Development of Online Learning Based Teacher Competency Models

Hermasari Restuti, Suryanto

Airlangga University, Surabaya, Indonesia

* Correspondent Author: hermasarir@gmail.com

ABSTRACT

Currently various countries in the world are facing the COVID-19 pandemic since December 2019, including Indonesia. In Indonesia, the COVID-19 pandemic began to be felt since the beginning of 2020, until May 5, 2020, 864 people died from the COVID-19 virus and 11,192 people were confirmed to have contracted COVID-19. This resulted in the government implementing several policies to reduce the rate of growth of the spread of the COVID-19 virus in Indonesia. The implementation of physical distancing policy requires that the learning process be carried out from home through an online system. The online learning system presents its own challenges for teachers who in this case are teachers. This research aims to improve the development of teacher competence in terms of pedagogic competence, which is the ability of teachers in learning management which includes the ability to utilize the advancement of science and technology in education. In this study, researchers took 5 people as research subjects to be interviewed. The results showed that the development of pedagogic competency model needs to be done to teachers in order to improve and maximize the use of science and technology in online learning, especially during the pandemic period as it is today.

Keywords: COVID-19, Competency, Pedagogik, Daring

BACKGROUND

Education is fundamental and very important for every individual. Through education, people can know the nature of life, can develop science, and can hone and develop all the potentials and talents that exist within themselves. The talents and potentials of an individual developed, are expected to bring change to a better direction. The change is expected to have an influence on the purpose of national education that implements the process and results of the implementation of education itself (Siswoyo, 2008).

Of course, education is more successful if supported by supporting factors other than education itself, one of which is the use of technology. In the current era of globalization, which is characterized by the existence of intense free competition is also characterized by the rapid development of technology. The development of science, one of which is information and communication technology, has had a huge influence on various aspects of human life (Holmes &Gardner, 2006). No exception in the aspect of education, the way of learning and teaching human beings has undergone a significant paradigm shift. Nowadays, education has known the so-called e-learning or learning that applies electronic technology in such a way that the learning objectives can be achieved to the maximum.

Currently, in some countries have been exposed to the Covid-19 virus, inseparable Indonesia. In Indonesia itself, the spread of the Covid-19 virus began to occur in February 2020. The more days the spread of the Covid-19 virus occurs so quickly that the current condition is called the Covid-19 pandemic. The Covid-19 pandemic led the government to create and implement several policies to reduce the rate of spread of the virus. Some of these policies, including social distancing, physical distancing, to PSBB (Large-Scale Social Restrictions). With the implementation of these policies, it affects the continuity of various aspects of life, including education.

The physical distancing policy resulted in the learning process not being able to take place in the classroom and the learning was done from home using an online system. The online learning system presents its own challenges for teachers who in this case are teachers. Teachers should be able to build a comfortable learning atmosphere and be able to convey knowledge well and maximally even though the learning is done using an online system. In the process of online learning, of course, it is necessary to use technology appropriately so as to produce the process of transferring knowledge to the maximum even though learning is not done directly.

To be able to transfer knowledge well and maximally, every teacher must have a variety of good and adequate competencies in order for the learning process to run well. In the Regulation of the Minister of National Education No. 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies there are 4 competencies that must be mastered by teachers, namely pedagogic competencies, professional competencies, individual competencies and social competencies. In accordance with what has been explained earlier that one of the competencies required in online learning is pedagogic competency. Pedagogic competency is the competency or ability of teachers in managing learning, including the ability to utilize science and technology in education.

Pedagogic competency is very important in the online learning process. This is because, if teachers can not maximize and can not use science and technology appropriately then the purpose of learning and the process of transfer of knowledge will not succeed. It is expected that through an online learning system, with limited time, teachers can deliver learning effectively. By keeping an eye on the development of information technology in the world of education and some important components needed in the development of online learning programs is not impossible to realize (Hartanto, 2016).

Rusyan (2014 : 27) said, to have the ability and expertise, teachers are required to improve knowledge, use, and master technology, be it computers or other technological tools that can be used in learning. Teacher pedagogic skills are very important to develop, especially to conduct online learning processes in the current pandemic.

