
Teacher Pedagogical Competence in Using Technology for Teaching English at A State Vocational High School in Mataram

Amir Linda Tyas Hartatik^{1*}, Muhammad Amin¹, Kurniawan Apprianto¹

¹English Education Department, Faculty of Teacher Training and Education, University of Mataram, Indonesia

*Corresponding Author: tyas.bing18@gmail.com

Article History

Received : October 20th, 2022

Revised : November 17th, 2022

Accepted : November 22th, 2022

Abstract: In the current era of globalization, a teacher must have pedagogical competence in utilizing technology. The development of the use of technology in the world of education is currently non-negotiable because it has been integrated with the development of every activity of life, including in the world of education. This study aimed to know how the pedagogical competence in using technology in teaching English at a state vocational high school in Mataram. This type of research is a descriptive qualitative method. The subjects of this study were three English teachers at a state vocational high school in Mataram. Data were collected by observation, interview, and documentation. Then, the data analysis procedures in this study include data reduction, data display, and drawing conclusions. The results showed that the pedagogical competence of teachers in using technology as a learning medium in teaching English at a state vocational high school in Mataram was very good, the teachers can apply ICT-based learning media and are skilled in utilizing ICT facilities to develop the material into interesting learning media. So, that the learning process feels fun, creative, innovative, and gives a new spirit in doing the learning. Learning by utilizing technology as a learning medium is a solution for teachers and students in creating the expected classroom atmosphere.

Keywords: Pedagogical Competence, Teaching English, Technology

INTRODUCTION

In the digital era, Indonesia can pursue technological development. The field of education is also changing and developing, including education and the teaching of English (Ashrafi, 2021). Information and communication technology (ICT) is extensively used by our country and it affects our lives every day (Juliana & Muslem, 2017). ICT is defined as 'any technology used to support information gathering, processing, distribution, and use' (Beckinsale and Ram, 2006). The development of information and communication technology is advancing so fast, that it has even penetrated all sectors of people's lives.

Making the students aware of their potential and optimizing student learning activities become the responsibility of a teacher, by creating enjoyable teaching and learning activities. In the learning process, the teacher's main task is to teach, educate, and train students to achieve optimal cognitive, emotional, and psychomotor performance according to

competence. In order to be able to perform their duties properly, teachers must have the skills and abilities to plan, teach and evaluate their teaching.

The role of the teacher is one of the main components of the education sector which is a determining factor for the high and low quality of educational outcomes. According to No. 16 Ministry of Education Republic 2007 "Standards and Regulations on Teacher Competence", to be professional, teachers must have four competencies: pedagogical competence, personal competence, social competence, and professional competence.

Teacher competence based on Musfah (2011: 27) is a collection of knowledge, skills, and behaviors that a teacher or lecturer must possess, internalize, and control in the performance of professional duties. Basically, everyone who imparts knowledge to others can be called a teacher, but not all teachers can be called professional teachers. Teacher professionals are teachers who work in

accordance with professional boundaries, namely: based on certain skills education.

Teacher core competence, according to Permendiknas number 16 of 2007, includes “Teacher’s ability in using information technology and communication for maintenance interest educational development activities where is the qualification of the teacher in competence pedagogically”. Teachers need to have these competencies to make the learning process meet the learning goals.

Teachers are direct actors in their own professional development (Gonzalez et al. 2002). In general, teachers are a very important factor in formal education because they are often role models for students. Therefore, teachers must have good behavior and adequate competence to teach their students. Teachers need to master a variety of knowledge, especially personality, social, pedagogical, and professional competence, to perform their duties appropriately according to their profession (Rusilowati & Wahyudi, 2020). To support the process of optimal teaching and learning activities, teachers need teaching media (Qiao & Wang, 2011).

The role of media in the learning process is very important as it helps students to facilitate understanding of the material being taught. Technology and information science are used as media that support the learning process and make it easier for teachers to convey and provide understanding to students about the material being taught. Besides, this media can provide new experiences for students who are bored with conventional learning models carried out by teachers, in this case the monotonous lecturing method (Sudarsana et al., 2019).

