

Teacher Competency Development In The Digital Era

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Abstract

In this digital era, new technologies have emerged, resulting in extraordinary changes in all fields, including education. The increasing sophistication of technology, the heavier the demands for the competence of teachers. For this reason, at this time required the will and ability of teachers to understand the dynamics of the classroom in order to educate students well. This paper aims to describe the development of teacher competencies in the digital era. The method used is literature study with descriptive analysis techniques. The results showed a change in the educational paradigm. One of them is that teachers as educational actors must be able to improve and develop their competence in pedagogic, social, personality and professional aspects. This can be seen in the ability to communicate and collaborate, the ability to think critically and solve problems, the ability to emphasize conceptual learning, and the ability to use technology-based learning media.

Keywords: Development, Teacher Competence, Digital Era

INTRODUCTION

Schools as educational institutions have an important role in preparing the young generation of the nation's hopes to be able to compete in the era of globalization. The role of teachers in schools has control in printing and shaping the young generation of the nation's hopes. For this reason, teachers must be able to develop competencies in facing the challenges of the 21st century, in order to develop competencies in the form of affective, cognitive and psychomotor optimally for their students.

The problems that arise in the 21st century include the global economic crisis, global warming, theory, racism, human trafficking, moral degradation and low cultural awareness. The development of westernization, the emergence of SARA issues and the gap in the quality of education and conflicts between ethnic groups. Besides that, the lifestyle of the Indonesian people has changed, namely being individualistic, hedonistic and materialistic. For this reason, the role of teachers is expected to be able to overcome these problems, especially in the field of education, namely to produce students who survive in facing competition in the era of globalization. Besides that, it also carried out a mental revolution which was a mandate from Mr. President Ir. H. Joko Widodo.

The digital era is already booming, marked by the increasingly widespread use of technology followed by internet networks. Such conditions also have an impact on the development of educational services, so that they have consequences for the competence of teachers and the characteristics of their students

Schools, teachers, and students in urban areas are already connected to the internet, but there are also areas where telecommunications networks have not been reached, let alone the internet. However, in the 21st century today society. Indonesia has indeed become an inseparable part of the digital era. Therefore, anything must adjust to the presence of a new digital-based era, so how to be part of today's digital era by productively utilizing this technology and network.

The use of digital technology in the learning process, completing various tasks, and increasing teacher competence cannot be separated from the flow

information and technology developments. Facing these challenges, teachers as the front guard in the world of education are required to be ready to change and adapt. The role

of the teacher will not be replaced by any sophisticated machine. This is because teachers are needed to shape the character of the nation's children with character, tolerance and values of kindness. The teachers are also able to foster social empathy, build imagination and creativity, and strengthen the spirit of national unity and integrity.

The foundation of teacher competency development is Law No. 14 of 2005 on teacher competence covering pedagogical competence, personality competence, social competence, and professional competence. Each competency can be described as follows; Competence is performance (ability to do) which is motivated by mastery of knowledge, attitudes and skills. This implies that the quality of performance is determined by the mastery of knowledge, attitudes and skills. The higher the quality of mastery of knowledge, attitudes and skills, the higher the performance, and vice versa. So there is a high positive correlation between the level of mastery of knowledge, attitudes, and skills with the established competencies. Competence is a set of mastery of abilities that must be present in the teacher in order to create a proper performance as a teacher [1].

Teacher Competence

Teacher competence is holistic which includes, among others: pedagogical competence, personality competence, social competence and professional competence obtained through professional education and understanding computer-assisted instruction [2].

In Government Regulation Number 19 of 2015 concerning National Education Standards, Article 28 Paragraph 1 states that educators must have competencies which include: pedagogical, personal, professional, and social.

