

The Importance of Multimedia Technology in Physical Education Learning

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Abstract---Technology has taken a role in the education sector as a supporter of the learning process because the use of technology is very important for sharing information and communication. Through a variety of applications that can be used for education, the quality of the Internet network, the participation of teachers, and competence of students themselves they can see one of the advantages of educational technology that is learning media without face to face. Physical education is a subject that is not currently possible with face to face directly, this is where multimedia plays an important role. This study tries to provide an overview of the importance and use of multimedia technology in physical education. Search for articles using Google Scholar with the keywords Education Technology, published since 2000-2020. Conclusion multimedia technology can increase student motivation to conduct learning activities independently because the main modern supporting equipment is widely available at all times

Keyword: Multimedia, Technology, Physical Education

I. INTRODUCTION

Education should ideally be adapted to the talents, interests and abilities of students. To get the maximum educational achievement, of course, it must go through the development of environmental aspects in schools as a learning environment that adheres to the principles of security, honesty, high creativity, and intimacy with friends, as well as with a sense of love for the motherland and full of enthusiasm (Omeri, 2015). According to (Hernado et al., 2017) & (Arifin et al., 2017), sport is a systematic process aimed at fostering one's potential in the context of the formation of a whole person. In line with the above (Nurseta & Soenyoto, 2017), The exercise is carried out in stages, gradually and continuously. Sports within the scope of the school develop students in physical aspects which aim at the formation of a whole person.

Research by (Lowther et al., 2012) stated the involvement of technology for education does not yet have an appropriate position in the field of education, regardless of their recommendations. (Leu et al., 2009) argues that children with underprivileged families almost never use learning media such as the Internet. Children are now more focused on modern

technical equipment that has been used from an early age (Gutnick et al., 2011) so that when they use new educational technology in schools they will not experience significant problems. In this study (Greenhow et al., 2009), most students use multimedia learning tools in a modern way. The great influence of educational technology is examined more seriously on the cognitive aspects carried out by (Kauffman, 2004; Lee et al., 2008). When using educational technology, we must focus more on the use of tools and applications that lead to the value of education, how capable they are in the knowledge gained, how users and tools interact, and the positive impact of their use. A number of writers (Clements & Sarama, 2003; Dynarski et al., 2007) suggest to teachers to give more attention to software in which there are five programs that have the ability to influence students:

1. Programs that have educational value,
2. manipulate children's involvement in learning,
3. Easier use,
4. Children and programs are involved in interactions,
5. The possibility that the child's development can be monitored by a software program.

Teachers must have adequate knowledge and follow the current situation related to technology in an approach using perspective through a wider range to support the design of integration of educational technology that can benefit students and civilize technology-based learning (Szeto et al., 2015). Principles in the implementation of multimedia learning will occur if we design mental representations by uniting text and graphic elements according to the form of learning (Kari Jabbour, 2012). Use methods such as multimodal interactive information delivery; can be used and accessed anywhere and anytime (Malik & Agarwal, 2012). The integration of multimedia technology is beneficial for students in physical education learning.

At present physical education learning is not possible to meet face to face. But on the one hand students who take part in this learning are required to remain active and maintain their physical fitness. Researchers assume that multimedia can answer that.

II. METHOD

This study tries to provide an overview of the importance and use of technology in physical education. The method of library research through searching articles using Google Scholar with the keywords Education Technology published between 2000-2020.

III. RESULT AND DISCUSSION

TECHNOLOGY IN LEARNING

The conclusion is not much different from other writers (Dynarski et al., 2007) there are some major differences in the old style of education and teaching technology used. With the birth of educational technology carried out by teachers in the classroom, indirectly confronts education with new challenges that educational technology must be able to be interacted by teachers in their routine work. Some research results show that only a few teachers are willing to apply educational technology when learning (Hermans et al., 2008; Stosic, 2013; Wang et al., 2004). The existence of two types of teachers is the main reason for differences in understanding of educational technology. First some of them understand the whole of modern equipment and its operation while some others think they need additional technical knowledge about modern tools and methods of teaching that involve active student relations with the teacher. Both types of teachers are representative of a group of teachers who are of different ages. Teachers who already have an older age have never gained knowledge of modern technology in learning that supports learning in the future so they find it difficult to find, use and adapt to current needs. This is different from teachers in the younger generation who have the knowledge during the study that is appropriate for the use of educational technology. This will be the meeting point between increasing the understanding of older generation teachers and is easy because it requires a variety of scientific backgrounds so that appropriate collaboration is needed so that the teacher has sufficient basic knowledge to use educational technology.

