

Application of School Teacher Literacy Culture in Efforts to Improve Education Quality in the Digitalization 4.0 Era

Khairani¹, Sonia Purba Tambak²

Master of Islamic Education Management, Faculty of Tarbiyah and Teacher Training,
North Sumatra State Islamic University

khairani.0332224012@uinsu.ac.id¹, sonia.purbatambak@uinsu.ac.id²

ABSTRACT

In the industrial era 4.0, especially in the world of education, the teacher is an educator who is obliged to educate his students in learning skills, by: First, Educational competence, internet-based educational competence or learning of things as a basic skill. Second, Technology commercialization competence, has the competence to bring students to have a technology-based entrepreneurial attitude and student innovation work. Third, competence in globalization, a world without barriers, not stuttering about various cultures, hybrid competencies and problem solving competencies. Fourth, Competence in future strategy, the world changes easily and moves quickly, so that you have the competence to predict exactly what will happen in the future and its strategy. Fifth, the competence of the counselor, considering that in the future the child's problems are not difficulties in understanding teaching material, but are more related to psychological problems, stress due to increasingly complex and severe pressure conditions, a teacher who is able to behave is needed. as a counselor/psychologist. Why are they called teachers because some people think that all areas of the teacher must be mastered even though sometimes we cannot lie to ourselves, if we have to master all fields we may not be able to, but there is nothing wrong if these deficiencies must be covered with lifelong learning. And continue to accompany these students to continue learning and learning.

Keywords: Teacher and Student Literacy Culture, Education, Digitalization age 4.0

INTRODUCTION

Currently the development of the world is entering the age of Digitalization 4.0, the era of the fourth digital world revolution, where information technology has become the foundation of human life. (Uswatun Hasanah, Herina, 2019). The support and role of education is therefore expected to enhance the country's competitiveness in international competition, the rapid development of information technology. The current wave of the Digital World is unstoppable, sending out those who make good use of it, often hurting people's dignity in various ways. Human ignorance in the digital world leads to multiple abuses of digital media at the personal, social and national levels. Improving the quality of learning is therefore one of the challenges for Indonesian educators. (Harian Jurnal Asia, 2016)

Education is an important factor in improving the quality of human life. Through education, people grow and learn a lot. Education is the raising of awareness by communities and governments through counseling, mentoring, or training activities that occur throughout life, both in and out of school, in order to prepare students to play appropriate roles in various life situations in the future.

(Abdul, Kadir, 2012) is an effort. 20.2003, National Education System:

“Education is the creation of a learning environment in which pupils can positively develop their religious faculties, self-discipline, character, intelligence and noble character potential. It is a conscious and deliberate effort to create a process and skills needed by himself, community, nation, nation”. (UU No. 14, 2005)

Literacy culture is a way to instill a noble character. Teachers play a key role in motivating students to learn, so they should take a comprehensive and progressive approach to learning to stimulate their curiosity and encourage them to think critically. must take. This succeeds when teachers are able to develop appropriate learning that improves students' literacy and overall potential. In developing learning, teachers should also be able to select and use materials such as: Encourage students to read quality books because reading activities align with critical thinking processes that enable students to be creative and creative.

In order to develop students' potential, the Indonesian government has made a lot of efforts to improve the education system to improve the quality of human resources in Indonesia. Reading is an important element of education, through reading activities knowledge (in this case, including the source book of reading) is transferred to people, through reading activities a person develops his thoughts and makes someone an educated person. can be Developing a reading culture is important given that reading skills and competencies are the foundation for acquiring knowledge, skills and shaping attitudes. Becoming a literate generation means moving towards a critical and compassionate society. This means being critical of all information you receive, avoiding emotional reactions, and being concerned with the news that is circulating around you. One of them is that many people are illiterate and can easily get into irresponsible problems. This can divide our unity, cohesion and integrity as a nation.

