

# Education Quality Enhancement via Multimedia Technology

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## Abstract

**Problem statement:** The objective of this research was to evaluate the relationship between the multimedia usage in the understanding level and students interest. While the emphasis on the effectiveness of using multimedia teaching system as an aid in the exploration of ideas in learning instruments need to be addressed. **Approach:** A rapidly growing technology, comprehensive and interest in education at Malaysia has provided space and opportunities for educators to contribute their ideas and experience. Application of method helps to understand concepts, processes and terms in multimedia, simultaneously provide conducive teaching and learning which dynamically visualize information interesting and effective. To realize the main objective, the literature research and a detailed monitoring are performed. **Results:** Comparison of student progress obtained after examining the traditional learning methods and education system using multimedia technology as a means of support. In addition, educational technology has posed challenges, impact and responsibilities to educators and requires more than just the involvement of the students. **Conclusion:** Assimilation in the expertise required in implementing available technology, thus improving the quality and create a capable generation to facing challenges.

**Keywords:** technology, multimedia, teaching and learning, educators, students

## 1. Introduction

Unilateral communication by educators leads students to act as a passive recipient. Such a situation would raise boredom among students. In dealing with this situation, educators need to implementing multimedia aided learning, as one measure for greater impact on a student, especially those who are at low levels of academic achievement. According to Al-Shaibani dan Daoud, (2011); Sakat, A.A et al., (2012) educators need to develop and map out the best thinking of education. The effective cooperation will lead to improved teaching expertise.

While, all challenge and a new strategy helps student to achieved a better understanding in a study field. Diversity in learning combinations of media such as graphics, animations, text and graphics can certainly boost the academic level and their interest in the learning process. Instructional learning process addressed systematically, especially for the knowledge gained in one session and have continuity with the knowledge given in the next session. Thus, diversity in teaching methods of presentation is an important component to motivate students' interest.

Chitanana, 2009; Lockias Chitanana and Musingarabwi Starlin, 2011 states that rapid changes in information technology systems, managed to combine the study of learning to use computers. In line with the concept of education is an instrument of social change and development, computer technology is used as an instrument to raise the dissemination of knowledge in education.

The best practice in today's education system is to maximize the multimedia applications. With this, the various measures to obtain the knowledge and reference materials are available. Therefore, knowledge is not limited to one source. Indirectly, it is an alternative to the educators and students to find additional material for teaching

and learning. While various forms of information presentation in audio-visual and high impact graphics convenient to navigate, where these advantages are not available from reference books used.

## 2 Materials and Methods

Gagne and Briggs (1979) said the learning process begins with information obtained from the stimulus received by the senses, perception formation process by means of information and is stored as an experience that can be applied. Application of media in teaching will be to diversify the skills of intelligence, which is absolutely necessary to acquire the lesson.

The application of multimedia is a means in enhance understanding and appreciating the Islamic education subject. While the multimedia courses existence and organized, dedicated to Islamic education so that educators are familiar with modern technology. He added, technology usage in Islamic education is seen as a stimulant, a catalyst and a tool to increase the effectiveness of teaching and learning process. (Abdul Ghani Shamsuddin and Norhashimi Saad, 1997)

Besides that, Zoraini Wati (1992) claims that teaching and learning process involves more than the presentation of facts, it also emphasizes an appreciation of knowledge gained. As an educator, teachers are role model for students to form a knowledgeable human, highly morality and righteous. In terms of educational purposes, Imam Al-Ghazali; Abdul Wahab Ismail Gani, 2006 stressed that a teacher should remind students acquire knowledge purpose is to reach out to God, to see evidence of His authority, not to boast, and do mischief on earth.

Although multimedia applications began to replace most of the traditional teaching methods, but no doubt the success has been obtained along with the "chalk and talk" method, despite the various constraints. For example, the static nature of this method has actually contributed to a reduction of student interest in a subject. For this reason, the presence of computers in teaching and learning has prompted the desire of academics to find and tried viable new methods, which is more practical to use the benefits maximized.

Educators are supposed to act an essential role as a facilitator. For example, teaching and learning process can be conducted in small or pairs at the classroom (Cooperative Method). This has been proved by many studies that cooperative learning increased the effective achievement of domain consistent. (Johnson & Rholubec, E.J 1994 :61; Mohamad Zaid, 2012) Thus, an effective social skills will be fostered and balanced the intellectual and emotional components of the student.

According to the Weinraub (1998); Ajmian Bin Safar & Fatim Nor Muhamad bin Nordin (2007) study, the understanding percentage in the students' learning using multimedia oriented software is much higher, and the results are encouraging. This is reinforced by cognitive psychologist, who has submitted a concept that emphasizes learning by the students' own discovery and effort to get it.

In an internet-based teaching methods, students centered on learning progress. Therefore, the opportunity for the occurrence of bilateral communications between teachers and students is higher, because students often referred to educators if related learning problems occur. Individual cognitive skills and the ability to understand the message communication is one of the criteria for using multimedia technology. Continued provision of multimedia information processing, making it form and easily repeated for understanding and further action by educators and students.

For the children, exposure to multimedia tools embedded unnoticed. With selective selection, viewing television programs can facilitate learning. According to the provision Rezki Perdani Sawai et al (2009), television is one of the multimedia and watching is not a passive behavior. Children will actively viewing the material processing. They will respond to auditory and visual display as well as considering whether to watch or not. In addition to the entertainment, children and adults often use television as a learning tool, especially when it involves consideration of "cause and effect".