Existing facts about the use of educational technology, mainly due to lack of support for the quality of school equipment and needed resources, the lack of teacher knowledge, and the lack of interest and motivation of teachers to use technology.

4.

Teachers must be more eager for the use of different and new technologies because better interaction and acceptance of information in learning can be achieved through the use of educational technology supported by experiences gained involving student activity through real pictures, sounds and movements.

MULTIMEDIA EFFECTIVENESS

Learning that is currently accessible to the wider community, especially by all students. It must always develop and innovate with creativity in the use of technology as a learning medium that is adapted to science and technology (Surahman & Surjono, 2017). Enhanced creativity can be developed into interactive multimedia for learning. Interactive multimedia as an effective learning media are: 1) delivering material that does not always use verbalism; 2) overcome narrow space, limited time, insufficient energy, and sense abilities; 3) enthusiasm for learning increases, between students and learning resources there is a real direct interaction; 4) allows children to learn independently according to their talents and abilities to see, audio and motion and 5) provide the same stimuli by uniting experiences (Jamilah et al., 2012). Some of the advantages of learning to use multimedia over others are that there is no need to print or print and can be made / edited while teaching. It makes the teacher easier and more efficient in presenting the material. Multimedia that is developing at this time has a great opportunity to become a learning tool and an alternative for students (Arfan et al., 2010). The use of instructional media with multimedia will make students able to study anywhere and anytime.

MULTIMEDIA THEORY

This theory says a multimedia principle about people learning people will learn more to use words combined with images using only words. This is the basis of this theory (Mayer, 2009). In this theory say several assumptions:

1. There are two separate channels. These channels are auditory and visual that are used to process information. This is called Dual-Coding Theory;
2. Each channel has limitations (cognitive Sweller); and
3. Learning is an active process both through the process of filtering, selecting, organizing and integrating information from previously acquired knowledge.

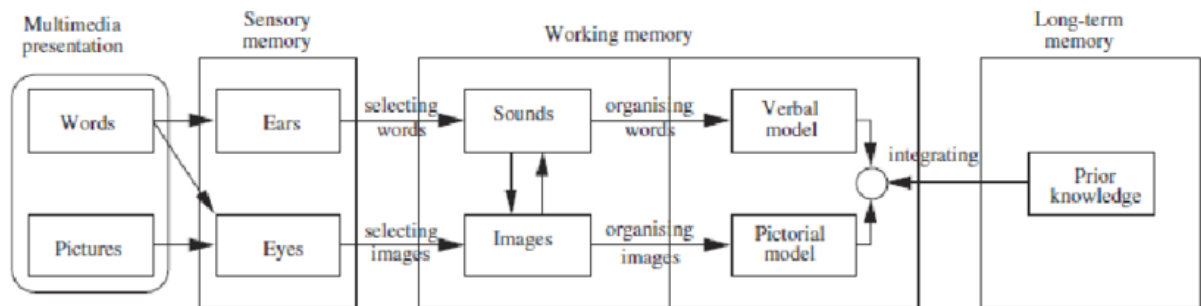


Figure 1. Multimedia Theory (Mayer, 2009)

IV. CONCLUSION

Cognitive skills and characteristics can be improved through the application of educational technology. With the contribution of new technological vacancies, there has been a positive surge in learning and new information received, especially on mobile devices. The use of instructional media with multimedia will make students able to study anywhere and anytime while the teacher is not available or limited.

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