is the teacher's ability to master theoretical and practical learning process, which includes the ability to manage learning, planning, and implementation, evaluate learning outcomes, and develop and actualize students' potential. (Nurtanto, 2014; Susanto, 2016; Suyanto, Jihad, 2013). Whereas in special education, pedagogic competence means a teacher's ability to increase the potential of students who have special needs and serve education according to their portion. (Martika & Salim, 2017).

Based on the description above, it can be concluded that pedagogical ability is the teacher's ability to manage the class, which includes skills in mastering the material, increasing student participation, and most importantly, exploring the potential that exists in students.

Professional Competence

Competencies that also need to be possessed by a teacher are professional. According to Dudung (2018), professional competence is teachers' ability to carry out their duties as an educator. Furthermore, based on the National Education Standards, the explanation of Article 28 paragraph (3) point c states that pro-

fessional competence is the ability to master learning materials broadly and deeply, which aims to guide students to meet the specified competency standards.

Teacher competence as mastery of teaching and educating tasks, skills, attitudes, and appreciation in supporting success in learning, (Fitriani et al., 2017). A teacher's mission is not only to educate, teach, and train students, but more importantly, to provide professionalism in carrying out humanitarian and social functions that may be the difference between other professions (Sulfemi, 2019). Thus, professional competence is one of the competencies in carrying out tasks following the primary duties and functions and responsibilities of a teacher to students in learning both at school and outside school.

Personality Competencies

The role of a teacher is as a director in every learning process. So that the learning objectives are achieved or not is the responsibility of a teacher. To complete the learning objectives that are expected, a teacher must have the necessary abilities that come from within a teacher, namely the teacher's personal competence. According to Law Number 14 of 2005 concerning Teachers and Lecturers, teacher personality competence states that competencies related to the personality of a good teacher are teachers who have noble, wise, authoritative characters and are role models for students.

An established teacher's personality affects the tasks they carry out, which are related to the learning process they carry out (Huda, 2018). As role models for students, teachers must have good attitudes and personalities to become idols and role models in their lives (Barinto, 2012; Ni'mah, 2014). Then follow (Anggraeni, 2017), the teacher's personality who is polite, respects students, is honest, sincere, and exemplary, has a significant effect on success in learning. Besides, the teacher's personality will also affect students' interest and enthusiasm in participating in the learning process. All competencies that teach-

ers must possess, which include pedagogic, professionalism, and social competencies, will be driven by or determined by their personal competencies. Therefore, teacher personality competence is an essential competency that must be developed and should not be forgotten (Dwintari, 2017).

Social Competence

The next competency that the teacher needs to have is social competence. According to (Rahmawati & Nartani, 2018) described social competence related to communication with students in the learning process. The ability to interact with a teacher is an indicator of success in learning. Communication skills that will provide a pleasant learning atmosphere and make students participate in education. Good interaction will create effective learning and improve teacher performance as an educator (Herlina & Suwatno, 2018).

Social ability is the skill to communicate and socialize effectively, especially with students, so that the teacher will become someone who can motivate students and will be looked forward to at every meeting (Ahmad, 2019). The social competence of a teacher has sub-competencies with indicators of communicating and getting along with students, fellow educators, and education personnel, and with parents/guardians of students and the community (Kurniasih, Imas; Sani, 2015; Novauli. M, 2015). Therefore, teachers' social competence is an indication that the learning process is running well and effectively and makes the learning environment comfortable and conducive.

Teacher Competence during the Covid-19 Pandemic

Based on the findings in the field, it can be seen that several things need to be developed in the learning process. Mostly the teacher's skills in planning and managing learning. The more advanced and modern era will undoubtedly provide a new transformation in education and learning patterns. Digital literacy is a 21st-century skill that is needed for both teachers and students. Through the Ministry

of Education and Culture, the government integrates digital literacy as an indicator of education and culture's success. The challenge facing schools today is to instill digital literacy in the learning system (Rahayu & Mayasari, 2018).

The various transformations that teachers need to develop their knowledge in digital literacy. An essential aspect in achieving an education in the digital era has the ability to digitize. The ability to understand the digital era includes reading, writing, understanding symbols, and calculating numbers. But in on-line learning, this ability is the knowledge of using software, creating files containing text and images, including sharing files on digital platforms (Irhandayaningsih, 2020). Currently, digital technology has integrated into the world of education (Benson & Kolsaker, 2015). Digital technology is also used by students as a medium for learning activities. Students can find reading sources quickly, send assignments via e-mail, access the platforms used in learning, discussions that can provide independent education.

In modern times, a general approach in education in learning is distance education (Yilmaz, 2015). Distance education is also a solution to the COVID-19 pandemic, which is carried out online (Nahdi & Jatisunda, 2020). This distance education during the pandemic has provided opportunities for teachers to improve competence in mastering digital technology. Teachers can use various digital applications as means or media that can be used in the learning process effectively. The use of digital applications is proven to increase learning effectiveness so that it can improve student learning outcomes (Rahayu et al., 2019). For example, online learning through virtual classrooms can be an alternative so that learning activities can continue during the COVID-19 epidemic (Ng & Or, 2020). One way is to integrate ICT (information, communication, and technology) where the teacher provides directions and trains students to understand and use various learning support applications (Rahayu et al., 2019).

Based on the findings that have been confirmed with a theoretical basis in this study, it can be explained that the importance of providing training is an effort to improve teacher competence in learning effectiveness in the digital era and the COVID-19 pandemic. This is done to create quality education and make young generations of quality and have high competitiveness.

CONCLUSION

As the guardian of education, teachers must have various necessary competencies in the master of the learning process. The fundamental competencies that must be possessed are pedagogical competence, professional competence, personality competence, and social competence. This competency is essential for teachers to plan and manage to learn so that learning can run effectively and provide comfort in the learning environment.

Along with the development of science and technology, the paradigm of thinking develops rapidly. One of them is the need for additional competencies, as the carrying capacity of teachers to carry out teaching tasks in the digital era. The most needed competency is digital literacy competence. Necessary competencies are owned to accommodate learning in the digital age and the COVID-19 pandemic. This situation makes the direction of education to become distance education, which is carried out using an online learning model (e-learning). Mastery of digital literacy competencies will provide creativity in developing planning and management of learning and creative thinking skills so that they can become reliable facilitators and initiators of quality education attainment.

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