Based on our observation of the school, we found that the school already has facilities such as computer labs, liquid crystal display (LCD) projectors, speakers, and an internet network. This school has already implemented teaching and learning using ICT, not only for delivery of lessons in the classroom but also in submissions of assign assignments administration of tests.

This research was conducted with the aim of knowing the pedagogical competence of teachers in using technology as a learning medium in the classroom and outside the classroom.

METHOD

This type of research is qualitative descriptive. Descriptive research is scientific research that describes an event or fact systematically dealing with a certain area or population. This research was conducted at a state Vocational High School 4 Mataram in July 2022. The participants of this study were three teachers who are representative English teachers teaching at a state vocational high school in Mataram. In collecting data on teachers’ pedagogical competence in using technology in teaching English, observation, interview, and documentation were conducted. Observations were done by identifying the learning technology used by teachers in teaching English in the classroom. The objects to be observed were the availability of facilities at the school and whether the teachers at the state vocational high school in Mataram utilize information and communication technology properly. Interviews were conducted to obtain data, real information, and pedagogical competencies in using learning technologies in the classroom. Documentation is ancillary data considered necessary to support data from the interviews and observations. The documents analyzed to support this research were lesson plans used by the participating teachers in teaching the lessons. This research uses analysis of Miles and Huberman’s data model which includes three stages namely data reduction, data display, and conclusion.

RESULT AND DISCUSSION

Research Result

The results of this study are based on analysis of data which we re collected through observation, interviews, and documentation studies of participants’ pedagogical competence in using technology in teaching English in the classroom.

In order to have accurate and valid results, researchers conducted direct observations to see how school activities were carried out. The following are the data of this study's observations:

Table 1. Observation Findings

Aspect of observation	T1		T2		T3		Findings
	Yes	No	Yes	No	Yes	No	
Teachers can master the characteristics of students from physical, moral, spiritual, social, cultural, emotional, and intellectual aspects.	√		√		√		Teachers are able to understand the characteristics of students
Teachers can take advantage of technology and communication for learning purposes.	√		√		√		Teachers can take advantage of ICT for learning purposes.
Teachers use technology as a media in the learning process	√		√		√		PowerPoint, YouTube and Google Classroom
Teachers operate the ICT tools provided by the school in the learning process.	√		√		√		Schools have provided facilities such as computer labs, internet networks and LCDs that can be used by teachers for classroom learning purposes.
Teachers create ICT-based learning media according to their abilities	√		√		√		Teachers use existing technology to create learning media according to their abilities
The teacher uses technology as a learning media that is in accordance with the learning material.	√		√		√		The ICT-based media displayed are in accordance with the lesson plan
Teachers use materials from the internet/ learning videos to help support learning materials	√		√		√		To be precise, almost all teachers use materials from the internet/ learning videos to help support learning materials
Teachers use PowerPoint software to help present learning materials	√		√		√		All teachers have often used PowerPoint software to help present learning materials
Teachers use e-books as teaching materials.		√		√		√	Teachers do not use e-books as teaching materials because schools provide textbooks as teaching materials for students
Teachers are able to operate the e-learning system for the learning process	√		√		√		All teachers have access to e-learning systems for learning, such as classrooms, since the time of the pandemic.

1) Pedagogical Competence

Teacher pedagogical competence is the ability of teachers to manage learning which includes understanding the insights or foundations of scientific education so that they have academic and intellectual expertise. Teachers must have the knowledge and experience to implement classroom learning. Teachers understand the psychology of child development, so they know the right way to treat their students. Teachers can guide children going through hard times at that age experienced by children. In addition, the teacher has knowledge and understanding of students' backgrounds, so that she/he can identify problems faced by students and look for solutions to the problems (Mulyasa, 2007).