The literacy culture embedded in students influences their success in both school and social life. One of the school literacy activities is his 15 minute out-of-class reading activity before study time begins. This activity is done to increase students' interest in reading and improve students' reading comprehension reading skills to acquire knowledge better. Readings contain moral values in the form of local, national and global wisdom that are taught according to the developmental level of the student. Systematic and continuous efforts are needed to improve student literacy. To stimulate interest in literacy and literacy, since 2016 UNESCO (1996) Principles of Learning Due to the different conditions in schools and classrooms, aspects of learning in the classroom have not been adequately addressed . The development of learning activities to improve reading literacy, especially the development of interest in reading, has been suboptimal in schools as some teachers have a different or inadequate understanding of literacy. Teachers should be good role models for their students. When a teacher asks students to read, the teacher should also read to set a good example for the students. Literacy traditions (skills in clear oral and written communication and the ability to absorb information through texts) have also not grown consistently among some teachers.

Efforts to socialize and improve literacy in schools have not yielded optimal

results due to lack of support and training to increase awareness and literacy among teachers. The materials and texts available in schools are not optimally used to develop literacy skills in students. Additionally, literacy strategies are not optimally implemented during learning. Law No. 14 of 2005 on Teachers and Lecturers states: "Education". (UU No. 14, 2005) The status of the teacher as a professional is aimed at implementing the national education system and realizing the goals of national education, namely, the teaching of pupils to become persons of faith and fear of Almighty God. Develop potential, have a noble character, be healthy, knowledgeable, competent, creative, independent, democratic and responsible citizen within. in the implementation of the school literacy program, all teachers have their respective roles in relation to literacy activities, the goal is to familiarize students with reading which is expected through the reading process to grow the character of reading fondness, of course, the growth of this character does not go through a fast process but requires a short time.

Teachers are the most important factor in learning competence, teachers must be projected to be able to answer the latest challenges that lead to the preparation of an educated generation who are ready to compete and go directly to the digital era 4.0. Era 4.0, whether we realize it or not, has changed the concept of work, the structure of work and the competencies needed by the world of work. An international recruitment company survey, Robert Walters, titled Salary Survey 2018 said that the focus on business transformation to digital platforms has triggered the demand for human resources (HR) professionals who have far different competencies than before. There are at least five teacher qualifications and competencies needed in the 4.0 era. First, educational competence, namely competency in educating/internet-based learning of things as a basic skill. Second, Technology Commercialization Competence, has the competence to bring students to have an entrepreneurial attitude (entrepreneurship) based on technology and students' innovative work. Third, Competence in globalization, a world without barriers, not stuttering about various cultures, hybrid competencies and problem solving competencies. Fourth, Competence in future strategy, the world is easy to change and move quickly, so you have the competence to predict precisely and accurately what will happen in the future. Fifth, the competence of the counselor, bearing in mind that in the future the child's problem is not difficulty understanding teaching material, but more related to psychological problems, stress due to increasingly complex and severe pressure conditions, a teacher who is able to act is needed.

RESEARCH METHODE

This research was conducted with a literature review approach. Data were obtained from various sources in the form of documents, papers, journals and reports on related research as well as various other relevant sources. The data that has been collected is then analyzed using an exploratory method. The analysis is done by finding out what things can affect the implementation of reading and

writing literacy culture by teachers to students.

FINDINGS AND DISCUSSION

Literacy Culture in the Age of Digitalization 4.0

The Industrial Age 4.0 is a serious challenge for education especially in Indonesia and in other countries in general. (Ma, 2018) Unless we change the way we teach and learn, we will face great challenges over the next 30 years. Teaching and learning that cram knowledge and eliminate attitudes and skills creates students who cannot compete with machines. The dominance of knowledge in learning needs to change so that young Indonesians can transcend machine intelligence in the future and use machines wisely for greater benefit. Teachers need to talk about Literacy 4.0 in the digital age. This shows that being aware of the development of science and technology is an attempt to understand the situation of the times. Like it or not, the community needs to participate in time. Every time there is a revolution in any field, people have to update their way of life and way of thinking. Like a curriculum in an area of study that changes frequently. This is because the Indonesian curriculum is constantly adapting to changes in science and technology.