Pedagogic Competence is one type of competency that absolutely needs to be mastered by teachers. Pedagogic Competence is basically the ability of teachers to manage student learning. Pedagogic Competence is a distinctive competency, which will differentiate teachers from other professions and will determine the success rate of the process and learning outcomes of their students [3]. This competence is not obtained suddenly but through continuous and systematic learning efforts, both in the pre-service period (education for prospective teachers) and during their tenure, which is supported by the talents, interests and other potential of each individual teacher.

Based on the theory above, it can be concluded that pedagogical competence is the ability possessed by the teacher in managing the learning delivered to students from designing, implementing learning by utilizing several learning resources and evaluating the results of learning with the aim of developing the potential of students.

Personality competence is a solid personality ability, has a noble character, is wise and dignified and is a role model for students [Law No. 14 of 2005 article 10 paragraph (1)]. In the explanation of Government Regulation Number 19 of 2005 concerning National Education Standards, it is stated that the teacher's personality competence is a personality ability that is: 1) solid; 2) stable; 3) adult; 4) wise and prudent; 5) authoritative; 6) have a noble character; 7) be role models for students and society; 8) evaluate own performance; and 9) develop yourself in a sustainable manner.

Meanwhile, referring to the national education standards, teacher personality competencies include: 1) Having a solid and stable personality whose indicators act according to legal norms, social norms, pride as an educator, and have consistency in acting according to norms; 2) Having a mature personality, with the characteristics of showing independence in acting as an educator who has a work ethic; 3) Have a wise personality, which is shown by actions that are beneficial to students, schools and society and promote openness in thinking and acting; 4) Having an authoritative personality, namely behavior that has a positive effect on students and has respected behavior; and 5) Have noble morals and be role models, by displaying them in accordance with religious norms (faith and piety, honesty, sincerity, helpfulness), and having behaviors that are emulated by students.

In the National Education Standards, the explanation of Article 28 paragraph (3) point c states that what is meant by "professional competence is the ability to master learning material broadly and deeply which allows guiding students to meet the competency standards set forth in National Education Standards [4].

Professionalism is the attitude of a professional. This means that a team explains that every job should be done by someone who has expertise in their field or profession. That professionalism is a professional attitude which means doing something as a main job as a profession and not as a pastime or as a hobby. a professional has the meaning of an expert (expert) with the knowledge he has in serving his job. Responsibility for decisions, both intellectually and attitudes, and having a sense of serviceability uphold professional ethics in a dynamic organization. A professional provides job services in a structured manner [5].

Social competence is the ability of teachers to communicate and interact effectively with the school environment and outside the school environment [6]. With two-way communication, students can be better monitored and can develop their character more effectively too.

In the National Education Standards, Article 28 paragraph (3) point d, it is stated that what is meant by social competence is the ability of teachers as part of society to communicate and mingle effectively with students, fellow educators, educational staff, parents / guardians of students. , and the surrounding community. This is further elaborated in the RPP on teachers, that social competence is the ability of teachers as part of society who at least have the competence to: (a) Communicate orally, in writing, and in signs; (b) Using communication and information technology functionally; (c) Mingle effectively with students, fellow educators, educational staff, and parents / guardians of students; and (d) Getting along politely with the surrounding community [7].

The four competencies, in their implementation, constitute a complete rule, because someone who has this competence is a requirement to be categorized as a professional teacher. To achieve professional teachers requires a fairly long process, in accordance with Article 20 of Law No. 14 of 2005 that in carrying out professional duties, teachers have the right to: (a) Plan learning, of high quality and assess and evaluate learning outcomes. (b) Develop and improve academic qualifications and competencies in a sustainable manner in line with the development of science, technology and arts. (c) Acting in an objective and non-discriminatory manner based on considerations of gender, religion, ethnicity, race, certain physical conditions, or family background, and the socioeconomic status of students in learning. (d) Upholding laws and regulations, laws and teacher codes of ethics as well as religious and ethical values. (e) Maintain and cultivate national unity and integrity, and (f) Teachers must have the ability to use IT in the learning process [8].