Based on the Law of the Republic of Indonesia Number 14 In 2005, regarding teachers and lecturers, competence is the ability in knowledge, attitude, and skills that employees need to have in carrying out the role and duties of a professional educators.

Based on the results of teachers' observation at this school about the pedagogical competence of teachers in schools, teachers are already familiar with and are aware of pedagogical competence in their teaching.

2) Teacher Pedagogical Competence in The Use of Technology as Media

The trend toward the use of information and communication technology (ICT) in education is increasingly common. Several schools and universities have launched the development of ICT in learning for students as a guarantee of the quality of education. This requires teachers to be prepared to use ICT in their teaching. The e-learning mode of learning is alternative learning that can be applied in the current digital era. Learning using ICT-based media such as YouTube can make the learning environment more efficient, while other media such as Google Classroom can make it easier for teachers to create, share and group.

The process of teaching and learning activities has used a lot of technology such as laptops, computers, LCD projectors, and audiovisuals and is supported by the internet, and digital learning (e-learning), which can be accessed freely with students' computers or laptops. In maximizing the professionalism of educators and increasing the ability of teachers to use technology as a learning media material at

this school, the school provides facilities to support the ICT-based learning process, including the school providing computer laboratories, LCD, and projectors as well as Internet connection facilities.

Based on the results of observations, the researchers found that teachers used the facilities provided by the school such as computers, LCDs, and internet networks to support the learning process to present material through PowerPoint slides or showing videos to make the learning process interesting, perform assignments and quizzes through Google Classroom/WhatsApp Group and access information via the internet.

3) Benefits of Using Learning Technology as A Media

Technology plays a very important role in facilitating all the demands of the teaching process. In essence, educational technology includes efforts that can be useful for creating an effective and efficient learning process for each individual. Educational technology also provides benefits in supporting the success of learning. During the COVID-19 pandemic, the role of educational technology is very important in the learning process because it is an effort to break the chain of transmission of the Covid-19 virus (Mispah *et al.*, (2021). That way technology becomes the most important part of helping the online learning process.

Based on the results of an interview the researcher conducted with Teacher 1 (T1) about the benefits of using technology as a learning media, he said:

“Using technology as a learning medium in the classroom can be very useful, such as using an LCD to display material more clearly. The benefits can also be seen especially in online learning such as during the current pandemic, such as the ease of sharing materials and engaging in discussions with students through the Google Classroom platform. This indirectly makes teachers must be able to use technology”

4) Kinds of Technology Used in Teaching English

Using technology as a learning medium is one of the skills to support teachers in their role as teachers. Teachers are required to be able to create appropriate and diverse ICT-based learning media. According to observations,

teachers use existing facilities in schools to produce their media.

In general, the types of ICT-based media are composed of audio, visual, audio-visual, and multimedia media. Based on the findings of an interview the researchers conducted with Teacher 2 (T2) about the types of ICT-based media used, she said:

“I use all types well. Starting from audio, visual, audio-visual, and multimedia. Most often, it's audio-visual”

There are thousands of software widely circulated in today's society. Some software is very familiar to use, and some may be foreign software or even not known at all. Data from interviews with 3 teachers at this school, shows that there are three digital platforms/software that are often used WhatsApp group, Google Facilities (Google Classroom, Google Form, and Google meet), and Zoom Cloud Meetings. And when it comes to creating ICT-based learning media, one of the most well-known is Microsoft Office, such as PowerPoint.

Teaching materials are an important part of implementing distance learning and can be accessed outside of school hours. Based on the results of observations, it was found that the Google classroom platform was used as teaching material for students at home and sending material, sometimes through WhatsApp groups.

Based on the results of interviews with Teacher 1 (T1) regarding teaching materials that can be accessed by students outside school hours, he said that:

“I provide teaching materials that they can access, such as materials and videos to clarify the material that I upload in Google Classroom so that students can study anywhere and anytime, making it easier for students when they don't understand, they can repeat the lesson. I also post pictures in WhatsApp groups and explain them using voice notes”

Based on the overall results of observation and interview data analysis regardless of the obstacles experienced by the teacher, it can be seen that the teacher's pedagogical competence in utilizing technology as a learning medium at this school is quite good. This can be seen in how teachers use ICT facilities as a medium of learning, for example

from the use of computers, LCD projectors, and the integration media with the internet.

