
Effective Use of Technology in Supervision Educational Institutions

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Abstract

To achieve a quality learning system, first improve the quality of the teacher. In this case, it is the supervisor's job to provide guidance so that teachers can use technology according to their functions and follow technological developments so that they can advance and can achieve the goals set effectively. In increasing the productivity of education, educational institutions must develop according to the times, especially in the field of technology. Learning at these institutions needs to use a series of technological equipment that is able to work more effectively and efficiently according to the needs of the education itself. However, a supervisor must have competence in mastering new technology so that the implementation of supervision can be applied according to his competence.

INTRODUCTION

Science is growing from time to time, this development supports the creation of new technologies that mark the progress of the times. Until now the developed technology has entered the digital stage. Including in Indonesia, which has started to use technology to facilitate work, including in the field of education.

Advances in science and information technology have had an impact on the use of teaching aids in schools and other educational institutions. For schools that are advanced and capable, have used these tools as teaching aids, so that learning becomes more effective and efficient.

Technology is the result of the development of science that occurs in the world of education. Therefore, it is appropriate for educational institutions to use technology to assist the implementation of learning. Currently, everyone is required to be able to provide learning to others, even though in formal education the teachers who teach are still competent teachers in their respective fields of knowledge. One form of application of

educational information technology in improving the quality of education is the creation of an ideal atmosphere in various kinds of active and creative learning strategies through IT which are applied in learning methods and learning models used in the implementation of learning in formal and non-formal education. Improving the quality or quality of education can be measured through indicators of educational success, one of which is the quality of graduates who can compete in the global era according to the fields of knowledge they master.

Minimum educational facilities and infrastructure are standard or the same as in urban areas, (Rahmatullah, AS, et al., 2022) especially until they are able to meet internet access, (Syahrani, S. 2021) so universities should be able to manage and set standards for their institutional facilities and infrastructure to adjust national standards, (Syahrani, S. 2022) so that facilities and infrastructure are not an excuse to hinder the speed of digital adaptation of schools (Syahrani, S. 2022) and learning in schools will be more weighty because all learning media can be shown through browsing on the internet, (Shaleha, Radhia, and Auladina Salihah, 2021) the development of education becomes more focused, (Syahrani, S. 2018) especially in the Koran there are many verses that talk about the importance of management and adapting and actions like this are strategies that are responsive to the current conditions that occur in the world of education, (Chollisni, A., et al., 2022) transfer of knowledge can go hand in hand with character building and accompanied by With supporting facilities, (Syahrani et al, 2020) because nowadays facilities and infrastructure, especially internet access, seem to be the number one need (Syahrani, 2018) so for campuses that have unlimited internet access with normal signals, even with extraordinary speeds, many people have the opportunity to look at them. community, (Syahrani, 2017) it is hoped that the course of higher education will be more ideal according to dreams, (Syahrani, 2017) although the development of facilities and infrastructure, including internet facilities, is still being carried out (Syahrani, 2017).

Thus mastery of information technology as a learning medium is a must for an educational institution. Supervised information technology is a step forward for those used in realizing the effectiveness of the educational process program in a madrasa/school.

METHODS

This article uses the method of reviewing research articles and literature reviews. Literature review can be interpreted as an activity to explore, observe, examine, and identify knowledge (Fitrah and Luthfiyah, 2017:138). The results of this study will produce research findings in each journal and these findings will provide input related to the title that has been chosen by the author.

RESULTS AND DISCUSSIONS

Understanding Educational Technology

Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using or utilizing, and managing appropriate technological processes and resources. The main goal is to facilitate learning to be more effective, efficient, and interesting and improve performance.

Meanwhile, according to Yusuf (2012) educational technology is a systematic process and helps solve learning problems (Mohammad Yusuf, 2012). This opinion is in line with the opinion of Mufleto (in Selwyn, 2011) which states that educational technology is not about devices, machines, computers or other artifacts, but rather about systems and processes that lead to the desired results (Neil Selwin, 2011).

From some of the opinions above, it can be said that educational technology is a system that is used to support learning so that the desired results are achieved.

Issues in Educational Technology

There are several debates related to the use of technology in education including:

Technology can improve learning

One of the uses of technology in learning is as a learning medium, such as interactive multimedia. According to Heinich et al (2002) interactive multimedia is a media consisting of images, sounds and video materials that are presented under computer control for students, so that students not only see images and hear sounds but also make active responses (Heinich Robert, et al., 2002). These responses affect the speed and order of presentation of learning materials.