(Suripto et al. 2014:3) said that the development and application of information technology has various benefits for education, among others:

- The emergence of Mass Media, especially electronic media as a source of science and education centers. Like an Internet network, a lab. School computer and others. The impact of this is that teachers are not the only source of science, so students in learning do not need to be too fixated on the information taught by teachers, but also can access lesson materials directly from the Internet, therefore, teachers here not only as teachers, but also as students' mentors to direct and monitor the course of education, so that students do not misdirect in using information and communication media in learning.
- The learning system doesn't have to go through face-to-face. During this time, the learning process that we know is a learning that is delivered only face-to-face, but with the advancement of technology, the learning process does not have to bring students together with teachers, but can also use internet postal services and so on.
- The emergence of new learning methods, which facilitate students and teachers in the learning process. With the advancement of Technology, new methods are created that allow students to understand abstract materials, because the material with the help of Technology can be made abstract, and can be understood easily by students.
- The fulfillment of the need for educational facilities can be met quickly. In the field of education of course many things and materials that must be prepared, one example, namely; Doubling the exam problem, with the photo copy machine, to meet the need for a large number of questions certainly takes a long time to work on it if done manually. But with the development of technology all of that can be done in a short time. Especially in learning activities, there are several benefits that can be obtained from the development of science and technology, namely: learning becomes more effective and interesting, can explain something difficult and complex, accelerate a long process (time efficiency), present rare events, and show events that are dangerous or out of reach.
- The existence of an assessment data processing system that uses technology utilization. In the past, when people did a study, then to analyze the data that has been obtained must be analyzed and calculated manually. But after the development of science and technology, all the tasks that used to be done manually and took a long time, became something that is easy to do, namely by using technology media, such as Computers, which can process data by utilizing various programs that have been installed.

(Spencer, L.M. and Spencer, S.M, 1993) says that competence can be said to be a fundamental characteristic of a person resulting in effective and or superior performance that refers to a particular criterion. Teacher is a position or profession who require special skills as Teacher. Work as a teacher cannot be done by people who do not have the skills to do activities or work as a teacher. To become a teacher, special requirements are required, especially as a professional teacher must master the ins and outs of education with various other sciences that need to be built and developed through a certain period of education or pre-service education (Usman, 2000:5).

Along with the need for education that can prepare future generations, it takes a teacher who has competent in it. In accordance with (Law of the Republic of Indonesia No. 14 of 2005) in Chapter IV part one of Article 8, namely "Teachers must have qualifications, competencies and certifications of educators, healthy physically and spiritually, and have the ability to realize national educational goals". Then in Article 10 it is stated that "the competence of teachers as referred to in Article 8 includes pedagogic competencies, personality competencies, social competencies, and professional competencies obtained through professions.

In 2014, the Directorate of The General of Higher Education in Indonesia is quick to respond to this development by running the Open and Integrated Indonesia Online Learning (PDITT) program. The benefits of E-learning according to Pranoto, et al (2009:309) are:

1. The use of E-learning to support the implementation of the learning process can increase students' absorption of the materials taught.
2. Increase the active participation of students.
3. Increase the active participation of students.
4. Improving students' self-learning skills.
5. Improving the quality of educator materials and training.
6. Improving the ability to display information with information technology devices, where with ordinary devices is difficult (Riadi, 2014).

METHODS

In this study using qualitative approach method with descriptive method that has the purpose to be able to describe and know the extent of teacher understanding of the development of science and technology today and the extent to which teachers can make the most of science and technology in the teaching and learning process, especially in the current pandemic that results in learning conducted from home and conducted online or using other online communication tools.

Data collection in this study, using indirect and structured interview techniques where researchers conduct interviews to informants via whatsapp, via e-mail and video calls to get the information needed and establish their own problems and questions asked.

NO	NAME	DESCRIPTION
1	Miss Andarina	Private Elementary School Teachers, Teaching time more than 5 years
2	Miss Rikha	Private Elementary School Teachers, Teaching time more than 5 years
3	Miss Andriana	Private Elementary School Teachers, Teaching time more than 5 years
4	Miss Dian	Private Elementary School Teachers, Teaching time more than 5 years
5	Miss Kandy	Private Elementary School Teachers, Teaching time more than 5 years

RESULTS

From the research that has been done, it is known that 5 teachers as respondents said that understand about pedagogic competence. The five respondents said that pedagogic competence is the ability of teachers to understand in learning starting from planning, implementing, evaluating learning outcomes and developing the potential of students. This is in accordance with what is explained in Permendiknas RI No. 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies.