Discussion

In this digital age, there is a great need for technology, with the help of which all needs in various fields can be easily met. No exception in the field of education, with the inclusion of technology in education is expected to learn can facilitate the distribution of messages or information between teachers and students, so that pedagogic competence is needed for teachers with the use of ICT in media learning.

Based on these problems, then this journal research was conducted in order to answer existing problems. For that based on data analysis that has been carried out from various references can be described as follows: Results from research by Al-Munawwarah (2014), teachers' perceptions on the use of ICT in Indonesian EFL learning context. The approach used in research this is qualitative with descriptive type and it can be concluded that competence owned by the teacher in utilizing ICT-based learning media already good. There were three benefits of using ICT in English teaching and learning process; namely, helping the teachers to conduct interesting and enjoyable learning activities, promoting learner autonomy, and motivating the students to learn. The present study also reveals some challenges encountered by the teachers in using ICT in EFL classes and strategies to overcome the challenges. Overall, the teachers' perceptions towards the utilization of ICT in English teaching were positive.

The results of the research by Jatileni and Jatileni (2018) show that the most commonly used technological device is computer, because of its multi-functioning aspects. The study also found out that there were challenges such as lack of skills, ICT tools, cell phone usage stigma, just to mention a few. The study shows evidence that most teachers have the right attitudes and positive perceptions on the meaningful use of ICT in teaching and learning, therefore they must be encouraged in using ICT to embrace the Namibian education sector.

And the result of the research by Andhini (2018) investigated teachers' perceptions of using social media to improve pedagogical competence. The survey method was used in this study to determine the perceived value of social media for developing their pedagogical competence. This shows the advantages of using

social media as a medium in teaching and learning such as searching, evaluating, and collecting information from various sources, and content-specific tools. This study is faced with the existence of social media which plays an important role in everyday life, including in learning. This study seeks to determine the frequency of teachers' use of social media and to analyze teachers' perceptions of the use of social media in developing their pedagogical competence. This is related to the use of ICT in the teaching and learning process in this study.

In maximizing the learning process this school has facilities such as a computer lab room, LCD and projector as well as an internet network. To complete the documents in this study, the researchers collected lesson plans that show teachers using technology as a learning medium in the learning process according to the content of the lesson plans.

Based on the observations, the learning technology used by teachers in the classroom and outside the classroom varies. In classroom learning, teachers often use LCD projectors to display PowerPoint so that teachers can display materials, images, or videos to help students better understand the material. The process of teaching and learning activities has used a lot of technology such as laptops, computers, LCD projectors, and audiovisuals and supported by the internet, and digital learning (e-learning), which can be accessed freely with students' computers or laptops.

The teacher's pedagogic competence (T1) in using technology as a learning medium in the classroom and outside of school is very good, always uses PowerPoint to explain material in the form of text, images, and videos. Teachers (T1) also use technology outside of schools such as the Google Classroom application and WhatsApp to send assignments or quizzes.

In addition, the teacher (T2) is also good at using the existing technology in the school to learn, in addition to using PowerPoint, WhatsApp, and google classroom, (T2) also uses google forms for practice questions or tests. Likewise, teachers (T3) are quite good at using technology, because during this pandemic, teachers inevitably have to be able to use technology for learning and also so that students don't feel bored.

The most frequently teacher-used application is WhatsApp. This application is used to provide guidance to students. Problems that

may arise in the course of classroom learning can be resolved. Most teachers also use this WhatsApp app to send material and make students understand it better. Teachers also use other apps and websites are Zoom, Google Classroom, Google Forms, Google Meet, and E-learning, provided by their school.