Digital Era

The challenges of education in this digital era, especially in Indonesia, are no longer just talking about classic problems, namely equalization and fulfillment of access, educational infrastructure but also talking about the quality of graduates who are able to compete with the demands of development. Educators are required to be able to adapt to the times, are required to master technology first so that they can adapt to students, lest students have mastered digital technology while educators are not yet able to use and take advantage of the IT system, if such a situation occurs then it is certain to be lame so that the common ground between teachers and students will not exist.

Although the development of education has not been able to optimally follow these technological developments, one effort that needs to be made to face this challenge is through improving the quality of teachers so that they are able to teach material with an application approach to the use of information technology (IT) in the teaching and learning process otherwise it will be further away. out of date and this has an effect on the quality of graduates.

Moreover, the field of education our opponent now is not only in equal distribution of education but the quality of graduates to participate in it, it is necessary to adapt properly,

namely teachers are expected to be able to implement information and communication technology-based learning because if they are not ready they will be increasingly left behind, improving the quality of educators. become a priority in order to be able to adapt, produce students according to the demands of the times and the position of the teacher is irreplaceable for students. One way to deal with the challenges of this digital era is to improve the quality of teachers through education and training on how to use and apply ICT in learning, training on teacher competence. In terms of facing the challenges of this digital era, it is hoped that the support of all parties. The government together with all stakeholders should seriously rethink various matters related to strengthening the education system because change is a must and does not wait for our readiness.

METHODS

This study uses a literature method, with a qualitative approach. Qualitative research is supposed to be able to organize all the theories that are read [9]. The study of theory in research functions more to show how far the researcher has the theory and understands the problems being studied. In addition, qualitative research is required to conduct grounded research, namely finding theories based on data obtained in the field or social situations.

RESULT AND DISCUSSIONS

Educational Challenges in the Digital Era

Changes in the education system have an impact on the role of teachers as educators. Teachers are required to have high competence to produce students who are able to answer challenges in the digital era.

The challenge of an educator does not stop with the ability to apply information technology in the teaching and learning process, but there are 6 competencies that teachers 4.0 are expected to have, namely: (1) Critical Thinking and Problem solving (critical thinking and problem solving skills). Namely the ability to understand a complex problem, connect information with other information, so that eventually various perspectives emerge, and find solutions to a problem. This competence is defined as the ability to reason, understand and make complex choices; understand the interconnections between systems, structure, disclose, analyze, and solve problems. This is very important for students to have in 21st century learning. Teachers in era 4.0 must be able to concoct learning so that they can export these competencies to students. (2) Communication and collaborative skills (communication and collaboration skills). Information and communication technology-based abilities that teachers must apply in learning in order to construct communication and collaboration competencies. (3) Creativity and innovative skills (creative thinking skills and innovation). The revolution requires students to always think creatively and innovatively, this is necessary in order to be able to compete and create jobs based on the industrial revolution 4.0. Of course, a teacher must first be creative and innovative in order to transmit to his students. (4) Information and communication technology literacy (Information technology literacy and communication). Information and communication technology (ICT) literacy is the obligation of teachers 4.0, this must be done so as not to be left behind by students. Information and communication technology literacy is the basis that must be mastered in order to be able to produce students who are ready to compete in the face of the industrial revolution 4.0. (5) Contextual learning skills. This learning is very suitable to be applied by teachers 4.0 when they have mastered ICT, so contextual learning is easier to apply. Currently, ICT is one of the contextual concepts that teachers must know about, ICT-based learning materials so that teachers are very unprepared if they do not have ICT literacy. Abstract material can be presented more real and contextually using ICT. (6) Information and media literacy (information and media literacy). Many information media are social in nature that students are involved in. Social media seems to be a powerful communication media used by students and one of the learning media that teachers 4.0 can use. The presence of digital classes in

the form of social media can be used by the teacher, so that learning takes place without space boundaries and without time. [10].

