

## UTILIZATION OF INTERACTIVE LEARNING MEDIA USING TECHNOLOGY IN FACING CHALLENGES TO INCREASE STUDENT CAPTURE

Astri Sabila<sup>1\*</sup>, Fazrotun Maghfuroh<sup>2</sup>

\*<sup>1, 2</sup>Universitas Muhammadiyah Sumatera Utara

<sup>\*1</sup>email: [sabilaastri@gmail.com](mailto:sabilaastri@gmail.com)

<sup>2</sup>email: [fajrotunmaghfuroh@gmail.com](mailto:fajrotunmaghfuroh@gmail.com)

**Abstract:** The development of information and communication technology (ICT) has had a significant impact on various aspects of life, including the world of education. This technology allows easier access to information and allows teachers to design more interesting and enjoyable learning. However, even though many technology-based learning media have been developed, the level of utilization among educators and students is still relatively low. This research aims to understand the obstacles faced by educators in integrating technology in learning, including limited knowledge and skills in using technological tools. This research also examines the impact of low use of technological media on students' understanding, learning motivation and learning outcomes. Using a literature review method, this research analyzes various sources that discuss technology-based learning media and the literacy skills needed to optimize their use. It is hoped that the research results will provide insight into the challenges and solutions for increasing the use of technology in learning, as well as its impact on students' comprehension and motivation. The use of technology-based media can increase students' interest and motivation in learning, which in turn will affect students' ability to grasp the material being taught. Although challenges related to infrastructure and skills still exist, the proper implementation of digital media in learning can accelerate student understanding and engagement, and support the achievement of more effective and enjoyable learning goals.

**Keywords:** Technology-Based Interactive Learning Media, Challenges and Implementation, Student Catchiness.

### Introduction

In the era of development of information and communication technology, ever-changing progress is clearly visible through computers and electronic devices that facilitate communication between individuals at various levels, both generally and specifically. According to w. Acep et al. (2024) Easy access to information now relies heavily on this technology. The development of information and communication technology plays a large important role in life, including in the field of education. Technology allows educators to design interesting learning activities so that students do not feel bored. Learning plays an important role in supporting intellectual growth and individual character formation through two-way interaction between educators and students. According to Jones (in Majid, 2005), learning is a way of providing learning experiences. One effort to create a pleasant experience is to utilize learning media. Based on Minister of Education and Culture Regulation Number 22 of 2016, learning media is a tool to convey material to make the learning process more interesting (Acep et al., 2024). Even though various technology-based learning media have been developed, the level of utilization among education and students is still relatively low. Even though many educational

staff have started to integrate technology in the learning process, there are still various challenges in its implementation. Several factors that cause low use of technology are: Access to adequate technological devices, training for educators, and support from parents are important factors that must be considered. This research aims to understand the obstacles faced by educators in integrating technology in the process of teaching and learning activities, including limited knowledge and skills in using technological tools. (Maria et al., 2016) The impact of the low use of technology-based learning media on students' comprehension ability. This research focuses on how the lack of use of technological media can affect students' understanding and learning motivation, as well as overall learning outcomes.

### **Research methods**

This research uses a literature review method. Literary research methods include various activities, such as collecting library data, synthesizing information, reading, taking notes, and processing documents resulting from experimental research. This approach involves reviewing various literature sources, such as journals, books, scientific articles, and other relevant sources. In this research, the author applies qualitative research methods with a library approach. Data sources used include books, magazines and articles that discuss technology-based learning media and literacy

### **Results and Discussion**

#### **Results**

Based on the results of journal articles collected and analyzed, the author finds that the factors causing the low use of technology-based learning media are limited facilities and infrastructure, as in previous journals, which proves that the results of observations and interviews in the field show that the availability of Information and Communication Technology (ICT)-based media in cluster VI still inadequate and not commensurate with the number of existing students. As a result, students must take turns using this media. Apart from that, some of the available media can no longer be used due to damage, and the high cost of repair is the main reason why the media has not been repaired. (Nezha, 2014).