The challenge for the educational community at this time is to use the learning process to emphasize not only old literacy enhancements, but also new literacy enhancements. This is integrated with academic and professional skill enhancement to stimulate educational enhancement. Profession. Therefore, there is a need to reorient educational practices in both primary, secondary and tertiary education. For the world of education to remain relevant in the Digital Age 4.0 or era of disruption, the educator (teacher) must simultaneously integrate learning outcomes in her three areas and integrate them into the learning process. New Literacy and Scientific Literacy Graduates may experience reading and writing otherwise.

Teachers aren't just expected to understand old literacy skills like reading and writing. In the Digital Age 4.0, he has three new reading skills to master. The three literacies are data literacy, technology literacy and human literacy. The challenge of acquiring skills in the future is enormous. Therefore, in addition to reading, writing and arithmetic, the student must also teach her three new literacy skills. When it comes to the world of education, literacy is an important part of a student's growth and development as an object of instruction. Literacy is the ability to read and write. This opinion is consistent with the meaning of the Merriam-Webster online dictionary, which explains that literacy is derived from the Latin word "literature" and the English word "letter." But literacy can only understand reading. The word literacy cannot be separated from the word book. Literacy is not only about reading books, but we can also do literacy when we read what is going on around us. Whether you read or not, writing is literacy. Iman Al-Ghazali once said, "If you are not the son of a king, *If you are the son of a great scholar, be a writer. Writing can make us famous even if we are not famous. Writing also has the benefit of improving your reading and writing skills. As Pramoedya Ananta Toer quoted, "Write. Unless you write, you will disappear from the vortex of*

society and history."

Many people say that writing is a talent. incorrect! Think of it that way, because writing is a practical skill that needs to be practiced and done diligently, because in everyday life it is inseparable from the word writing. Despite having readily available technology, the literacy rate of Indonesians is still low. It's not that we should not be fooled by technology, we should be the ones to weaponize technology itself in order for Indonesian people to improve the literacy rate in Indonesia. A member of the Press Council, he even Agus Sudivyo once suggested adding media literacy to the curriculum to limit the impact of new technologies. Indonesians' low interest in literacy is one of the reasons why the quality of education in Indonesia remains relatively low compared to other countries to this day.

Curriculum needs to be realigned in order for graduates to be competitive. Because in Digital Age 4.0, according to Ahmad, I, 2018, the old literacies (reading, writing and mathematics) as basic capital for social participation are lacking. (Aung, Massachusetts Institute of Technology, 2017) The Industrial Age 4.0 Literacy Group has three of his:

1. Data Literacy: The ability to read, analyze, and use information (big data) in the digital world.
2. Technology Literacy: Understanding How Machines Work, Technology Applications (Coding, Artificial Intelligence, and Engineering Principles)
3. Human Literacy: Humanities, Communication.

According to Muhadjir Effendy, (Effendy, Muhadjir, 2018) education needs to revise its curriculum adding five competencies to enter the digital age 4.0.

1. Students are expected to have ability to think critically
2. Students are expected to have creative and innovative skills. Needs student skills and communication skills
3. Collaborates and cooperates
4. Confidence in students

Teachers in the Digital Age 4.0 need to improve comprehension, express themselves in the field of media literacy, understand information shared with students, and analyze to solve academic problems to solve digital competencies. should be able to find All stakeholders need to strengthen cooperation on future educational directions, change the performance of the education system to improve the quality of student mindset, and strengthen the digitization of application-based education is desired Age of 4.0 requires at least five of her teacher qualifications and competencies when talking about what to do in relation to the educator's role in meeting these challenges. First, educational ability, the ability to educate and learn about the Internet of Things as a basic skill. Second is the ability to commercialize the technology. It has the ability to lead students into entrepreneurship, based on technology and student innovation work. Third, competence for globalization, a world without barriers, a stutter-free world for different cultures, hybrid competence, and problem-solving competence. Fourth, the ability to be strategic in the future, the world is volatile and fast-moving, so we have the ability to accurately

predict what will happen in the future in line with strategy. Fifth, the skills of counselors, considering that children's problems in the future will not be difficulty in understanding teaching materials, but psychological problems, stress caused by complications and burdens, and the need for teachers who can act as counselors, as a psychologist.