In the digital era, not only students, but teachers, and lecturers must also have 21st century skills. Because it is impossible for teachers to train these skills to students if the teachers themselves have not mastered them. Teachers must have strong competence, have soft skills, namely critical thinking, creative, communicative and collaborative thinking. The teacher's role as a character role model, spreads passion and inspires. This is a role that technology cannot replace. Teachers must be able to build an atmosphere that can meet the psychological needs of students, which includes: needs for competence, each student needs to feel able, meaning that interactions in learning can make students feel they can. This can affect the psychology of students, which includes: needs for competence, every student needs to feel able, meaning that interactions in learning can make students feel they can. This can be done by giving appreciation for the learning outcomes of students. Needs for Autonomy, every student needs to feel "autonomous" by getting freedom and trust because every autonomous learner will not depend on the teacher for learning. Needs for relatedness, each student needs to feel he is part of a group, and interact in groups. So the learning process must be able to foster collegiality interaction and mutual support. Sustainable learning, so that students are able to go through the era of disruption, and enter a new era called the Abundant Era, which is an abundance of information, media and learning resources.

The 21st century which is marked by the presence of the media era (digital age) greatly influences the management of learning and changes in student characteristics. 21st century learning becomes imperative to integrate information technology and communication, student-centered learning. In the development of 21st century learning, teachers are required to change conventional learning patterns that are centered on the teacher (teacher centered) into student-centered learning because the abundant learning resources are not only teacher resource persons, so that the role of the teacher becomes a facilitator, mediator, motivator at the same time. leader in the learning process. The conventional learning pattern can be understood as learning in which the teacher gives a lot of lectures (transfer of knowledge) while the students listen more, take notes, and memorize. The ability of pedagogy with conventional patterns is deemed inappropriate for the current era.

The characteristics of students of the 21st century are very different from students of the previous era. In this 21st century, a person must have four skills (communication, collaboration, critical thinking and problem Solving and creativity and innovation). These skills should be reflected in the learning that will be carried out by a teacher. 21st Century skills can be integrated into the implementation of learning, so that the choice of methods, media and classroom management actually enhances these skills. That is why it is imperative that teachers' pedagogical abilities complete the characteristics and skills needed in the 21st century.

The characteristics described above are suitable for the professional development of teachers in the 21st century. Therefore, teachers continue to increase their interest in reading by increasing their collection of books. Whenever there is a learning problem, the teacher needs to increase knowledge through reading books, both printed and digital which can be accessed via the internet. Without high reading interest, teachers in the current era of cyber pedagogy will lag behind the knowledge of their students, which will reduce the credibility or authority of the teacher. The loss of teacher authority will have a serious impact, not only on decreasing the quality of learning, but also for the progress of a nation.

Teacher Competency Development

One way to develop teacher competence is through teacher certification, but this is a long process to obtain an educator certificate. Educator certificates for teachers are valid as long as the person concerned carries out his duties as a teacher in accordance with statutory regulations. Educator certificates are marked with a teacher registration number issued by the

Ministry of National Education. Certification is obtained through professional education which ends with a competency test.

The certification program has determined educational qualifications for all teachers at all levels, namely at least a bachelor's degree or Diploma IV. By having an educator certificate, teachers will receive income above the minimum requirement, including: basic salary, allowances attached to salary, as well as other income in the form of professional allowances, functional allowances, special allowances, and additional allowances related to their duties as teachers as stipulated by the principle of reward on the basis of merit. Teachers who are appointed by educational units organized by the Government or Local Government are given a salary in accordance with statutory regulations, while teachers who are appointed by educational units organized by the community are given salaries based on a work agreement or collective work agreement, this is intended for teachers who have pocketed an educator certificate.