Several studies, such as that conducted by Rahayuningrum and Izzudin (2013) stated that the use of interactive multimedia can improve learning which is characterized by increased student learning outcomes. However, if the use of technology is not in accordance with what is needed in learning, or there is no teacher control in the use of technology during learning, then the technology can backfire.

Technology can make education better

If technology can improve learning, it will also make education better. However, technologies such as computers can also make social inequality more visible. For students who already understand and are accustomed to operating computers, they can easily use them to support learning so that they get maximum learning outcomes. Meanwhile, for students who are not familiar with computers and cannot operate them, their learning will

focus on how to operate a computer, not on the material that they should learn. This can reduce learning outcomes.

Technology can replace teachers

Some teachers who apply web-based learning also ask their students to find the information needed for independent learning. This opinion strengthens the statement that technology can replace teachers. The internet does provide all the information needed by students about a material, but not all the information presented on the internet can replace the learning experience of students with teachers. There are some learning materials that involve the teacher's role directly as a role model or as a mentor, such as ethics and speech materials that the internet cannot do.

Technology can replace schools

The existence of internet technology can be used for distance learning, namely learning through telecommunications. In this distance learning, students do not have to sit in a regular class. Students can take lessons anywhere and anytime, so learning is more flexible.

Distance learning is a solution when students and teachers cannot meet face-to-face due to time and place limitations. However, distance learning can also cause students to become more individualistic. In addition, speaking and socialization skills will not be obtained from distance learning. Therefore, the use of technology in education can indeed facilitate the course of an education, but technology is not necessarily able to solve all problems related to education such as social learning.

Information Technology in Education

Education and learning continue to develop in accordance with the flow of changing times, educational institutions in this case must follow changes in existing technology in accordance with the needs of education itself. With technological advances, it requires an educational institution to make updates in the field of technology to adapt to the IT field. The development of information technology is used as a means of educational institutions to adapt in providing higher quality educational services.

Education Management App

According to Danim (2010) educational technology is very relevant for the management of education in general and teaching and learning activities (Sudarwan Danim, 2010). The applications in question include: a) Educational technology allows changes to the curriculum, both development strategies and applications; b) Educational technology plays a full role in the implementation of the teaching and learning process, although it cannot completely replace the position of the teacher; c) Educational technology broadens

the notion of learning activities, more than just teacher-student interaction in a very limited space and time; d) The application of educational technology can reduce the role of the teacher, although technology cannot fully replace the role of the teacher.

It can be concluded that educational technology cannot replace teachers, teachers still play an important role in controlling learning activities, but they are not absolute anymore because they are supported by other learning resources.

Types of educational technology

According to Danim (2010), the pattern of human life with technological advances has a close relationship, education is the most prominent container in this progress. In educational activities, there are several media that can be used, ranging from the simplest to the most sophisticated. Some educational technology media are as follows.

Whiteboard

The blackboard has certain values, such as presenting material clearly, writing errors are easy to correct, stimulating children to be active and attracting attention.

Bulletin Board and Display

This tool is specially made and used to display student work, pictures, bodies, posters, or other dimensional objects. It can also be used as a class bulletin board, school announcements and assignments, broaden children's interests and create shared enthusiasm and responsibility, add new experiences, awaken artistic skills, stimulate initiative, creativity and so on.

Photography Images and Illustrations

Pictures are all around us and are relatively easy to obtain to show children. Colored photographic illustrations are more attractive. The meaning of an image is determined by each individual's perception.

Slide and Flimstrip

It is a projected image that can be seen and easy to create. Traditional schools are almost never used because slides and filmstrips require a power source and hardware. Slides and filmstrips can facilitate the presentation of certain materials, arouse children's interest, uniformity of information, can be used repeatedly and can reach all areas of learning. The use of slides and filmstrips requires certain skills, including giving explanations, both main explanations and additional explanations.

Film

Educational films are considered effective to be used as teaching aids. Films shown in front of students are an integral part of teaching activities.

Education Records

A foreign term for educational recording is recording, which is an audio device that is not followed by a visual. Through this tool we can listen to stories, speeches, music, poems, recitations and others. This recording is often done by individual groups or students, for example recording teacher lectures.

Educational Radio

Educational radio is not fully used for educational purposes. Educational radio has certain values such as providing up-to-date news, attracting interest, wide coverage, based on reality, encouraging creativity, and having recreational value.

Educational Television

Television is an electronic device that functions to spread images and is followed by a certain sound.

