THE IMPLEMENTATION OF LEARNING MEDIA BASED ON ICT IN MATHEMATICAL LEARNING PROCESS IN ELEMENTARY SCHOOL

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Abstract
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In order for the presentation of the material presented by the teachers more effectively and efficiently. Therefore it needs media learning that can motivate and stimulate students to morale in learning. One of them is by making use of ICT-based learning or media that we often call it TIK. This research aims to describe how the implementation of ICT-based learning media in the process of learning mathematics inprimary school (elementary school). This research is a research library. the nature of this research is descriptive-i.e. decomposition analysis on a regular basis, then the whole concept of giving of the comprehension and explanation to taste the result description. The analysis of the data used in this study is the analysis of the content (content analysis). The results of the research study this library is; (1) the existence of the benefits of ICT-based learning media in the field of education; (2) the existence of the benefits of ICT-based learning media in the process of learning mathematics in primary school (elementary school).

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PENDAHULUAN

Learning media is a tool from the very process of learning play an important role in the survival of both the teaching and learning process of formal or non-formal learning. Diverse learning mediums used by teachers in delivering teaching materials, tailored to the capabilities and capacity of teachers themselves in using it (Rosdiana, 2016).

Andrijati (2014) argues that the media including the props will function properly when the media can provide a meaningful learning experience, enable and joyful learners. Media learning mathematics has a very large role for teachers to convey basic concepts of mathematics as well as for students in receiving the knowledge conveyed the teacher in him. Innovative media, as an idea, practice, or media object that is considered new.

Use of the media will facilitate the students understand the subject matter, because learning to use media can be designed into an interesting, fun learning so that students do not quickly bored, and can motivate as well as stimulating students to morale in learning, it supports the achievement of business objectives effective and efficient learning. The use of learning technology that can combine elements of education and entertainment elements, one of which is the use of computer-based technology in the science of innovation model of learning.

Media learning currently needed is a media-based ICT (Information Communication and Technology) or better known as ICT (information and communication technology). Various research results indicate that the most effective learning media is used to improve the quality of education in entering the era of globalization nowadays with the use of information and communication technology (ICT) (Rusmana and Isnaningrum, 2009).

The presence of ICT (Information and Communication Technology) or that we often refer to as ICT (information technology and Komuniakasi) in the classroom, at school, and at home, has a huge potential to be utilized in the world of education. The utilization of ICT in learning can support students to gain experience learning collectively with other students or through interaction with experts in ICT-based media communication independently. Recent developments is the utilization of ICT integrated in learning to integrate various functions skills and ICT in teaching and learning (Setyorini, 2015).

ICT is one of the learning process that can be used in mathematical subjects. Mathematics is one of the important subjects in education. According to the regulation of the Minister of national education 22-year 2006 Number of Standard contents of mathematical subjects mentioned that should be given to all students, from primary school to equip them with the ability to think logically (reasoning), systematic, analytical, critical, creative, and cooperative (Hasanah and Surya, 2017). It is according to the MoE (Risqi and solar, 2017) that one of the purposes of mathematics learning in school is to train the mindset and reasoning in taking the conclusion, developing the ability to solve problems, and develop the ability to provide information or communicate ideas through oral, written, images, charts, maps, diagrams, etc.

One characteristic of mathematics itself is to have objects that are abstract. This condition causes a lot of lazy students who study math, so a lot of learning material which cannot be controlled properly, then the application of conventional learning methods that are less attracted the attention of learners, so there is rarely present a complaint that math just make students dazed and regarded as a fearsome scourge by most students.

This is evidenced in the results of the research of Andrijati (2014) is a phenomenon in schools shows that in learning mathematics there is still the tendency of teachers rarely use mediaalat Viewer, teachers use mediaalat Viewer potluck or very simple, far from attracting the attention of students for not paying attention to the composition of the color, the size of the less proportional, and not packaged properly. Such conditions make learning math isn't interesting, not fun, so not optimal in helping students to acquire mathematical concepts.

The advantage of learning process using ICT-based learning media, among others: (1) Improve the quality of learning, (2) Expanding access to education and learning, (3) Helping visualize abstract ideas (4) making it easy to understanding of the material being studied, (5) Showing the learning material becomes more attractive, (6) allowing the occurrence of the interaction between the learning with the material being studied.