By improving teaching and learning, primary and secondary education will only improve the quality of teachers. The Power of Teachers in the Digital Age 4.0 Teachers well versed in the digital economy, artificial intelligence, big data and robotics do not neglect the importance of the noble task of developing noble character for their students. Through teachers, the world of education must build creativity, critical thinking, collaboration, ICT proficiency and digital literacy. Relating to student wellbeing, increasing emphasis is now being paid to how technologies can help support the mental health of students within education. Learning analytics, for instance, when appropriately applied, can help to identify at-risk students. Further, digital assistants that are AI-driven and use natural language processing can act as effective communication channels with students (JISC, 2018a, 2019a, p. 43; LeedsBeckett University, 2017).

Strategies for Building a School Literacy Culture in the Digital Age 4.0

Schools are at the forefront of literacy culture. To keep schools at the forefront of developing a culture of literacy, A Principal's Guide to Literacy cites Instruction. Beers in Nurlaila teaches some strategies for creating a positive literacy culture in schools: (Kemendikbud, 2016)

First: Create a Readable, Readable Physical Environment The physical environment is the first thing students see and feel in school. Therefore, the physical environment should appear friendly and conducive to learning. Schools that support the development of a literate culture should display student work in all areas of the school, including hallways, the principal's office, and staff rooms. Additionally, student work is regularly exchanged to provide opportunities for all students. In addition, students have access to books and other reading materials in reading nooks located in all classrooms, offices, and other areas of the school. A tour room where students' work is displayed positively demonstrates the school's commitment to developing a literate culture.

Second, it strives for a social and emotional environment as a model of literary communication and interaction. A social and emotional environment is constructed through models of communication and interaction for all school components. This can be developed by recognizing student achievements throughout the year. Awards may be presented weekly during the flag ceremony to recognize student progress in all aspects. Achievements are not only recognized academically, but students' attitudes and efforts are also evaluated. (Hakiki, 2019) Additionally, literacy is expected to color all major festivals throughout the school year. This can take the form of book festivals, poster contests, storytelling, storybook character carnivals, and more. School leaders should play an active role in literacy mobilization,

including building a culture of cooperation between teachers and educational staff. This means that everyone can be involved according to their expertise. The role of parents as volunteers in the literacy movement will further strengthen the school's commitment to the development of a literate culture.

Third, Striving for Schools as Educated and Academic Environments The physical, social, and emotional environments are closely related to academic environment. This can be seen in the planning and implementation of literacy exercises in schools. Schools should allocate sufficient time for learning to read and write. One of them is for her to read silently and have her teacher read the book aloud to her 15 minutes before class. In order to improve the skills of teachers and staff, they should be given the opportunity to participate in training programs for educational staff to gain a better understanding of literacy programs, their implementation and implementation. (Hakiki, 2019)

Critical Thinking Skills in the Digital Age 4.0

The Government, through the Ministry of Education and Culture, has made a breakthrough to improve reading culture through the School Literacy Movement. Literacy Culture aims to create a culture of critical thinking for students, starting with literacy activities. Students need critical thinking skills as they are good at solving different situations when faced with them. This is corroborated by his Armia and Zuriana (2017) statement in Asih A.M. (Mardiyah, 2018) which mentions several benefits of implementing a literacy culture in schools: Train your child's basic skills of reading, writing and counting. Literacy culture can be applied to schools by shaping children's reading habits. Reading activities are early activities that introduce children to the culture of reading and writing.

Develop critical thinking skills. Students with high literacy rates are also better able to receive, process and respond to the information they receive. Prepare the children for the world of school. Children accustomed to literacy cultures learn and communicate better than those who are not accustomed to literacy cultures.

