DEVELOPMENT OF INFORMATION TECHNOLOGY-BASED LEARNING MEDIA FOR EDUCATORS IN ELEMENTARY SCHOOLS

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Abstract

This research aims to determine whether instructional media can be used to share learning messages and data. Students will better understand and understand the material in a well-designed learning environment. The learning environment is also increasingly advanced in the information and globalization era. Learning to use information technology (IT) is a must. Media functions in the learning process as a teaching tool and as a source of information and news. Each learning environment has advantages and disadvantages. Therefore, the use of the learning environment must be adequately planned. The learning environment is growing in the current information and globalization era. There is an argument that using information technology (IT) as a learning method is necessary.

Keywords: Development of learning media, information technology, educators

Abstrak

Tujuan penelitian ini adalah untuk menentukan apakah media pembelajaran dapat digunakan untuk berbagi pesan dan data pembelajaran. Siswa akan lebih mampu memahami dan memahami materi dalam lingkungan belajar yang dirancang dengan baik. Di era informasi dan globalisasi, lingkungan belajar juga semakin maju. Pembelajaran menggunakan teknologi informasi (TI) sudah menjadi keharusan. Media berfungsi dalam proses pembelajaran, bukan hanya sebagai alat pengajaran, tetapi juga sebagai sumber informasi dan berita. Setiap lingkungan belajar memiliki keunggulan dan kelemahan. Oleh karena itu, penggunaan lingkungan belajar harus direncanakan dengan baik. Di era informasi dan globalisasi saat ini, lingkungan belajar semakin berkembang. Ada argumen bahwa penggunaan teknologi informasi (TI) sebagai metode pembelajaran sudah menjadi keharusan.

Kata kunci: pengembangan media pembelajaran, teknologi informasi, pendidik

INTRODUCTION

People in charge of influencing pupils to develop characteristics and behaviours consistent with educational principles engage in a purposeful and methodical endeavour called education (Achmad, 2004; Astuti, 2016; (Martias, Suriyanto, &; Triartanto, 2019). As a result, it is believed that education would be really focused on helping kids grow up and become independent (Muhson, 2010; Yusrizal, Safiah, &; Nurhaidah, 2017).

The name "media" is derived from the Latin word "medium," which meaning intermediate or introduction, according to the Ministry of Education (Azhari, 2015; Ramli AR, 2019). Everything that may transfer information between information sources and information receivers is the broad definition (Oktaviani, 2019). The process of teaching and learning involves communication as well, hence the media utilised for learning are referred to as learning media (Sapriyah, 2019). Learning resources, which include software (learning materials) and hardware (learning tools), also include learning media (Suwarsito, Sutomo, & Fauziah, 2011).

As the field of education moves towards professionalism, the government is allocating a sizable portion of its budget to it, one of which is implemented as an Educator Professional Allowance (TPP) for teachers in an effort to encourage them to become more productive and professional (Yogi Yunefri, Sutejo, & Yogi Ersan Fadrial, 2022). Not only must teachers accomplish their responsibilities as educators seven days a week, but they must also work harder and improve the efficiency of their learning habits (Salamah, Kusumanto, &; Lindawati, 2020).

Advances in information technology are opportunities teachers can use to improve their learning patterns (Hartono et al., 2022). The number of available software can be used to develop more interactive learning media and attract students' learning interest (Desmira, Permata, &; Denny, 2021). The available internet facilities are also an excellent opportunity to be able to enrich the content of material that can be prepared to be delivered to students (Riskiawan, Sarwo Setyohadi, &; Arifianto, 2016)

Technology and scientific advancements have a significant impact on many aspects of human existence (Ngafifi, 2014). On the one hand, education, as a necessary component of human growth, makes a vital contribution to the advancement of science and technology. However, in order for education to successfully and efficiently accomplish its objectives, it must also benefit from advancements in science and technology (Muhson, 2010).

Today, practically all human activities are governed by the application of science and technology (IPTEK) due to the fast advancement of science and technology (Indriyani, 2019). In light of the advancement of science and technology, efforts must be made to make it simpler to understand these fields (Wiyono, Setiawan, &; Paulus, 2012). An encouraging element for the growth of smartphone users is the smartphone industry's degree of development, which is increasing higher and comparatively less expensive. The

number of smartphone users in Indonesia is also rising (Irnin Agustina Dwi Astuti, Dasmo, & Sumarni, 2018).