Map and Globe

A map is a visual representation of the earth's surface, a globe is a globe or model.

Textbooks

It is the most popular learning tool and is widely used among other learning tools, where the printing press has entered the modern age.

Over Head Projector and LCD Projector

LCD Projector is one type of projector that is used to display videos, images, or data from a computer on a screen or something with a flat surface such as a wall and so on. This type of projector is a technology developed from the previous type with the same function, namely Over Head Projector (OHP) because the OHP data is still in the form of writing on clear paper. So, it can be concluded that every educational tool has its advantages and disadvantages, but all of them can provide assistance according to their respective uses. Educational technology tools also affect education, namely the delivery method and also the way it is assessed.

Learning Technology in Improving the Quality of Learning

Learning technology (instructional technology) is a theory in the field and profession that pays great attention to efforts to facilitate student learning (learners) and continue to improve learning performance with appropriate and interesting processes and sources.

Learning facilities are provided in accordance with the principles of individual characteristics so that students can learn more easily, interestingly, fun or motivated, more effectively and efficiently. With several processes and resources that can be designed and developed by learning technology, based on student characteristics and based on correct learning and learning theories, it can be ensured that the learning process will be of high quality considering that in the process each student gets optimum service in accordance with characteristics so that students will be more active, happier and easier to learn.

Thus they will succeed better, that is, in addition to being easy and happy to learn, changes in knowledge, attitudes and values can be achieved more efficiently and more permanently.

Supervision Technology in Education

The development of electronic and information technology has influenced the use of various types of media, as a tool in the learning process in the classroom, teachers are required to be able to use these tools or equipment effectively and efficiently. Teachers are starting to try to get used to using technological equipment such as LCD, CD, VCD, video, computers, and the internet in classroom learning, with various learning programs that can be developed. Advanced schools are trying to make various efforts to improve the educational tools and equipment used. Likewise, the willingness of teachers to adapt and use existing conventional educational tools by not refusing to use tools that are in accordance with modern technological advances (Oemar Hamalik, 1989).

In supervision, an educational supervisor sees the development of the world of education requiring to be able to master, understand the technology (IT) that is being used in the world of education. A supervisor must be able to master the learning media used according to the times and must be able to master the technology that is being used. As the purpose of supervision, that supervision carried out by a supervisor is to assist teachers in improving the quality of the teaching process, not assessing teachers in carrying out the learning process which ends in giving positive or negative verdicts against the teacher concerned. Thus, learning media is a functioning tool that is used to convey learning messages. Supervisors position themselves through ICT mastery in the form of the ability to master laptops, computers, and the internet which are applied to the supervision activities carried out.

Functionally, ICT is very supportive to be used as a tool to improve the quality of education. The existence of ICT for supervisors is as a supporting tool for assessing teacher performance through supervision that is used by using ICT tools. ICT is used as a supervisor's tool in conducting supervision.

Supervisor Competence in Improving Technology

Based on the Regulation of the Minister of National Education Number 12 of 2007, supervisory competencies include personality, managerial supervision, academic supervision, educational evaluation, research development, and social. For school principals as supervisors, they must have competency standards, namely guiding teachers in compiling the syllabus for each subject, guiding teachers and compiling Learning Process Plans (RPP), guiding teachers in carrying out learning or guidance activities, guiding teachers in managing, caring for, developing and using educational media and learning facilities for each subject, and motivate teachers to utilize information technology in learning each subject (Somad, 2012). So, it can be concluded that a supervisor must have the competence to guide and motivate teachers to use technology in learning in order to achieve effective and efficient educational goals. Teachers along with other learning resources are responsible for controlling teaching activities. In this case, the classroom teacher controls the discipline and interest in student learning, while the supervisor is only responsible for guiding and motivating the teacher.

Technology Program to Help Completion of Teacher's Assignments

According to Riva'i (2003) the development of science affects teaching patterns so that there is a tendency for difficulties to enter the learning system, on the other hand there is the influence of technology development with media equipment and teaching facilities, for example the existence of input standards for books, building designs and school facilities. , the form of blackboards, instructional media, libraries, and laboratories (Ahmad Rivai, Nana Sudjana, 2003).

The application program is very helpful in the administration of teacher work, for example when preparing learning programs, archiving data, assessing and evaluating work. From the application program, professional teachers have the ability to make learning software either as presentation media or interactive media.