While Pablo González Blasco and Graziela Moreto, 2012 said, the opportunities for teaching with cinema are well suited to the learners' environment. This learning scenario stimulates learner reflection. In process that impacts the learner's emotions, cinema is useful in teaching because it is evocative. Movies provide a quick and direct teaching scenario and point out important issues. Hence, emotions are presented in accessible ways where they are easy to identify and capable recognize it immediately.

Practically, multimedia assisted in revising subject. These resources are used and exploited by the students systematically for the purpose of obtaining information or a message in the learning process. In addition, most students do live in a world that is influenced by the media and its effects could be seen after a combination of pictures, words and sounds mixed. It is more memorable and retained longer in memory, different from just listening or reading.

### 3. Results and Discussion

In the use of multimedia teaching system, there are terms indicate a combination between the elements of learning with current technology. For example, Faharol Razi, 1998; Abdul Wahab Gani Ismail, 2006 claimed that the term "Computers in Teaching and Learning" is taken from the original term in English is "Computer-Based Instruction", which means computer-based lessons planned. Criswell, 1989; Abdul Wahab Gani Ismail, 2006 also defines Computer Aided Teaching and Learning as computer usage in conveying teaching aids and involves students actively and enabling feedback given.

Multimedia is defined as a technology that combines multiple sources of information (media) such as text, graphics, sound, animation and video, in which information is delivered and controlled by an interactive computer system. Hofstetter (2001); Mohamad Zaid (2012) defines multimedia as the use of computers to present and integrate text, audio and video link devices that enables consumers to navigation, interaction, invention and communication.

Hofmeister (1984) in Mansur K., (1997) states the concept of computer literacy is still expanding and difficult to obtain consensus on those features. He defines it as an understanding of skills that include the technology used when processing the information, the impact of computers on society and an understanding of computers as a mechanism for solve the problem.

Multimedia technology tools required to participate with the global information exchange, especially for educational purposes. However, Balke, W.T and K. Nahrstedt, 2004; G. Maria Kalavathy (2009) claimed that the emergence of advances in distributed media services, such as video conferencing and any navigation through multimedia, requires media services scalable infrastructure, robust and appropriate.

Tajul Arifin et al (2002) classify Multimedia application influenced the development of Islamic education at five levels: [i] expand the scope of the paradigm of Islamic knowledge, [ii] to build a successful Islamic civilization based on the concept of unity, [iii] design paradigm and the same curriculum all Muslim countries, [iv] make Islamic education as a core of knowledge and [iv] solidarity among Islamic Education and Modern Education.

There are factors associated with the role of Multimedia application on the level of interest shown by students. Bates (1997); Shiung T.K. (2007) said there was four main purpose which led to the application of technology to improve the quality of learning, encourage access to education and training, reduce costs and increase the effective impact on education.

Figure 1. Registration software user / students

Source: Computer Aided Learning: Funeral According to Islamic Studies Syllabus KBSM Form Three (Ajmian et al, 2007)

Figure 1 describes the application of multimedia in education that helped facilitate the teaching track students' interest and performance, based on the frequency of website designed for a particular subject. Through the registration of students as consumers, educators can evaluate whether the software helped the learning or not. In addition, usage of multimedia assist the educational repetition and practicable. In this manner, the explanation of

a concept becomes much easier, thus overcoming the deficit of learning in the classroom. Clearly, the audio and visual diversity capable in accomplish task, faced by educators.

Today, multimedia devices such as computers become a necessity in every household. The internet provides a new dimension in exploring the world of information, which is usually hard to come by before, now able to be easily reached. Therefore, to realize the important of computer use and application, the country must develop a computer literate society first. (Molnar, AR, 1987) Usage with internet can make teaching more attractive. Information can be accessed through a search engine on the internet and teaching materials that available are more varied.

#### Constraints in Teaching and Learning Methods

Renee Hobbs (2010) defines the importance and efficiency in the digital media fundamentals including finding and evaluating relevant information, create, share the message and take action (to contribute ideas, make good decisions and to instruct people). However, the most significant issues in the implementation of computer technology, particularly in developing countries are the provision of substantial financial and technical skills shortage.

Based on the research Dr. Sumarni Rio (1996), found that the ability to develop software for the purpose of education among educators is at low level. Most of them focused on learning and lack centralized approach focuses on 'student center' in teaching and learning. Introduction to multimedia software is an opportunity to make their approach more variety, fun and exciting.

Most of the technical failure is due to application multimedia attitude underestimate on the power of technology, which able to have an impact on the use of educational technology. Furthermore, educators facing pressure from superior officer, lack of support, encountered skills shortages and training factors. Apart from that, many educators didn't possess the course of educational technology. Existing problems such as time constraints and convenience, lead some educators decided not to use educational media. The presence efficient learning changes resulted to student relieved boredom, the implementation of learning will be more structured, organized and able to maximize the use of this method.

#### 4. Conclusion

Education is an effort in strengthening the future generation, providing the students to have a significant role and capable to confront the problem to rectify the situation through the medium of education. (M. Natsir, 1932; Amir Husin et al, 2012), especially education sector as a pillar and conduit for world-class human capital, creating social mobility and act as a development factor. Meanwhile, the use of multimedia education is a challenge and responsibility to educators and students. Therefore, continuous effort, experience and expertise required to meet the challenges. Implementation of existing technology should be harnessed in innovative and more effective in improving quality and creating a generation capable of facing challenges.

Important for those involved in education to manage information efficiently varied. Extensive use of technology will form an interactive system for students, indicating the importance of multimedia in education. In addition to providing knowledge, it could also inspire creativity that led to the creation of new knowledge. However, it should be understood that the existence of a sophisticated multimedia system will not provide benefits if not used according to the method of delivering the right message to those who explore and applies the software.

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