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Effectiveness of Utilization of Learning Technology at SMKS Wahyu 1 Makassar

Nurfadillah Aswari[1], Risma Niswaty[2], Isgunandar[3*]
[1,2,3]Universitas Negeri Makassar
Email: isgunandar@unm.ac.id

ABSTRACT

Learning technology is defined as a combination of theory and practice to design, develop, and utilize technology to support teaching and learning activities. The rapid development of science and technology has enabled everyone to gain knowledge quickly and easily by utilizing technology by considering the advantages of various forms of learning technology, appropriate and optimal strategies can be developed to improve the quality and effectiveness and efficiency of learning. The purpose of this study was to determine the effectiveness of the use of learning technology at SMKS Wahyu 1 Makassar. This study is qualitative, therefore, to achieve the objectives of the study, data collection techniques were used, namely observation, interviews, and documentation. The results of this study indicate that the effectiveness of the use of learning technology at SMKS Wahyu 1 Makassar seen from the indicators, namely teacher professional competence, student involvement and evaluation and assessment went "well" seen from the indicator of teacher professional competence, namely training that began to be held for teachers at school and the ability of teachers is very good in utilizing technology by making learning more interesting so that students are motivated and feel involved when using technology in learning. From the indicator of student involvement, namely learning technology itself increases student involvement in the way teachers start and provide good feedback so that students can collaborate and interact with classmates which makes it easier for them to work together and communicate more effectively. From the evaluation and assessment indicators, namely technology helps personalize learning and assessment which makes it possible to adjust the material according to the needs of each student, involving students in the evaluation process of using learning technology with guidance provided by teachers in using learning technology for assessment or assignments which is clear enough and more efficient.

Keywords: Learning, Technology, Effectiveness

INTRODUCTION

The rapid development of science and technology has enabled everyone to gain knowledge quickly and easily by utilizing technology. In addition to rapid development, changes also occur rapidly, both positive and negative. Likewise, the development of learning technology is always accompanied by various problems. Therefore, human resources are needed who can obtain, manage, and utilize technology in order to survive or even adapt to conditions that are always changing, uncertain and competitive. Learning technology, namely development (research, design, production, assessment, support, use), components of the learning system (information, humans, materials, tools, models and backgrounds) and managing development efforts (groups and individuals) systematically aimed at solving learning problems (Annisa et al., 2025; Hasyim et al., 2024; Maulidya et al., 2024).

Various learning models that can increase student learning motivation by utilizing technology, considering that the learning model is relatively new, so that not many educators have implemented it, besides requiring relatively expensive infrastructure support. The

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learning model that utilizes this technology has a significant impact on changes in learning culture. In addition to developing the use of technology in effective education, it is necessary to pay attention to the right learning model in using technology to improve student learning outcomes. Learning technology is defined as a combination of theory and practice, aimed at designing, developing, and utilizing technology to support teaching and learning activities(Okafor, 2025; Saleh et al., 2024).

One of the factors contributing to the low quality of learning is the lack of optimal utilization of various learning resources by both teachers and students. The utilization of technology in learning is also supported by the existence of internet discovery, which is considered a world changer, including the world of education. The use of the internet for education represents a significant shift. (Jiménez-Bucarey, 2021; Poth, 2020; Tan, 2021)

Based on the results of the research, the use of tele-technology for teaching is known to have a positive impact. But all teachers use technology in their teaching and learning activities even though they have already understood that such a learning strategy greatly enhances or helps the level of mastery of the learning material.

Considering the advantages of various learning technologies, appropriate and optimal strategies can be developed to improve the quality of learning effectiveness and efficiency. Therefore, to effectively utilize the solution to educational problems and simultaneously enhance the quality of learning, technology needs to receive serious attention and professional handling.

METHOD

The research approach used in this study is a qualitative approach because the business is described through various methods of data collection, namely interviews, observations, and documentation. Qualitative research is a method used to study natural phenomena, where the researcher serves as the key instrument in data collection and analysis (Suprianto, 2024). Unlike quantitative research, which typically begins with a hypothesis and uses statistical methods to test it, qualitative research starts with data from the field, utilizes existing theories as supporting explanations, and often concludes by generating or refining theoretical understanding. This study adopts a descriptive research design. Descriptive research involves the collection of data to test hypotheses or answer questions concerning the status of the subject of the study. It is a factual research method that aims to describe accurately the characteristics of a particular group of people, an object, a condition, a system of thought, or current events. The focus of this research is useful for restricting the objects of the study that are raised so that it does not occur in the amount of data obtained later in the field. This study will focus on the effectiveness of the use of learning technology at SMKS Wahyu 1 Makassar.