To get an educator certificate is not as easy as turning a hand, and requires hard work from the teachers. Educator certificates will be obtained by teachers if they really have competence and professionalism. For teachers who have competence and professionalism, this may not be a complicated issue, but a matter of time. Conversely, teachers who lack competence and professionalism, this can become a complicated problem when the turn to be certified has arrived. In this regard, something that is certain is that teachers must prepare themselves as early as possible to be certified, so that these good opportunities do not just disappear because there is no adequate preparation. Teachers must be mentally, scientifically and financially prepared. In relation to scientific preparation, teachers need to improve their competence and professionalism, including mastery of ICT.

In the interest of certification and ensuring the quality of education, it is necessary to increase the competence and professionalism of a teacher. This needs to be understood because with post certification teachers must continue to improve their abilities and professionalism so that the quality of education is guaranteed. Increasing teacher competence and professionalism can be done in several ways, including:

Further study of the bachelor's degree or master's program is the first way that teachers can take to improve their competence and professionalism. Two types of master programs that can be followed are master programs that organize pure science education programs and educational sciences. The tendency of teachers to prefer to take part in educational science programs in order to increase their competence and professionalism.

Courses and training, participation in courses and training on education are the second ways that teachers can improve their competence and professionalism. Although the main task of a teacher is teaching, there is nothing wrong with increasing competence and professionalism, it also needs to be equipped with the ability to research and write articles / books.

Use of journals, journals published by the professional community or universities can be used to increase competence and professionalism. Articles in journals usually contain the latest developments in a particular discipline. Thus, journals can be used to update the knowledge possessed by a teacher. By having adequate knowledge, a teacher can develop the competence and professionalism of a teacher in transferring knowledge to students. In addition, these journals can be used as a medium for communicating the written results of teachers' thoughts and research which can be used to obtain the credit score needed at the time of certification and promotion.

Seminars, participation in seminars is a self-development activity as a fourth alternative that can be taken to improve the competence and professionalism of a teacher. It seems that this is the most popular method and is becoming a trend for teachers in the era of certification, because it can be a means of obtaining credit scores. Through seminars, teachers get new information. That method is legitimate and good to do. However, in the future it will be better if the teacher is not only a seminar participant, but more than that it can be an organizer and speaker at the seminar. Seminar forums organized by and for teachers can be a good vehicle

for communicating various matters concerning the field of science and their profession as a teacher.

CONCLUSION

One of the problems of education in Indonesia is that the quality of education in Indonesia is very low compared to other countries. This is partly due to the low quality of teachers. The causes of low teacher competence in Indonesia are: 1) the incompatibility of disciplines with the subject areas they are capable of, 2) teacher qualifications that are not yet equivalent to undergraduate degrees. 3) Teacher's Continuous Professional Improvement Program (PKB), 4) ineffective teacher recruitment. Educational praxis in schools that relies on the transfer of knowledge from teachers to students is no longer effective in preparing students to enter the industrial ecosystem 4.0 which prioritizes the development of 21st Century competencies.

Education 4.0 can only be implemented by referring to the 12 new educational paradigms characterized by students as connectors, creators, and constructivists in the context of the production and application of knowledge and innovation. Teachers in the era of the industrial revolution 4.0 have their roles not replaced by technology. The role of the teacher is irreplaceable because the teacher is the character shaper of students through character education, tolerance and the value of kindness. However, teachers need to change the way of teaching to make it more fun and interesting. Likewise, the role of the teacher changes from being a conveyor of knowledge to students, to being a facilitator, motivator, inspirator, mentor, developer of imagination, creativity, character values, and team work, and social empathy because otherwise the teacher's role can be replaced by technology.

Teachers in the era of the Industrial Revolution 4.0 need to have five competencies that must be possessed by teachers, namely: 1) educational competence, 2) competence for technological commercialization, 3) competence in globalization, a world without divides, not stuttering various cultures, hybrid competence and excellence in solving problem (problem solver competence). 4) competence in future strategies, the world is easy to change and runs fast so that you have the competence to predict exactly what will happen in the future.

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