Multimedia as a Media Development Skill to Improve the Quality of Learning

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Abstract - Learning paradigm has shifted from teacher centered to student centered. Shift the educational paradigm because the entry of constructivism views has changed the era teaching becomes an era of learning. Learners can learn from the various sources that are on around us, so the teacher or lecturer is no longer the only source of information. Learning resources are an integral component in a system learning, both designed and source sources. Learning Resources either by design or by utilization, analog or digital can be utilized for improve the quality of learning. Multimedia progress is an opportunity for creating interactive learning materials that support learning. Multimedia have high prospects and powerfull used for learning. Use multimedia in learning designed in accordance with the principles of multimedia has an important role in improving the quality of learning and learning outcomes.

Keywords: multimedia, learning resources, learning

I. INTRODUCTION

Various efforts have been made to improve the quality of education, by doing the quality of educators, changing the education curriculum, by adding educational facilities and infrastructure. This is done to improve the process of education and quality of learning, and in the end is expected to increase the quality of education. Various components in the education system, especially learning that needs attention, namely the source of teaching. Currently the learning system has changed from teacher centered to student centered. The transformation of the educational system is due to the inclusion of constructivist views, which has transformed the era of teaching by educators into an era of learning by students (Reigeluth, 1999). Students can learn through various sources around us, so the lecturer or teaching staff is no longer the center of information. Learning is the process of student interaction with teachers and learning resources in a learning environment, it is contained in the Constitution no. 20 of 2003 on National Education System. So learning holds on two principles, namely prioritizing the interests of learning and learning conditions and optimizing the benefits of various learning resources around properly, and of course, accompanied by educators.

The current information is characterized by the availability of more and more information, widespread and instantaneous dissemination of information, and the dissemination of information in various forms in a very fast time. The multimedia is currently growing very rapidly along with advances in computer-based information and communication technologies. The rapid growth and rapid development of multimedia has an impact on the advancement of multimedia technology which is an opportunity to create interactive teaching materials to support the learning process. Such technological advances can provide ease in designing instructional media used in teaching and learning process to bring real phenomena, can be a video of facts and daily life that brought into the classroom in the learning process.

The current era of information is characterized by the availability of information the more and more varied, the widespread the spread of information and instantaneous, and the presentation of information in various forms in a time fast. Multimedia has grown and developed very rapidly

with advances in information and communication technology based on computer. The advancement of multimedia technology is an opportunity for creating interactive learning materials that support learning. Technological advances provide ease in media designing learning to bring real phenomena, in the form of video facts and daily life into the classroom (Mayer, 2007).

The results of the study also show that there are two channels (channel) used to perform information processing, ie auditory and visual. Auditory channels do the processing of the sounds we hear, and the visual channels do the processing of whatever we see. By combining these two processes, the results of the study show that learners can learn more in depth and the results are stored in the memories of the learners with longer time. The results of the study also show, a lot of visual or text can burden learners. So between the visual and the text must be balanced and interconnected with each other, so as not to confuse the learning process of the learners.

Graph (graphic) can be a static image, animation or video. The types of graphs, among others:

• Decorative graphics, this type of graph is used only for decoration only, does not improve the quality of messages to be conveyed on learning and sometimes confuses learners.

• Representational graphics, images in the form of photos in which there is a caption (text) that describes the photo. For example in the picture below, is the introduction of layout in photoshop
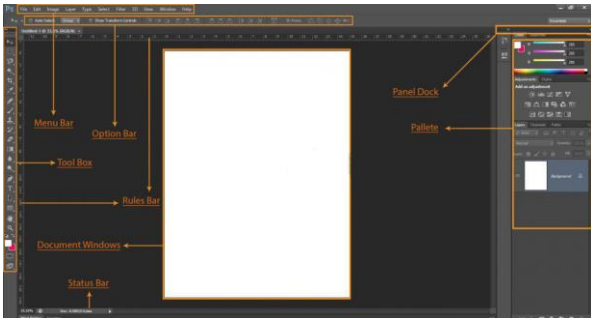

Fig.1.1 Example introduction of layout in photoshop (google.com)

• Relational graphic, describes the existence of a quantitative relationship between two or more variables.

Fig.1.2 Example Relational graphic (selasar.com)

• Organizational graphics, describes the relationship between each element.