RESULT AND DISCUSSION

The study conducted at SMKS Wahyu 1 Makassar employed the interview method as the primary data collection tool to gather information on the effectiveness of learning technology use at SMKS Wahyu 1 Makassar. The data presented through direct interviews with several teachers and students in this study. This study also used five informants who could help in providing valid and accurate information and conducting observations and documentation obtained in the field. With the presence of these five informants, it was ensured that the information obtained could be trusted to provide accurate answers to the questions asked during the interview

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Teachers' Professional Competencies

Teachers' professional competence on the abilities and expertise that teachers have in carrying out their duties effectively and efficiently. The competence and qualifications of teachers are regulated in the Law of the Republic of Indonesia number 14 of 2004 article 8. The professional competence of teachers is essential to ensure a high quality of education. Teachers who have this competency will be able to create a learning environment that supports the academic and personal development of students, helping them reach their maximum potential. This competency includes various aspects, such as in-depth knowledge of the subjects taught, pedagogical skills, and the ability to develop oneself through advanced learning experience. The importance of teachers' roles in education and development requires them to possess qualifications and competencies in teaching.

Based on interviews with key informants, teachers' professional competence in educational technology is vital for fostering a learning environment that supports student development. By engaging in ongoing training, adapting to emerging technologies, and cultivating strong relationships with learners, teachers can enhance the quality of their instruction and create a positive, interactive classroom experience. Such technological proficiency not only streamlines the delivery of content but also enables students to grasp subject matter more effectively, ultimately promoting deeper understanding and engagement.

A professional teacher is a teacher who has the competencies required to carry out educational and teaching tasks, both personal, social and academic. "Teacher competency is a series of mastery of abilities that must exist in oneself to be able to realize their performance in a true and elf way. The competence of the teacher encompasses intellectual competence, physical competence, personal competence and social competence. (Falloon, 2020; Safihu et al., 2022). Competence is a foothold to know the qualifications of a teacher. Where professional teachers are not only for one component, namely the professional component but the professional teacher is not only covered by the entire component, as for the performance of the 4 teacher competencies, namely: Competence is a foothold to know the qualifications of a teacher

1. Pedagogical Competence, the ability or skill of teachers to manage the learning process or learning-teaching interaction with students. There are aspects of pedagogical competence that teachers need to master, namely understanding student characteristics, mastering theories and principles of learning, being able to develop the curriculum, being able to assist, being able to communicate well and effectively, being able to conduct assessments and evaluations to measure the learning process and outcomes.
2. Personality Competence, related to the character of teachers, which must be possessed to become role models for students. In addition, teachers must also be able to educate their students to help them have good personalities. By having this basic teacher competency, teachers can create an inclusive classroom environment and support the learning material.
3. Professional Competency, the ability or skill that teachers must have so that teaching tasks can be completed well and correctly. This basic teacher competency is related to performance, especially technical skills. The competency of professional teachers is being able to master the subject matter being taught, having good mastery of the subject matter competency standards (SK), having the ability to develop subject matter creatively, being able and willing to act reflectively, being able and willing to utilize information and communication technology in the learning process.

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4. Social Competence, the ability of teachers to communicate effectively with students, educational staff, parents/guardians, students, and the surrounding community. Social competence is an inclusive, objective and non-discriminatory attitude towards students, effective communication, and the ability to adapt.

The results of the research conducted show that the professional competence of teachers in teaching in class has begun to be effective, with the creativity of teachers in teaching who are able to provide good understanding and deliver forms of material in the use of learning technology very clearly and easily understood and accepted by students in class. Students use or utilize learning technology well not only during learning hours but also outside of learning hours.

Based on the teacher's explanation of delivering learning materials through learning technology, the effectiveness of utilizing learning technology can facilitate students' learning. The professional competence of teachers greatly determines the success of achieving the objectives of effective learning technology use.

Student Engagement

Student engagement in school is the quality and quantity of students' psychological conditions, such as cognitive, emotional, and behavioral relaxation towards the learning process, as well as academic and social activities in class and outside class to achieve good learning outcomes. Student engagement in learning is an important role because they are the generation of the nation who must be educated, fostered, guided, and channeled into interests and talents that are by their respective fields so that the generation of the nation becomes better and better than the generation of the next generation.".