Through the results of the interview, it can also be known that the 5 teachers understand that the ability to manage technology and information is part of pedagogic competence. The five teachers have done online learning. The media used is diverse, namely online learning via zoom meeting, via microsoft, whatsapp, video, instagram, and telegram. The selection of the use of such media is tailored to the needs of online learning needed. Online learning conducted by the 5 teachers has described how Education has been trying to develop technology and information according to the demands of the times so as to support the development and progress of education itself.

The 5 teachers said that in the process experienced some obstacles and had some difficulties carrying out online learning. One of them said that the obstacle is when the teacher feels that the expected target in learning is not achieved, it can be seen through the presence of students who do not understand the learning materials that have been delivered. Then another teacher said that the obstacle experienced in online learning is where there is a collection of tasks that are not simultaneous and often the learning is not in accordance with the study plan that has been created and prepared.

Furthermore, one other teacher said that the obstacles faced are sometimes unstable networks to support the online learning process, teachers feel important and there needs to be parental assistance to students in the use of computers or gadgets during online learning, the time required by students to be longer to do the tasks provided by the teacher, and each student needs to have adequate facilities for the implementation of online learning properly. Four of the teachers found it rather difficult to coordinate in preparing for online learning. It is certainly a concern where the learning materials must be prepared as best as possible in order to be accepted and conveyed well to students. In addition to preparing for prison, difficulties are also felt in coordinating when collecting his assigned tasks. Five teachers also said that through online learning, teachers and students get a refresher in the learning system and more follow and can apply technology development.

DISCUSSION

Five teachers also said that through online learning, teachers and students get a refresher in the learning system and more follow and can apply technology development. There are still teachers who find it difficult to make the most of technology and information in the online learning process. On the other hand, it is expected that with better mastery of information technology, it can facilitate the acceptance of knowledge delivered in the learning process.

There is a need for socialization or introduction of any media that can currently be used as a support for the teaching and learning process so that before being applied directly in the teaching and learning process, teachers already have the ability and good understanding in using information technology so that the obstacles that occur in preparing teaching materials, in delivering learning materials can be overcome properly.

So far, the five teachers interviewed feel that they have not been able to do the teaching and learning process optimally through online learning so they think that they feel more like

hands-on learning, which is face-to-face in the classroom with the students. This is because, teachers feel that learning can happen to the maximum while in the classroom and teachers can directly evaluate and help students who do not understand the materials taught. Therefore, it is important for teachers to develop pedagodik competencies, especially in the aspect of information technology for the success of the online teaching and learning process.

Basri (2013 : 201) said that learning is a change in behavior or appearance with a series of activities. Through this it can be understood that learning is a long process experienced by man throughout his life until man is gone, where this concept is known as lifelong learning. Actually learning does not know the age, time, anytime and anywhere where man can learn. The concept of lifelong learning is very much in line with the policies set by the government lately. Where in order to reduce the number of virus spread during the current pandemic period, the government makes social distancing and physical distancing policies so that the implementation of teaching and learning activities must be carried out from home.

As has been done by 5 respondents where teachers are currently doing online learning. In the process many things are considered and well prepared, including the ability of teachers to prepare and present learning materials. Online learning materials are materials that consider the theory of constructivism that makes students play an active role. This makes it difficult for teachers to create learning materials that can stimulate students in online learning. In online learning, pedagogic competence is urgently needed. In addition to making learning materials, of course teachers must be able to understand the information technology used. The average teacher finds it difficult to use new media in online learning. Another thing is that teachers also find it not easy when it comes to explaining the system of using media in online learning to students and parents. Therefore, there needs to be an improvement in the ability of teachers in applying various media in online learning. Competency development can be done through training or special training related to online learning media.

Based on interviews conducted, online learning conducted so far in the form of explanations through video, through zoom meetings, coordination of tasks through whatsapp. After conducting discussions through the learning media that has been provided, students will be given assignments and then collected and will be corrected by the teacher and will be given assessments and comments as a form of evaluation. Through the tasks given, the teacher can also know whether the learning is achieved or not.

Despite all the difficulties and obstacles faced in the online learning process, there are positive things that can be felt through online learning, one of which is able to make students more independent and not dependent on others. Online learning has the advantage of building (constructing) knowledge built by students. This is in accordance with what John Dewey said in Majid (2011:25) that students learn well if they can actively construct their own understanding of what is being learned.

Another advantage that can be felt by the existence of online learning is that students can learn or review teaching materials every time and anywhere, teaching materials can be stored on computers or other electronic devices, the onset of paperless culture, if students need additional information then students can access the internet, online learning results in the change of the role of students from passive to more active, and online learning is relatively more efficient to do.