The teaching resources used in schools and other educational institutions have changed as a result of advances in science and technology. As information technology has advanced, learning in schools has started to adapt, leading to shifts in educational paradigms (Sanaky, 2013). This suggests that in this age of globalisation, the employment of information technology in the classroom learning process has become both necessary and desirable.

Information and communication technology (ICT), often known as the fast growth of ICT, has permeated many spheres of life, including teaching and education. This is evidenced by the availability of various learning media based on the view of knowledge construction. In its development, media can be combined with other media called multimedia. In general, multimedia uses several media to present information, combining text, graphics, animation, images, video, and sound (Ivers et al., 2009). Multimedia-based learning with the help of computer devices in the form of two-dimensional and three-dimensional images, interactive text displays, animation effects (moving images), exciting color combinations, and sound aids (audio) that help students understand the material more easily (Afrida, Harizon, Bakar, &; Sanova, 2018).

Teaching techniques and learning media are two crucial components of education (Jagat, Djamilah, Hasanah, Alfiyanto, & Hidayati, 2022; Agustina et al., 2023). These two facets are linked to one another. The best kind of learning material will depend on the teaching strategy you choose. The learning context, which includes student characteristics, as well as the teaching goals, tasks, and answers that students hope to master following instruction, must also be taken into account while picking media (Abdullah, 2017). However, one of the key roles of teaching media may be considered to be as a teaching tool that also influences the atmosphere, circumstances, and learning environment that are set up and made by teachers for students and can be utilised by the general public (Sapriyah, 2019).

The efficacy of the learning process and the transmission of messages and lesson material at this time will be greatly enhanced by the use of teaching media during the teaching orientation stage. Teaching media may boost student motivation and interest as well as knowledge, convey information in an engaging and trustworthy way, assist data analysis, and compress material (Suryani, 2015)

In the age of information technology, visualisation took the form of animated moving pictures that could be combined with audio. Visualisation is made more fascinating by audiovisual presentation, or more often known as multimedia. Computers having multimedia capabilities, in this context known as ICT, are able to display non-linear, multidimensional, and non-sequential text with interactive linkages and vertices. Because educated and capable human resources are required to meet the demands of the modern

world and its technological advancements, education plays a key role in the renewal and development of a complete society (Dewantik, Mukminin, & Waluyo, 2010).

Children between the ages of 7 and 13 are educated at primary schools. Appropriate teaching and learning strategies are required to create success in teaching and learning activities as education at the elementary level is developed by educational units, regional potential/regional characteristics, and socio-cultural aspects of the community in the region. To be able to achieve goals and success in the teaching and learning process, need to pay attention to several components, including teaching objectives, teachers, students, learning materials, learn (Minardi &; Akbar, 2020)

The usage of information technology (IT)-based learning resources is now required and desired in this age of globalisation and information. However, its application is challenging (Setiawan et al., 2023). You must be mindful of a number of approaches while utilising these media in order to make the most use of them and stay true to their intended function.

The learning process, which comprises instructors, students, and interdependent learning environments, is integral to the field of education. One of the variables that helps students meet their learning goals is media (Irnin Agustina Dwi Astuti &; Bhakti, 2018). This has to do with incorporating suitable and diverse media into the learning process, which may boost learning motivation and lower passive attitudes among students.

The creation of diverse inventive and unique learning models is required to increase learning's efficacy and efficiency. This is necessary to prevent the learning process from coming across as uninteresting, repetitive, and dull in order to prevent the transfer of information. Because it will make learning more diverse and enjoyable, the function of media in the educational process is crucial (Muhson, 2010).

According to Eyler and Giles' study, instructors' use of media affects how well students learn (Widharyanto, 2003). They discovered that the learning that results in the greatest degree of abstraction is the learning that solely uses verbal symbols via text presentation, which is represented by the learning model at the tip of the cone. Learning that is intimately engaged in meaningful learning experiences at the bottom of the learning cone is the most effective learning. This learning model's thin degree of abstraction makes it simpler for pupils to assimilate new information and abilities. Based on the description provided above, the goal of this research is to enhance the use of information technology (IT) learning resources to assist educators' teaching and student learning processes (Nurrita, 2018).