The following cation applications are very commonly used by teachers, including; 1) Word processing program, used for processing and documenting. 2) Spreadsheet program or often known as Microsoft Excel and SPSS as a word processing program. 3) Presentation application programs such as Power Point. 4) Image processing programs such as Adobe Photoshop, Corel Photo Paint. 5) Multimedia application programs, such as Adobe Premier, Winamp, and Jet Audio.

Overall, the task of supervision is to guide teachers to apply learning methods. Therefore, to improve the quality of learning, first improve the quality of teachers. This can be done by providing guidance by supervisors to teachers.

The Use of Supervision Technology in Education

UUD No. 14 of 2005 stated that the competencies that must be mastered by a professional teacher are pedagogic competence, professional competence, social competence and personality competence.

Pedagogic competence is the ability that must be possessed by teachers in teaching certain material to their students, namely understanding the characteristics of students from various aspects, be it social, moral, cultural, emotional, and intellectual. A teacher must also understand the learning styles and learning difficulties experienced by students, facilitate the development of the potential of students, master the theories and principles of learning and educational learning, develop a curriculum that encourages student involvement in learning, design and implement educational learning. A teacher must also understand and know the family background of students and the need to evaluate learning processes and outcomes.

To be able to take advantage of ICT in improving the quality of learning, there are three things that must be realized, namely: 1) Students and teachers must have access to digital technology and the internet in classrooms, schools and teacher education institutions. 2) Must provide quality materials, meaningful, cultural support for students and teachers. 3) Teachers must have knowledge and skills in using digital tools and resources to help students achieve academic standards.

Social competence concerns the ability of teachers to communicate effectively with students, fellow educators, education staff, parents/guardians and the community. Teachers are expected to communicate sympathetically and empathetically and contribute to the development of students, schools and communities and can use ICT for communication and self-development. Therefore, ICT is accommodated by a curriculum that develops according to needs.

Definition of Curriculum

According to Crow & Crow quoted by Abudin Nata, what is meant by curriculum is a teaching design that contains a number of subjects that are systematically arranged and also as a requirement to complete a certain educational program (Nata Abudin, 1997). In the Constitution of the Republic of Indonesia Number 20 of 2003 concerning the National Education System Article 1 paragraph 19 states that the curriculum is a set of plans and

arrangements regarding the objectives, content and learning materials and the methods used as guidelines for implementing learning activities to achieve goals.

From some of the definitions above, it can be concluded that the curriculum emphasizes aspects of the ideal function and can actually be implemented in a lesson. The ideal aspects include: 1) Curriculum as a study program, which is a set of subjects that can be studied by students in school institutions. 2) The curriculum contains the data or information listed in the subject book being studied. 3) The curriculum must be planned properly and correctly, so that in its implementation it can run effectively and efficiently. 4) The curriculum has a goal to achieve complete learning targets and according to mutual agreement.

Supervisors in this case must be able to understand the direction and objectives of curriculum development. So that in the supervision carried out, the supervisor is able to provide input on the existence of the curriculum around it which is considered not to meet the standards of a good and correct curriculum.

Curriculum Development

The educational curriculum continues to develop according to needs. For this reason, curriculum development is a step that must be taken by an educational institution. Among them is the development of the ICT curriculum (ICT), the development of this curriculum is based on the demands of educational institutions in understanding the global changes that must be followed. The development of information technology has an effect on educational institutions, one of which is computers and laptops, these two tools are an integrated part of educational activities. This encourages education managers, teachers, and education supervisors to make the most of and optimize the implementation of educational performance.

Educational technology is the development, application, and assessment of new systems, techniques and tools to improve the learning process (Munir, 2008). Technology is the application of scientific knowledge about learning and learning conditions to improve the effectiveness and efficiency of teaching and training. Educational techniques implement empirical testing techniques to improve learning situations (Munir, 2008).

Thus curriculum development is used for application, system assessment, techniques to improve the learning process. Improve the effectiveness and efficiency of teaching and training. The existence of planning, implementation and assessment of the teaching and learning process within the framework of specific goals, human and non-human towards more effective teaching.

CONCLUSION

The quality of learning can be interpreted as a condition that describes the level of effectiveness of a learning. Effective learning is learning that facilitates students actively interact with various learning resources so that students achieve learning goals effectively, efficiently, and fun and have their own charm. Improving the quality of learning means the efforts made in realizing or achieving a more effective level of learning quality. To achieve a quality learning system, first improve the quality of the teacher. In this case, it is the supervisor's job to provide guidance so that teachers can use technology according to their functions and follow technological developments so that they can advance and can achieve the goals set effectively.

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