As Armia and Zuriana state in Asih A.M. (Mardiyah, 2018) one of the benefits of implementing a literacy culture is literacy, and in addition to improving students' literacy, they also improve their ability to think critically. develops. The higher the student's interest in literacy, the higher the student's criticality. Based on the literacy benefits described above, it is appropriate for schools to instill a culture of literacy in their students. The application of literacy culture in schools creates a generation of smart and strong characters who face the development of times such as the current era of Industry 4.0. The implementation of literacy culture can be done in many different ways without considering the needs of the students. Kern in Armia and Zuriana (Armia, Zuriana, 2017) states that he has seven principles for implementing a culture of literacy in learning. The seven principles are: (1) Existence of interpretation. This interpretation is carried out by the writer or speaker and the reader or listener. (2) Collaboration. Literacy activities require the cooperation of both the speaker and the listener. This collaboration aims to reach a common understanding. (3) Cultural Practices/Conventions. It contains language rules for both spoken and written language.

(4) Cultural Knowledge. (5) problem solving; (6) Includes reflective activities. (7) Literacy is not limited to spoken and written systems as it involves the use of language, but requires knowledge of how language is used.

Based on his seven principles above, the author concludes that there are some points to be aware of when applying a literacy culture for primary school teachers. First, the role of teachers. Refers to her 2013 curriculum in which the student is the subject of learning rather than the object of learning, and the teacher acts as the facilitator. Therefore, the implementation of literacy activities cannot be separated from the contribution of teachers. Second, the availability of literate materials. With the development of the times, literacy has penetrated not only literacy activities but also technology literacy, information, media, environment, etc. Schools can use the environment as a resource in implementing literacy culture learning information for students. Third, problem solving. Literacy culture practices are more effective when balanced with problem-solving activities.

Digital Age 4.0 Teachers

According to UNESCO data from the Global Education Monitoring (GEM) Report 2016, Indonesia's education ranks 10th out of 14 developing countries and the quality of its teachers ranks among the 14 developing countries in the world. It ranks 14th in the country. The number of teachers he increased by 382 in 1999/2000 brought him over 3 million, while the number of students increased by only 17%. Of the 3.9 million existing teachers, 25% still do not meet academic qualification requirements and 52% do not have professional qualifications. With a large number of teachers, it is expected that optimal learning activities can be realized. Unfortunately, the increase in the number of teachers has not matched tquality. (Maura, 2018) The distribution of teachers is still not evenly distributed across all regions, resulting in a shortage of teachers in many schools. (Wahyudi, 2018) Then, to make up for the lack of teachers, schools allocated teachers to teach multiple subjects so that each student could get all the tuition fees they needed. This discrepancy between subjects and areas of instruction means that the learning process is sub-optimal and that students are not fully mastering the materials taught by their teachers. Secondly, teacher qualifications that are not equivalent to a bachelor's degree. For example, the PAUD teacher certification. The number of his PAUD teachers in Indonesia reached 552,894 in December 2017, according to Mr. Hari Suiskandar, Director General of PAUD and Dikmas of the Ministry of Education and Culture. Of these, only 47.79% earned a bachelor's degree With PAUD. As a result, teachers' scientific standards are not sufficient to teach the subjects they teach. Third, teacher training programs are still small. The Continuing Professional Improvement Program is designed to improve the competence of teachers through personal development as science and technology advance. However, there are still many teachers who do not want to grow further in order to improve their abilities in line with the times. As it stands, teachers are ill-equipped to teach in the Digital Age 4.0. Fourth, ineffective teacher recruitment. There are still many aspiring teachers who were hired without going through the formal recruitment system. Especially in schools where there is a shortage of teachers, there are

many cases where teachers are recruited only with a bachelor's degree without considering the teacher's competence in quality teaching and learning activities. Not to mention a teacher recruitment process that emphasizes kinship over skill selection. This condition undermines teacher competence and prevents teachers from meeting the challenges of the Digital Age 4.0.