Limited Information and Communication Technology (ICT) facilities in schools are the main factor in the low use of digital media. Based on observations, almost all schools have very minimal facilities. This condition influences the low use of digital media in the learning process. This is normal, considering that digital media-based learning requires supporting hardware such as LCDs, projectors, laptops, and so on, which must be available first. (Lukman, 2023). Apart from limited facilities and infrastructure, educators' skills are also the main challenge in using technological media in the learning process. Many educators lack sufficient knowledge and ability to integrate technology into the teaching and learning process. Most educators still feel unfamiliar with

Technology and prefer traditional learning methods. This situation is exacerbated by the lack of training or workshops that specifically discuss the use of technological media, especially at the elementary school level. Even in urban areas that have access to more modern technology, educators often face difficulties in designing digital-based learning that suits students' needs. Therefore, consistent and ongoing training is needed to support educators in optimizing the use of digital media. (Diniyati, 2025). Facilities have a major role in supporting the process of teaching and learning activities in schools. As facilities and infrastructure, facilities simplify and expedite various activities, including learning. In the world of education, especially in schools, the existence of technology-based facilities greatly influences the smooth running of learning activities. For example, using WiFi at school can help students more easily understand what

educators are saying, especially if educators make optimal use of internet access. Based on previous research in the journal *Analysis of Educators' Difficulties in Applying Technology for Learning Process Activities at SD Negeri 08 Bilah Hilir Labuhan Batu* on seven indicators of school facilities that support technology-based learning, the results show that these facilities are in the adequate category with a percentage of 40.17%. However, existing facilities are still able to support technology-based learning. To overcome these limitations, educators and school principals need to work together to improve school facilities, such as introducing learning support technology and ensuring students can make good use of the available facilities. (Citra, 2023)

The use of media or tools in learning has been recognized by many educational practitioners as an effective effort to support learning activities, both inside and outside the classroom, especially in improving student achievement. However, in reality, not many educators make good use of it. On the other hand, the monotonous lecture method causes a decrease in students' learning motivation and has an impact on students' comprehension ability, which is still a fairly common approach used by most educators in the process of teaching and learning activities. (Sihombing, et al. 2023). Decreased learning motivation in students can be caused by various factors. The use of monotonous learning methods can cause boredom and boredom, as well as reduce students' interest in learning, which has a negative impact on their academic performance. Apart from that, difficulties in understanding material without interactive media can hinder the learning process, because students are not actively involved. Lastly, lack of access to varied and interesting learning resources also plays a role in low motivation and student achievement, because they do not receive enough stimulation in the learning process.

## Discussion

### 1. Use of Technology-Based Learning Media

According to the *New Oxford American Dictionary*, the word "media" comes from the Latin "medius" meaning "between." Although the topic of media is frequently used in educational settings, it is estimated that only a few definitions of media remain since the Second World War (Paul Seattler, 2004: 456). According to the *Big Indonesian Dictionary (KBBI)*, the term "media" is defined as a means, intermediary, or liaison (Pito, 2018). According to Asyhar (2020), media is defined as anything that can channel or convey messages from a source in a planned manner so that students can carry out the process efficiently and effectively. According to Briggs, media, as stated by Arif S. Sadiman in his book *Media Education* (2014), are physical objects that can be used to convey messages and motivate students to learn. The word media can also be interpreted as an introduction or intermediary. Learning media has an important role in improving the quality of education. As a visual, audio and audio-visual supporting tool, media helps clarify abstract concepts and increase students' motivation to learn.

With media, learning material becomes more fun and easier for students to understand. At the learning stage, the media functions to convey messages and information effectively and optimally. Media also supports various learning styles of students, so that the process of teaching and learning activities becomes more meaningful. Educators act as facilitators who help students explore ideas and develop critical thinking skills. Students' active involvement in learning encourages them to achieve more meaningful goals. Therefore, learning media must be designed carefully. Technology-based learning media is not just a tool, but the main force in change and transformation of modern education (Melati et al., 2023). This phenomenon brings about sustainable change and opens the door to a more interactive and technology-oriented learning experience. According to I Wayan Santyasa (2007: 4) in (E. Mulyosari et al, 2023) adds that technology has the ability to record, store and display objects or events in a clearer and more

interesting way. These objects or events can be visualized through images, photos, recordings or videos, which are then saved and displayed again as needed. Phenomena that take a long time, such as days or millions of years, can be presented through learning media in just 2-3 minutes without reducing the main essence. This of course really supports the effectiveness of the learning process. From various experts' definitions of media, the author can conclude that in many schools that do not have adequate technological facilities, the use of technological media is very important.

## 2. Implementation and Challenges

Various studies show that the use of media has an important role in supporting the learning process. According to Andari (2020), to develop new things and critical understanding, students need to be encouraged to create new ideas, evaluate and analyze the material being taught, and be able to apply what they have learned. This can be achieved through active involvement of students in online interactive activities. Apart from that, learning media also provides variations in the learning process, such as simulations, videos, interactive quizzes and educational games. Examples of applications that can be used include the use of Quizizz media to make students enthusiastic about taking quizzes which are presented in the form of games. Students try to achieve the highest score, and this media makes it easier for them to understand the questions, both in the form of images and videos. Apart from that, Quizizz is also able to motivate students during the learning process, which ultimately has a positive impact on their high learning outcomes.