CONCLUSION

Online learning is done now is good but still needed developments in order to achieve the learning objectives to the maximum. In addition to the preparation of technology and information, in terms of teachers who in this case are teachers, it is necessary to develop pedagogic competencies for teachers. Pedagogic competencies here include everything from preparing learning to learning can be well received by students. Of course, pedagogic competency also includes the science of how to use or utilize social media and or information technology to support online learning.

From the research conducted, it is known that 5 out of 5 teachers interviewed still prefer direct learning in the classroom. This shows that teachers and students are still not familiar with online learning, but with the pandemic situation as faced today, there needs to be adaptation and thinking patterns that online learning is the best solution that can be done in carrying out the current teaching and learning process.

Schools need to prepare internet networks and facilities that support online learning. In addition, teachers need to be given knowledge through training and training related to media used in online learning. The school also needs to consider the ability of the student whether the student is able to do online learning, considering that students also need preparation that is not cheap to be able to carry out online learning, for example having to prepare computers and mobile phones, then provide internet services in their respective places.

The disadvantage of online learning is that it has a tendency to ignore academic or social aspects and instead encourage business or commercial aspects. Then, online learning of the teaching and learning process that occurs tends towards training rather than education, and if the student does not have high learning motivation then the student will tend to fail in the learning process. Therefore, teachers need to look at various aspects for the creation of optimal online learning. Because the online learning system changes the role of teachers from conventional learning techniques, teachers are now required to master learning techniques using ICT (Information Communication Technology).

REFERENCES

Abdul Kadir & Terra CH. (2003). Pengenalan Teknologi Informasi. Yogyakarta: Andi Offset.

Abin Syamsuddin Makmun. (2000). Psikologi Kependidikan. Bandung: Remaja Rosdakarya.

A Tabrani Rusyan, dkk, Pendekatan dalam Proses Belajar Mengajar, (Bandung: Remaja Karya).

Budiman, M. A. (2012). Pemanfaatan Teknologi Informasi dan Komunikasi dalam Kelas Bahasa Inggris. *Semantik*, *2*(1).

B. Uno, H. . (2010). Teknologi Komunikasi dan Informasi Pembelajaran. Jakarta: Bumi Aksara.

Hariningsih, S. (2005). Teknologi Informasi. Yogyakarta: Graha Ilmu.

Hartanto, W. (2016). Penggunaan *E-Learning* sebagai MediaPembelajaran.*Jurnal Pendidikan Ekonomi*, *10*(1), 1–18.

Holmes, B., & Gardner, J. (2006). *E-learning: Concept and Practice.* London,UK: Sage Publication Ltd.

Jamun, Yohannes Maryono. 2016. "Desain Aplikasi Pembelajaran Peta NTT Berbasis Multimedia". Jurnal Pendidikan dan Kebudayaan Missio, Vol. 8, No. 1: 144– 150.

Moh. Uzer Usman. (2000). Menjadi Guru Profesional. Bandung: Remaja Rosdakarya.

Muhammad Surya. 2003. Teori-Teori Konseling. Bandung: Pustaka Bani Quraisy.

Muhibbin Syah. 1999. Psikologi Belajar.Jakarta: Logos Wacana Ilmu.

Mulyasa, E. (2006). Menjadi Guru Profesional Menciptakan Pembelajaran Kreatif dan\ Menyenangkan. Bandung : Remaja Rosdakarya.

Munir. 2008. Teknologi Informasi dan Komunikasi (TIK). Bandung : CV. Alfabeta.

Pranoto, Alvini.dkk. 2009. Sains dan Teknologi. Jakarta: PT Gramedia Pustaka Utama.

Rosenberg, Marc. J. (2001). E-*Learning :Strategies For Delivering Knowledge In The Digital Age*. USA : McGraw-Hill Companies.

Siswoyo, Dwi. 2008. Ilmu Pendidikan.Yogyakarta: UNY Press.Spencer, M. Lyle & Spencer, M. Signe.,1993. Competence at Work., Canada: John Wiley & Sons, Inc.

Suripto, Fatmasari R., dan Purwantiningsih. Penggunan Teknologi Informasi dan Komunikasi dan Dampaknya Dalam Dunia Pendidikan. Makalah disajikan dalam seminar *Citizen Journalism* dan Keterbukaan Informasi Publik untuk Semua, Jakarta, 16 April 2014.