Teaching in the Industrial Age 4.0

Learning in the Digital Age 4.0 emphasizes students' ability to gather information from a variety of sources, formulate problems, think analytically, and collaborate to solve problems. (Kemristekti, 2018) In line with Amimudin (2013), the use of e-learning is with NGOs (learning management systems) or other learning applications, stating that the use of mobile learning as learning media. Trilling & Fadel (in Uswatun Khasanah and Herina, 2019) states that Industrial Age 4.0 skills are 1) life and living skills, 2) learning and innovation skills, and 3) information media and technology skills. is showing. The three capabilities are grouped together in a scheme called The Industry 4.0 Knowledge Skills Rainbow, or the addition of knowledge content and various administrative tasks, dubbed the "Nineteenth Century Industry 4.0 Knowledge Skills Rainbow"? feel weighed down and do not have time to give students the opportunity to explore their creative possibilities to produce original work. As a result, students' social interactions are restricted, their creativity constrained, and their ability to develop noble character banished.

The era of digital revolution 4.0 will affect the role of education, especially the role of educators. If the role of the educator as a transmitter of knowledge continues to exist, it will be lost as technology develops and learning methods change. (Sukartono, 2019) Through independent learning. In the context of learning in the Digital Age 4.0, learning including creativity, critical thinking, collaboration, communication skills, community and personality skills must be maintained as students as educational institutions still require technical skills. it won't work. The use of a variety of learning activities to support 4.0 is mandatory, including models for sharing resources with anyone, anywhere, classroom and laboratory learning with advanced virtual teaching materials, interactive, challenging and content-rich Learning is not only perfect. (Sukartono, 2019)

This condition is contradictory today's teaching and learning is constrained by the walls of the classroom, preventing students from exploring the real educational environment: family, community, and school. A teacher who organizes learning is always rich in Adat (as it should be), not rich in Kudne (as it should be), and bad at innovation and creation. The learning process in school is nothing more than a routine of repetition and transmission of (helpful) content Knowledge that does not train students to develop creativity, taste, spontaneity and work, and social awareness. The teacher held classes as usual this year.

The world of education during the industrial revolution is in the age of knowledge, where the exponential increase in knowledge is accelerating. This rapid growth of knowledge is supported by the use of digital media and technology, called

Information Superhighway Gates in Sukartono. (Sukartono, 2019) The nature of learning activities in the Knowledge Age must adapt to the needs of the Knowledge Age. Learning Teaching materials need to offer a more authentic design to meet the challenge of allowing students to work together to find solutions to their learning problems. Problem solving leads to students searching for questions and answers. Find answers using the problem-solving information resources available in the learning context.

The above demands to change the way people think in the Digital 4.0 era are not easy tasks that also require a very big change in public education. (Sukartono, 2019) The Indonesian education system is one of the largest in the world, with approximately 30 million students, 200,000 institutions and 4 million educators in an area roughly the size of the European continent. But if we don't want to be overwhelmed by the changing global times, this change is a must.

Addressing Teacher Empowerment in the Digital Age 4.0

The Industrial Age 4.0, full of super-fast technology, brings about big changes. One of them is the Indonesian education system. Changes in the education system will certainly affect the role of teachers as educators. Teachers need a high level of competence to prepare students for the challenges of the Digital Age 4.0. Quastalani The Ministry of Education and Culture website (Kemdikbud, 2016) lists five skills teachers need to prepare to enter the Digital 4.0 era. Second is the ability to commercialize the technology. In other words, teachers must be capable of giving students a technological entrepreneurial spirit for student innovation. Thirdly, the ability to globalize, that is, teachers do not stutter about different cultures and are able to solve pedagogical problems. Fourth, the ability of future strategy in the sense of the ability to accurately predict what will happen in the future and that strategy through joint teaching, joint research, joint resources, staff mobility and rotation. Fifth, Advisory Competence, i.e., the teacher's ability to understand that future student problems are not only difficult to understand material, but also mental problems related to the times.