From the results of interviews with informants, it is evident that student involvement in the effectiveness of utilizing learning technology enhances the learning process by making it more interactive and engaging. Students who actively use digital tools tend to be more motivated and involved, allowing them to access materials flexibly, collaborate better and receive quick feedback. Technology used effectively can enhance students' understanding and support academic achievement. The use of learning technology increases student involvement by making the learning process more attractive. Students who actively use technology in their learning are more motivated; however, challenges such as acceleration and technical problems need to be overcome to maximize the effectiveness of technology in learning.

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Based on the results of the study that students as learners in the learning process at SMKS Wahyu 1 Makassar, explain what kind of learning and how their involvement in learning and receiving learning materials, through learning technology in class, with the provision of direction by teachers and good guidance and active in following the learning process. The effectiveness of learning technology use at SMKS Wahyu 1 Makassar has been running smoothly, as the school utilizes existing technology to facilitate learning.

Student involvement in learning so that the implementation of the effectiveness of technology utilization can run effectively and efficiently. Although the teacher's teaching method with good and clear competence, but if student involvement is lacking in the utilization of learning technology, then the learning process will not run effectively. Student

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involvement is very important in the effectiveness of technology utilization so that it runs effectively.

Evaluation and Assessment

The evaluation and assessment of the effectiveness of learning technology is a critical process that involves examining both the functionality of the technology and its contribution to enhancing the learning experience. This evaluation considers the role of technology in supporting student engagement, improving teaching effectiveness, and influencing learning outcomes. Additionally, self-assessment plays an important role in measuring the results and overall effectiveness of technology use, including the accuracy of assessments, the quality of feedback provided, and the achievement of intended learning objectives. The goal of this process is to ensure that educational technology is implemented in a meaningful, efficient, and productive manner, thereby maximizing its benefits within the educational context.

From the results of interviews with informants, the evaluation and assessment of the effectiveness of learning technology show that it can increase the accuracy and efficiency of assessment. The use of digital tools facilitates data collection, facilitates mobile feedback, and enables more personalized assessments. However, it is important to ensure that technology is used effectively and well-integrated in the assessment process to provide optimal and fair results

Evaluation and assessment are two components of teaching that are often used to measure student progress and performance (Daumiller, 2023; Glas et al., 2006; Gronlunds, 1985)), Evaluation is one of the descriptions of the success of the teaching process carried out by the educator. Evaluation is a process of assessing student growth in the teaching and learning process. (Glas et al., 2006; Moreno et al., 2022; Wood & Wood, 2005) Evaluation is crucial for teachers to assess the progress of the learning curve and measure the effectiveness of the math concepts taught in the classroom.

Assessment is a systematic process for collecting, analyzing, and interpreting information about students' progress and achievements. (Gronlunds, 1985; Saputra & Sahona, 2023) revealed that "assessment is the application of various methods and the use of various assessment tools to obtain information on the extent of students' learning outcomes or the achievement of students' competencies". The purpose of the assessment is to measure the quality of the students, the quality of the learning, identify strengths and weaknesses in the learning process, and evaluate the quality of feedback for further improvement and development. The assessment is not limited to the characteristics of the teaching model, curriculum, facilities, and school administration.

Based on the study's findings, teachers can evaluate and assess their students' level of success by examining the effectiveness of technology integration in the learning process. This approach enables educators to identify specific areas where students may require additional support, thereby helping to ensure that each learner receives the necessary assistance to achieve academic success.

CONCLUSION

Based on the results of the research and discussion, it can be concluded that the effectiveness of the use of learning technology at SMKS Wahyu 1 Makassar is running "effectively". This is shown in the indicators, namely teacher professional competence, namely mastery of technological tools and platforms, the ability to design integrated learning with technology, and the ability to evaluate and manage digital classes. With this competence, teachers can create a more flexible, effective, and attractive learning environment, which ultimately improves student learning outcomes. In addition, teachers also need to continue to

develop themselves so that they are always ready to face changes in technology and utilize it optimally in the learning process. The effectiveness of learning technology at SMKS Wahyu 1 Makassar can be observed through two main indicators: student involvement and evaluation and assessment. Student involvement is reflected in the active participation of learners in utilizing educational technology, which contributes to improved learning outcomes. Meanwhile, the evaluation and assessment indicators highlight how teachers measure the effectiveness of the learning process in a more structured and responsive manner. Evaluation focuses on the overall assessment of the learning process and its effectiveness, while assessment measures student achievement, supported by in-depth data analysis and real-time feedback. Together, these practices enhance the learning experience and contribute to better academic performance.

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