This research aims to; (1) describes how the implementation of ICT-based learning media in the field of education; (2) describes how the implementation of ICT-based learning media in the process of learning mathematics in elementary school.

LITTERATURE REVIEW

The word derives from the latin media Medius which literally means "middle", "intermediate" or "Introduction". In Arabic, the media is an intermediary or an introductory message from the sender to the recipient of the message. So, the media is a tool that convey or deliver the messages of teaching (Arsyad, 2003).

While the learning media is a tool that is used to demonstrate the facts, concepts, principles or specific procedure to appear more real and concrete. Props that are meant to give more concrete experiences, motivating and improving the absorption and the memory of students in learn. The media can foster positive student attitudes towards the material and the process of learning. The learning process becomes more interesting when using the right media so students termotifasi to love the science that's being he had learned. A teacher can be more effective and efficient in the menyajikankan subject matter if it can benefit from the media are good and proper (Nursamsu and Kusnafizal, 2017).

Danim (2011) argues that media technology-based learning can make learning more powerful where contact communication between individuals, supported by technology can give value added (add value) in communication skills certain. Use of the media in the process of teaching and learning is not an extra function but has its own function as a tool to bring about active learning situation, effective and fun.

Based opinions above it can be concluded that the media is a learning tool that is used to demonstrate the facts, concepts, principles or specific procedure to appear more nyatakonkrit so as to realize the situation of active learning, effective and fun.

Now it appears the tendency of the utilization of or pendayagunaan media based information technologies and communications (TIK). Medium of learning based ICT is components of learning that contains the material instruksional in the students who shaped information technologies and communication. In other words, the media is the means the spread of information in the form of a hardware, software, the system of tissues and infrastructure computer or telecommunication so that the data can be distributed and in access globally (Rusman, 2012).

Some kind of medium of learning based ICT that can be used to save, the process, featuring, and conveying information in the process of communication is (Suryani, 2015):

a. Technology Computer

Learning Media based computer or can be called learning based computer (computer assisted instructional/CAI) is one of the medium of learning a very interesting and able to improve the motivation to learn learners. The use of the computer as a medium of learning interactive can be realized in various forms, including the computer –assited learning (CAL), a computer, an email or electronic mail (email), and the computer multimedia who then called multimedia interactive. Learning through CAI, are offline, so that in use not depending on the access to the internet.

b. Technology Multimedia

Learning media who belong to technology multimedia is a digicam, a video, player, player video, etc. Multimedia often interpreted as a combination of many media or at least consisting of more than one of the media. Multimedia can be interpreted as a computer equipped with a CD Player, sound cards, the speakers with the ability to process motion picture, audio, and the graphic in the resolution of high.

c. Computer Network Technology

This technology consists of hardware such as a LAN, Internet, Wifi, and others. It also consists of a software application or its supporting network such as Web, E-mail, html, java, php, database applications and others.

The advantage of learning process using ICT learning media, among others: (1) Improve the quality of learning, (2) Expanding access to education and learning, (3) Help visualize abstract ideas (4) Ease of understanding the material under study, (5) Showing the learning material becomes more attractive, (6) allow the occurrence of the interaction between the learning with the material being studied.

Utilization of ICT in learning typically use hardware (hardware) and the software (software) with its application, such as: computer devices that are connected to the internet network, LCDProyektor, Learning CDS, television, even using the web or certain sites on the internet.

In the ICT-based learning, in addition to support the hardware and the software, web-based connections support (internet) is also very necessary. This allows students and teachers carry out learning activities is not necessarily face to face directly, but can be by means of connected online with the internet network.With the internet this person can access any data with doing browsing to a variety of data providers (server) in various parts of the world.

RESEARCH METHODOLOGY

This research is a research library. Sukmadinata (2009:52), describes a research library is a series of research relating to the methods of data collection the library or research done in the library that the object of his research was dug through the various information Library (books, encyclopedias, scientific journals, newspapers, magazines, and documents). As for the nature of this research is descriptive-i.e. decomposition analysis on a regular basis, then the whole concept of giving of the comprehension and explanation to taste the result description.

This study using the philosophical and pedagogis. Katsoff (2003:4), explained the philosophical is is an analysis in careful about penalaran-penalaran a problem and the preparation is deliberately and systematic over a point of view that be the basis of an action. While the is with the approach pedagogis namely tried to explain more detail the concept is to use the theory of education namely analyzed more in the implementation of the medium of instruction based ICT in the learning process math in elementary school.