These skills Efforts to master can begin with improving teacher recruitment systems. Teachers are recruited according to selective and standardized patterns that meet the requirements of technical development. Attitude patterns not only test the intellectual abilities of future teachers, but also the psychology and personality of future teachers to meet all the challenges entering the Digital Age 4.0. A bottom-up teacher development model should also be carried out so that all the problems and obstacles faced by teachers in the region can be taken into account in subsequent joint reviews. In this context, the roles of the Teachers Working Group (KKG) and Subject Teachers Advisory Service (MGMP) need to be optimized. Efforts to strengthen the KKG and MGMP should continue to create collaborations aimed at the self-development of teachers facing Industrial Revolution 4.0. Strengthening KKG and MGMP starts with understanding the number and distribution of KKG and MGMP in each region, promotes the formation of KKG and MGMP in areas that do not yet exist, determines the organization and management of KKG and MGMP, and improves quality. can be

systematically organized. Quality teacher education activities that recognize previous learning, funded through direct grants. Governments can provide support by implementing trainer apprenticeships locally, providing certified training and educational trainers, and providing Conduct monitoring of KKG and MGMP strengthening in the region in accordance with the design of quality education and training programs.

The next initiative is the continuous improvement of the teaching profession through the Continuing Professional Development Program. Continuous professional development aims to narrow the gap between the knowledge, skills, soft skills and personalities they possess today and the future demands of their profession. (Kemdikbud, Pedoman Pengelolaan Pengembangan Keprofesional Berkelanjutan, 2012) Courses and workshops to develop learning methods as they evolve in the digital age 4.0. In addition, the creation of innovative works such as scholarly publication in the form of ideas for formal teaching and learning, textbook publishing, and technology-based learning tools enhances the capabilities of teachers. To support on going professional development programs, governments should provide supporting infrastructure, such as equitable functional education, to ensure continued access for remote teachers, and research or experimental funding to generate learning innovation. Must provide E-literacy support facilitates efforts to improve teacher competence. Teachers can use her e-literacy to find a variety of information they need. We process and analyze information obtained from the Internet to create new information. In addition, the use of e-literacy improves teachers' knowledge and insight for the Digital Age 4.0. Provide support in the form of a pledge to expedite the drafting of the Teachers Bill. Particular attention should be paid to creating content related to teacher competencies so that teachers have room to further improve their competencies as we enter the era of Industry 4.0.

CONCLUSION

The Digital Era 4.0 will have a tremendous impact on the progress of science and technology. With these advances, human resources, in this case teachers, play an important role, especially in educating and guiding students to utilize technology and information to the fullest. They are expected to be able to build a literacy culture that supports learning so far. teachers are expected to respond to technological developments and changing times, the millennial generation who will enter a new era of education, the Digital Era 4.0, can print. By developing student competencies in various ways, namely first, pedagogic competence, pedagogic competence, or internet-based learning as basic skills. Second, the competence of technology commercialization has the ability to lead students to entrepreneurship, based on technology work and student innovation. Third, competence in globalization, a world without barriers, a world without stuttering about different cultures, hybrid competencies, and problem solving competencies. Fourth, the ability to strategize for the future. As the world is volatile and changing rapidly, we have the ability to accurately predict what will happen in the future according to our strategy. Fifth,

counseling skills. Teachers who are competent as counselors/psychologists, remember that children's problems in the future are not difficulties in understanding the material, but psychological problems, stress caused by pressure from increasingly complex and difficult situations. Some people think that all fields must be mastered by a teacher, that's why they are called gurus. If this deficiency must be corrected through lifelong learning. And help students to keep learning and learning.