• Transformational graphics, describing changes in space and time. An example is a description of the history of a design application

Fig 1.3 Example of description of the history of a design application (google.com)

• Interpretive graphics, visuals that display the objects in real and concrete. An example is the description of the design cycle
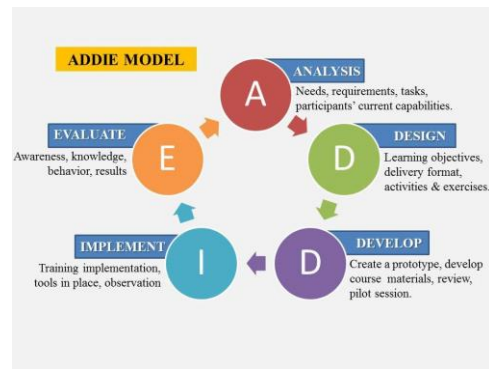

Fig.1.4 Example introduction of l description of the design cycle (google.com)

II. LEARNING RESOURCES

Association for Educational Communication and Technology (AECT, 1977) said that learning resources include data, people, and goods, which can used by learners either separately or in combined form, usually in informal situations, to provide learning facilities. In the definition of Educational Technology (Januszewski & Molenda, 2008) that sources used and created in educational technology are often called tools, materials, equipment, settings, and people. Dorell (1993) says that the source of learning is an expression used for describe learning materials including videos, books, audio tapes, computer-based training, interactive video programs, together with

Fig.1.5 check computer peripheral for learning using media

learning packages that combine the media. Based on the definition of some experts it can be concluded that learning resources can be interpreted as something that contains information and

Fig.1.6 teaching techniques using media with mentoring

knowledge that can be learned to achieve the desired competence, both in the form of knowledge, skills and attitudes. The Association of Educational Communications Technology (AECT) classify learning resources to be: 1) people (people), 2) message content (messages), 3) materials and software (softwares), 4) tools (tools), 5) methods and techniques, and 6) the environment (setting). Source learning can be distinguished between ‖by design‖, ie all sources that are specifically has been developed as a "learning system component" for provide targeted, formal learning facilities, and resources learn because it is utilized (‖by utilization‖), ie sources that are not specifically for learning purposes but can be found, applied, and used for learning purposes.

Fig.1.7 mentoring while teaching using media

In the 1994 definition, it is explained that the source of learning is the source of which supporting learning, including supporting systems and materials as well learning environment. Resources can include anything available to help individuals learn and behave competently (Seels & Richey, 1994).

Fig.1.8 students try to use the media after learning

Januszewski & Molenda (2008) states that some sources can used to facilitate learning as it is specifically designed for learning objectives, these are called ‖sources or sources‖. Resources others that exist as part of the everyday world, but can be found, applied, and used for learning purposes. This is what sometimes happens called "real-world sources", some sources are sources designed learning, and others as a learning resource that is utilized. Learning resources are an integral component in a learning system, both designed and source sources utilized. At this time has grown many communication and technology information, so that developed multimedia as a source of learning. Various learning resources, either by design or by utilization, analog as well as digital can be utilized to improve the quality of learning.

III. MULTIMEDIA

Multimedia has grown and developed very rapidly along with advances in computer-based information and communication technologies. The shift in educational paradigm due to the inclusion of constructivism views has transformed the teaching era into an era of learning (Reigeluth, 1999). In the era of learning, the emphasis of learning is how learners can learn optimally in accordance with their own way, so that the creation of learning environment becomes a learning discourse today.

Multimedia has high and powerful prospects used for learning and training (Passerini, 2007). Multimedia has high prospects for learning (Mayer, 2014). Some research findings show a positive contribution to the use of multimedia in learning. Over two decades various research results on how visual information in learning can improve learning. Focus research is primarily on presentation using computers in various modes (DiGiacinto, 2007). Multimedia can motivate learners and create active learning (Muller, Lee, & Sharma, 2008). The use of multimedia principles in designing learning materials has been shown to increase retention and transfer to learners (Issa, Mayer, Schuller, Wang, Shapiro, & DaRosa, 2013). DiGiacinto (2007) found that text with images

enhances the transfer of troubleshooting beginner learners but not for experienced learners. Mariano (2014) finds the use of narration and animation simultaneously learning outcomes learners better than the traditional. The result of the analysis showed that the segmentation group did not increase the recall and transfer. The results of the second analysis showed that the results in the non-segmentation group had an effect on the recall and transfer in immediate and delayed. The third analysis result shows no interaction effect between segmentation and transfer.

In order to organize successful learning situation, teachers need to learn how to put together tasks and materials to guide their learners to successful execution and conclusion of their projects. The design of learning situation is much more complex, requiring higher order skills involving researching and evaluating source materials, setting overall aims and objectives and breaking down tasks into meaningful and manageable sequences. Encouragement, help and advice is needed in terms of examples of good practice which may be emulated or serve as sources of inspiration for similar undertakings.

IV. CONCLUSION

Based on the findings of this study can be concluded that the use of multimedia in learning that is designed in accordance with the principles of multimedia has an important role in improving the quality of learning and learning outcomes.

Learning resources are an integral component in a learning system, both designed and source sources utilized. At this time has grown many communication and technology information, so develop multimedia. Use of multimedia within learning is designed in accordance with the principles of having multimedia an important role in improving the quality of learning and learning outcomes. Various sources of learning, can be used to improve quality of learning.

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