In this research using data sources secondary, namely all matters related to this research is good in the form of the book, articles in the newspapers, magazines, the website and blogs on the internet in the journal. In the data collection, this research using the documentation. According to the documentation Arikunto (1988:236), a method to obtain the data needed, namely in the form of a source of the data from some of the literature that tightly relation to the theme of which are discussed. Data analysis used in this study is analysis of the contents of (content analysis). According to the Suryabrata (1983: 94), the contents of is an engineering to draw the conclusion through the effort to find the characteristics of the message and do objectively and systematic way.

Findings and Discussions

The Implementation of Learning Media Based on ICT in Education

Media is something communication tools, both print and audio visual, which is used to convey information from the sender to the recipient of the message and stimulates students to learn. Stadiman (2009:6) says that: theAssociation for Educational Communications and Technology (Association of Education and Communication Technology AECT) in America, restricting the media as all forms and channels that people use to transmit a message information. Gagne (1970) States that media is the various types of components in the environment of students who can be merangsangnya to learn. Meanwhile, Briggs (1970) argues that the media are all physical tools that can present the message as well as stimulate students to learn. Media learning to motivate students in mathematics lessons is a computer. With the product media interactive learning students can better understand and learn according to their interests and abilities respectively.

The role of Multimedia Learning in the process of learning, methods of teaching and learning media are two aspects that are interrelated. The selection of one of the methods the particular teaching will affect the kinds of media learning tools, although there are still other aspects that must be considered such as competence, task type, the response is controlled by the students after the learning takes place, learning context, and characteristics of students. Even so it can be said that one of the main functions of instructional media is as a tool for learning

that also affect the climate, conditions and the learning environments are styled and created by the teacher (Kintoko et al., 2015).

ICT is one of learning media which can be used in enhancing learning achievement of mathematics students. ICT is defined as technologies processing and dissemination of data using the hardware (hardware), software (software), computer, communication, digital electronics, voice, data, network, satellite and other communication technologies, including in it an application development tool and multimedia (Minarti et al., 2014)

The advantages of the learning process using the learning media for ICT, among others: (1) Improve the quality of learning, (2) Expand access to education and learning, (3) Help visualize abstract ideas (4) Facilitate understanding of the material being studied, (5) Display of learning materials become more attractive, (6) Allows the occurrence of the interaction between the learning with the material being studied.

It can therefore be concluded that the application of ICT-based learning is needed in the field of education.

The Implementation of Learning Media Based on ICT in EducationMathematical in Elementary School

Mathematics is the science of the universal underlying the development of modern technology which have an important role in a variety of disciplines and advance the power of human thought, the development in the field of SCIENCE and technology based on the development of the mathematical field of number theory, algebra, analysis, theory of chances and discrete mathematics (Miedawati: 2014).

Mathematics is also one of the subjects that are learned gradually and sustained. As has been stated by Suherman, et al (2003: 22) that "mathematical concepts arranged in a hierarchical, structured, logical, and systematic way starting from the simplest concepts to the concept that the most complex". Therefore the hierarchilation of mathematics, in learning mathematics should be done gradually, sequentially adjusted with the level of development of thinking of students and are sustainable based on past experience (RusmanaaxndNingrum, 2009).

Mathematical learning in schools, especially in Elementary School (SD) is expected to be able to present effective and efficient learning according to the curriculum and mindset of students so that students can easily complete math problems related to everyday life.

But in fact, learning that delivering on these roles still encounter many obstacles. Related to learning mathematics, many students believe that mathematics is a subject that is considered difficult seta with regard to the numbers and overload the brain in thinking.

The existence of the application of ICT-based learning media in learning mathematics are expected to make learning maths becomes even more exciting, and fun, so you can help students optimally in obtaining the concepts of mathematics.

Conclusion

From exposure of the application of ICT-based learning media in the process of learning mathematics in primary school (elementary school), may be taken several conclusions: (1) the learning process becomes more interesting when using learning media ICT-based so students would motivated to love the science that's being he had learned; (2) a teacher can be more effective and efficient in the serving subject matter if it can benefit from the media are good and right; (3) the process of learning to use media can be designed into an interesting, fun learning so that students do not quickly bored, and can motivate and stimulate students to morale in learning.

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