REFERENCES

- Asih Andriyati Mardiyah, *Budaya Literasi Sebagai Upaya Peningkatan Keterampilan Berpikir Kritis di Era Industri Revolusi 4.0*, Semnas PPM LP4MP, Universitas Islam Majapahit, 2018.
- Armia dan Zuriana. "Pentingnya Literasi untuk Pendidikan Anak Usia Dini". *Langgam Bahasa*, Vol.11, No. 2, 2017.
- Aisya Maura, *Fakta Kualitas Guru Di Indonesia Yang Perlu Anda Ketahui* 2018, <https://blog.ruangguru.com/fakta-kualitas-guru-di-indonesia-yang-perlu-anda-ketahui>
- Dinar Wahyudi, *Peningkatan Kompetensi Guru Menuju Era Revolusi Industri 4.0*, Jakarta: Pusat Penelitian Badan Keahlian DPR RI, Jurnal: Info Singkat, Vol. X, No. 24/II/Puslit/Desember/2018
- Guru Era 4.0, [http://krjogja.com/web/news/read/59981/Guru Era 4.0](http://krjogja.com/web/news/read/59981/Guru-Era-4.0). *Harian Jurnal Asia*, 2016.
- Jack Ma, dalam Elsy Mainsany, 2018, [https://padek.co/koran/padangekspres.co.id/cetak/berita/117764/Peran Guru di Era Revolusi 4.0](https://padek.co/koran/padangekspres.co.id/cetak/berita/117764/Peran-Guru-di-Era-Revolusi-4.0).
- JISC. (2018b, November 30). Preparing for Education 4.0. *Times Higher Education (THE)*. Retrieved from <https://www.times-higher-education.com/hub/jisc/p/preparing-education-40>
- JISC. (2019a). *Horizons report on emerging technologies and education*. Author. Retrieved from <http://repository.jisc.ac.uk/7284/1/horizons-report-spring-2019.pdf>
- Kementerian Pendidikan dan Kebudayaan. *Pedoman Manajemen Pengembangan Keprofesian Berkelanjutan*. Jakarta: Kementerian Pendidikan dan Kebudayaan, 2012.
- Kementerian Pendidikan dan Kebudayaan. Master Design gerakan literasi di sekolah. Jakarta: Direktorat Jenderal Pendidikan Dasar dan Menengah Kementerian Pendidikan dan Kebudayaan Republik Indonesia, 2016, Nurlaila Hafizd Hakiki, *Peran Guru dalam Pelaksanaan Program Gerakan Literasi Sebagai Upaya Pembentukan civic knowledge*, Bandar Lampung, Universitas Bandar Lampung, 2019.
- Kanematsu, H. & Barry, D., M. 2016. *STEM and ICT Education in Intelligent Environments, Intelligent Systems Reference Library*, dalam Uswatun Khasanah dan Herina, *Membangun Karakter Siswa Melalui Literasi Digital dalam Menghadapi*

- Pendidikan Abad 21 (Revolusi Industri 4.0)), Prosiding Lokakarya Nasional Program Pascasarjana Keguruan Universitas PGRI Palembang 12 Januari 2019.
- Kemristek. 2018b. *Presiden Jokowi: Tantangan Kita Kedepan, Revolusi Industri 4.0*. Retrieved from <https://www.ristekdikti.go.id/presiden-jokowi-tantangan-kita-direvolusi-industri-masa-depan-4-0/>
- Kadir, Abdul. 2012, *Dasar-Dasar Pendidikan*. Jakarta: Kencana Prenamedia Group, 2012.
- Mouhadjir Effendy. Menteri Pendidikan dan Kebudayaan (Mendikbud). Rabu, 2 Mei 2018. *Mendikbud mengungkapkan cara menghadapi revolusi 4.0 di bidang pendidikan*. <http://www.republika.co.id/berita/dinding/education>.
- Sukartono, *Revolusi Industri 4.0 & Dampaknya terhadap Pendidikan diIndonesia*, FIP PGSD Universitas Muhammadiyah Surakarta, 2018.
- UU No. 20 Tahun 2003 tentang Sistem Pendidikan Nasional UU No. 14 tahun 2005 tentang guru dan dosen.
- “7 Provinsi Raih Nilai Terbaik Uji Kompetensi Guru 2015”, <https://www.kemdikbud.go.id/main/blog/2016/01/7-provinsi-raih-nilai-terbaik-uji-kompetensi-guru-2015>.
- Uswatun Khasanah dan Herina, *Membangun Karakter Peserta didik Melalui Literasi Digital Dalam Menghadapi Pendidikan Abad 21 (Revolusi Industri 4.0)*, Prosiding Seminar Nasional Pendidikan Program Pascasarjana Universitas PGRI Palembang, 2019.
- Widodo, Slamet dkk. *Membangun Kelas Literasi Berbasis Pendidikan Lingkungan Hidup Untuk Melatih Kemampuan Literasi Siswa Di Sekolah Dasar*. Prosding Seminar Nasional Pendidikan, 2015.