According to Sari et al (2024) in Sucipto (2024) On the other hand, they also identify various opportunities from digital-based learning, such as wider access to learning resources, better efficiency in administration, more interactive learning, professional development for educators, increased communication, improving learning methods, and making decisions related to data-based learning. Challenges in implementing digital-based learning media, such as limited infrastructure and lack of educator skills. Hereby recommends between educators and technology developers, intensive training for educators, as well as the provision of adequate facilities and infrastructure. Learning by utilizing technology-based learning media can increase students' interest in learning and become highly motivating for students. If this interest and motivation continues to develop, this will have a big influence on the speed of students' comprehension. So that it can overcome the low ability of students to grasp learning activities. However, the success of implementing this media is very dependent on the competence of educators as facilitators. Considering that not all educators have adequate technological skills, training and assistance is needed so that interactive media can be used optimally. Media that is structured in a structured manner is able to help students understand concepts and apply them in everyday life (Yanto, 2019) in (Wahyuni et al. 2022)

## 3. Positive Impact

Various studies have proven the importance of technology-based media in learning. Rizki Nurhabibi's research (2020) shows that the use of technological media such as Pawtoon makes the learning atmosphere more interesting and enjoyable. Dimas Yusuf Afrizal (2020) found that Instagram-based media can be an interesting learning tool for students. Novita (2022) reports that the use of technology such as Canva, Google Slides, and PowerPoint in learning Arabic at Al-Fatah Elementary School increases students' motivation to learn because it is interactive. Fitri Handayani et al. (2022) revealed that information technology (ICT)-based media encourages student creativity, activity, interest and learning outcomes. Kuncahyono's (2017) research states

that technological media makes it easier to deliver material effectively. Heryani et al. (2022) found that the use of technology in learning increases students' digital literacy. According to Lestari (2018). Educators play an important role in choosing the right media for successful learning. Hanannika & Sukartono (2022) show that ICT has a positive impact on learning, while Hadi (2017) emphasizes that the use of technology helps solve educational problems wisely. According to Shuai Liu et al (2022), social media increases collaborative learning, and according to Zhongzheng Zhao et al (2022) found that the use of Telegram supports students' motivation to learn. Nasser Alalwan (2022) states that social media improves learning outcomes through students' creative involvement. Doni Septumarsa Ibrahim et al (2014) and R. Supardi et al (2023) highlight the positive impact of e-learning on student learning motivation. Research by Hasan Mahmud Halidi et al. (2015) proves that ICT in science learning in grade 5 elementary schools increases student motivation. Research by Mulyosari et al. (2023) emphasized that technology-based media influences motivation for continuous learning. And as many as 80% of educators strongly agree to use interactive digital teaching materials that are easy to access from anywhere and at any time.

#### 4. Student Capability or Ability

According to Rohani, in choosing and using learning media, it is very important to pay attention to the criteria and objectives, namely that they must support the educational objectives that have been previously determined. That's what it means. (Siwi, Fine and Nicki Dwi Puspaningtyas, 2020). According to the Big Indonesian Dictionary, the word understanding means "the ability to absorb". "It is an ability or action, and the word 'understanding' means the ability to comprehend what is received or perceived by the senses. Students can access technology easily and can use it repeatedly according to their learning needs. Therefore, technology helps students to develop independence, self-confidence, and responsibility for their own learning process. Interesting learning makes students more enjoyable and easier to absorb knowledge. This is evident from students' responses during the learning process. Student response is a social response carried out by students as a response to the influence and stimulation of other people's situations. The reaction itself has meaning as a positive and negative reaction to what is presented or shown, and reflexes can be carried out.

#### Conclusion

The low use of technology-based learning media can be caused by several main factors. One of them is the limited facilities and infrastructure in schools, where Information and Communication Technology (ICT) facilities are still very minimal, in some areas the existing equipment is even damaged and requires high repair costs. This causes the use of digital media to be carried out alternately and limited. Apart from that, educators' skills in utilizing technology are also a significant challenge. Many educators do not have sufficient skills or knowledge to integrate digital media in the learning process, as well as the lack of special training or workshops at the elementary school level, causing them to prefer traditional methods which are less effective.

To overcome this problem, improving facilities and training for educators is an important step. Educators and school principals need to work together in introducing learning support technology and ensuring that this media can be utilized properly by students. The use of technology-based media can increase students' interest and motivation to learn, which in turn will influence students' comprehension of the material being taught. Even though challenges related to facilities, infrastructure and skills still exist, the appropriate implementation of digital media in learning can accelerate students' understanding and engagement, as well as support the achievement of learning goals in a more effective and enjoyable manner.

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