All teachers are good at implementing the use of technology as a learning medium. In addition, teachers are required to be able to master technological developments that occur at the moment, especially during the ongoing COVID-19 pandemic. Teachers must use online learning media to make homework and other work easier.

CONCLUSION

Based on the findings and discussion above it can be concluded that, the pedagogical competence of teachers in using technology as a learning medium in teaching English in this school was very good, the teachers can apply ICT-based learning media and are skilled in utilizing ICT facilities to develop mthe aterial into interesting learning media. So, that the learning process feels fun, creative, innovative, and gives a new spirit to doing the learning. Learning by utilizing technology as a learning medium is a solution for teachers and students in creating the expected classroom atmosphere.

ACKNOWLEDGMENTS

Thank you to my supervisor who has taken the time, provided direction and support in completing the writing of this scientific paper and thanks also to all parties involved in the research implementation process.

REFERENCES

- Al-Munawwarah, S. F. (2014). *Teachers' perceptions on the use of ICT in Indonesian EFL learning context*. In *English Review: Journal of English Education (Vol. 3, Issue 1)*.
- Andhini, I. N (2018). *Teachers' Perceptions of Social Media in Developing Pedagogical Competence*. Final Project. English Department. Faculty Languages and Arts. Universitas Negeri Semarang.

- Asharafi, A. (2021). Educational technology and principles and methods of teaching English. In *Indonesia Journal of Educational Research and Review (Vol. 4, Issue 1)*
- Beckinsale, M. & Ram, M. (2006). 'Delivering ICT to ethnic minority businesses: an action-research approach'. *Environment and Planning C: Government and Policy (Vol. 24, Issue 6)*
- Departemen Pendidikan Nasional (2005). *Undang-Undang Republik Indonesia, Nomor 14 Tahun 2005 Tentang Guru dan Dosen*. Depdiknas RI : Jakarta.
- E.Mulyasa (2007). *Standar Kompetensi dan Sertifikasi Guru*. Bandung: PT. Remaja Rosdakarya
- González M, A., Montoya A, C., & Sierra O., N. (2002). *What do EFL Teachers Seek in Professional Development Programs? Voices from Teachers*. (Vol. 7, Issue 13).
- Jatileni, M., & Jatileni, C. N. (2018). *Teachers' perception on the use of ICT in teaching and learning: a case of Namibian primary education*. Thesis Philosophical Faculty University of Eastern Finland.
- Juliana, R., & Muslem, A. (2017). The Use of Information and Communication Technology (ICT) Amongst EFL Teachers: Perceptions and Challenges. (Vol. 8 No. 4)
- Miles, Mathew, B., & Huberman, A. M. (1994). *An Expanded Sourcebook: Qualitative Data Analysis*. London: Sage Publications
- Mispah, M., Echchabi, A., & Ayedh, A. M., (2021) *Higher Education in Light of Covid-19 Pandemic: The Role of Educational Technology*. *International Journal of Social Sciences and Educational Studies*
- Musfah, J. (2011) *Peningkatan Profesi Guru: Melalui Pelatihan dan Sumber Teori Belajar dan Pratik*. Jakarta: Kencana
- Qiao, A., & Wang, N. (2011). An investigation of teachers' needs on using ICT in teaching and learning. *International Conference on Computer Engineering and Application IPCSIT (Vol. 2)*
- Republik Indonesia (2007). *Permendiknas No.16 Tahun 2007 tentang Standar Kualifikasi Akademik dan Kompetensi Guru*. Jakarta: Sekretariat Negara
- Rusilowati, U., & Wahyudi, W. (2020). The Significance of Educator Certification in Developing Pedagogy, Personality, Social and Professional Competencies. (Vol. 403)
- Sudarsana, I. K., Nakayanti, A. R., Sapta, A., Haimah, S. E., Helda, T., & Mursalin, M. (2019). *Technology application in education and learning process*. *Journal of Physics: Conference Series*, 1363 (1)