METHOD

The target of mentoring activities is to develop learning media to improve teacher competence in elementary schools. This activity was carried out at SDN with a total of 30 people. The instructors and resource persons in this activity are lecturers of Qamarul Huda University who have experience in making learning media. For problem-solving identified and formulated above so that assistance can run smoothly, an alternative to

problem-solving is as follows: assistance is carried out with an individual and classical approach. The classical approach is carried out when providing theory on developing correct learning media. The individual approach is made by making learning media that meet certification standards. The methods used are lectures, demonstrations, and training methods.

RESULTS AND DISCUSSION
Development of Information Technology (IT) Based Learning Media
The use of information technology (IT)-based learning media has become necessary and desirable in this age of globalisation and information, but its implementation is challenging. You must be mindful of a number of approaches while utilising these media in order to make the most use of them and stay true to their intended function.

Activities for community service that included in-person meetings and developed learning media practises surpassed expectations. Face-to-face sessions using lecture and demonstration techniques are followed by exercises or practises using learning media, commencing with the selection of the subject, its preparation, and the use of information technology tools. On Saturday, April 29, 2023, the activity procedure lasts all day with 30 pupils.

In general, learning media development objectives are being met, however because to the time constraints, not all of the information on the topic can be covered properly. However, it may be inferred from the outcomes of the participants' training, namely the calibre of the learning materials that have been created, that the activity's objectives can be met.

Because of the short meeting time, not all of the information could be presented in full. Exercises followed the opening lectures and demonstrations in the activity. The question and answer period continued as it became clear through the training exercises that instructors lack the skills necessary to create effective learning materials, particularly computer-based learning materials. During the question-and-answer period, the attendees excitedly asked a variety of questions. The participants' questions mainly focused on how to quickly create computer-based learning materials, the criteria for creating effective learning materials, how to change layouts, add sound effects and animations, use fonts and backgrounds, create tables in slides, and configure computer-based learning materials for student viewing.

According to Arief S. Sadiman et al., media can be divided into two categories based on their readiness for use: ready-made media (media by utilisation), which are trade commodities that are readily available on the open market, and design media (which must be specially created and prepared for particular purposes and learning objectives) (Sadiman, A. S., Rahardjo, R., &; Haryono, 2014).

According to the aforementioned remark, computer media may be classified as a design medium where a certain design is required and is developed in a manner that it can be utilised. A whole computer unit is employed as the hardware that serves as inspiration for the media. As a result, multimedia medium should engage pupils in the learning process.

Users may immediately connect with other users thanks to computer network technologies and the internet. The invention of a gadget known as a modem made this feasible. Participants are able to discuss thoughts about their educational activities and write letters to one another via computer networks and the internet. Computer networks may be built in a manner that allows lecturers to connect with students and for students to learn from one another. Computer networks may be used for both individual and group learning interactions throughout the learning process. The Computer Conferencing System (CCS) is another name for the method of using computer networks in remote learning.

Overall, it can be claimed that the mentorship programme was effective in helping educators create learning materials and increase their proficiency in student instruction. It is evident from the satisfaction level of the participants after the exercise. The ability to create learning materials of higher quality, and the expectation that these attributes would adhere to the criteria to be applied, is advantageous to educators.

Figure Development of IT-Based Learning Media for Educators in Elementary Schools

The lack of time for simple implementation is one of the challenges in implementing community service. The discussion system during the delivery of the material, the mentoring system at the conclusion of the training, and the provision of material before the implementation of the activity have all been found to be solutions to all obstacles and problems that may arise. This action may proceed properly as a result.

CONCLUSION

According to the justification given, educational media may be a way to spread knowledge and learning-related messages. A well-designed learning environment significantly aids students in assimilation and comprehension of the subject matter. The media has a dual function in educational activities: it serves as a medium for learning information and news as well as a teaching tool for instructors. Each learning environment has its own characteristics, benefits, and drawbacks. Because of this, a systematic approach for using the learning environment is required. The evolution of the learning

environment is accelerating in the age of globalisation and information. There is already a debate about the use of information technology (IT) for educational purposes.

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