An Investigation of Teachers' Use of Interactive Multimedia Technology for Islamic Education Instructions in Bengkulu

Nurlaili[1], Suhirman[2], Buyung Surahman[3], Adi Saputra[4], Khoiruman[5]

Abstract

Purpose: Islamic education in Indonesia is currently facing challenges as the country enters Industrial Revolution 4.0. If there is no new breakthrough in learning methods, achieving PP. No. 19 for the year 2005 will be difficult. Methodology: To meet the new challenges, teachers must have adequate and well-organized training programs. This study was conducted by using a descriptive qualitative method. This study illustrated the phenomenon based on the situation. The research data were collected through interviews, observation, and documentation techniques. Findings: The results of this study indicated the following: (1) school teachers have used learning media, such as books, pictures, real objects, and the surrounding environment; (2) teachers and students need to utilize interactive multimedia based on the material delivered by the teacher; (3) the teachers need to use interactive multimedia to match the students' various learning styles and preferred styles. Conclusion: Thus, teachers are advised to utilize interactive multimedia in performing the presentation of the lessons more effectively and efficiently and match the students' various learning styles and preferred styles.

Keywords: *Teachers' Use, Interactive, Multimedia, Technology, PAI learning.*

1. INTRODUCTION

The overall goal of learning Islamic religious education is to promote and develop religious beliefs, enrich and mature students' knowledge, understanding, practice and experience of Islam, to become Muslims who can continually grow in faith and compassion. and that they may continue to adhere to Islam. Higher educational level [23]. One of the efforts that can be made to increase knowledge about true Islam is Islamic religious education [39].

Islamic education in Indonesia is facing challenges today as Indonesia enters the era of industrial revolution 4.0. The Industrial Revolution 4.0 is characterized by less physical activity associated with geographic location, since all human activities are transformed from physical to digital spaces [41]. [9]explains that there are four factors that usually provoke harsh criticism. First, the cultural backwardness or the cultural gap. Second, you need to provide an active service. Third, don't get hung up on the budget. Fourth, you must increase the effectiveness of social media. Fifth, when faced with a problem, it must be taken as a possible solution. Sixth, it is not resistant to change. If you want quality production that can compete with working in a completely open world, new challenges require an innovative thought process [42]. Believes that Islamic education in the 4.0 era

---
[1] Universitas Islam Negeri (UIN) Fatmawati Sukarno Bengkulu, Indonesia, nurlaili@iainbengkulu.ac.id
[2] Universitas Islam Negeri (UIN) Fatmawati Sukarno Bengkulu, Indonesia, suhirmanman182@gmail.com
[3] Universitas Islam Negeri (UIN) Fatmawati Sukarno Bengkulu, Indonesia, buyungsurahman@iainbengkulu.ac.id
[4] Universitas Islam Negeri (UIN) Fatmawati Sukarno Bengkulu, Indonesia, saputraadi2181@gmail.com
[5] Universitas Islam Negeri (UIN) Fatmawati Sukarno Bengkulu, Indonesia, guschoioke@gmail.com

should take three steps, namely, intervention mindset, automation, and regeneration or creation [14].

Government Regulation No. 19 of 2005 on National Education Standards states that the learning process should be inspiring, fun, challenging and motivating in order to integrate learners into their talents, interests, physical and psychological development in an active, creative and independent manner. Achieving this teaching will be difficult if there is no further advancement in learning methods [43].

To meet the new challenge, computer laboratories that support teaching and learning creation must be available; however, their use is limited to information and communication technology subjects and extracurricular activities [38] [39]. Therefore, the best practice of teaching in education nowadays is by maximizing multimedia practice [40][45], but it needs adequate skills and proficiencies [44][36]. The challenge is with the teachers themselves because the program will not function properly without an adequate and well-organized training program. For information, various resources such as text, audio, graphics, animation and video are included, which implies the use of multimedia, including the interactive promotion of students through computers. This means that the user can control the elements of the multimedia application [38].

Before the development of multimedia technology, teachers only used conventional methods in teaching and learning. (1) Waking up in the classroom, talking to mites. (2) The material presented is based on the teacher's observations and textbooks; (3) Teaching and learning concentrated more on the plug and play method than on the practical aspects; (4) teacher's handwriting; (5) poor relationship with students in the subject; (6) theory without practical status and that of real life; (7) learn from memorization, but not from understanding; and performance marks (8) [10]. The development of Multimedia continues to regress with respect to the countries of Singapore, Malaysia and Thailand [1]. Students have difficulty learning the topic of the principles and practices of Islamic religious education [25].

According to the previous observations of the SMP PGRI researchers, the use of interactive multimedia is not very common due to the preponderance of the teacher in the use of reading methods, so the students are quite passive in the learning process and the material provided was difficult for the students to understand. The solution to the problems of this school must be multimedia. Basically, interactive multimedia is developed paying attention to cognitive aspects, according to the curriculum[21] and according to the problems of the learning process [15]. The use of multimedia has a positive impact on the learning process of students, 1) which includes a more interesting and interactive learning process [13],[5]; (2) time that can be shared through lectures; 3) students are more motivated [15]; 4) the teaching-learning process can be carried out independently at any time [33] ; 5) the student's personal vision can be improved and further channelled [24].

2. RESEARCH METHOD

The study process used in this analysis was descriptive qualitative [32], by having a systematic and subjective approach in explaining life experiences based on the reality [11]. This method can be used to directly present the nature of the relationship between researchers and respondents, and can be more sensitive and adaptable to the rigor of the interaction and the value models found [19].

Observation and conversation are used to collect data. The researcher attended Bengkulu's secondary classes and studied Islamic Education (MYP). These methods were used to analyze different types of phenomena. Data collection was carried out on several occasions and the result was analyzed to join a theory.

3. RESULT AND DISCUSSION

3.1. Media and Multimedia Learning

The word media is a plural form of the word medium . He further states that "media can be interpreted as anything that can deliver messages or teaching material from teachers as communicators to students as the communicants and so on." [10] states that "The media is a learning tool that is intentionally planned and prepared by the teacher to present and/or explain the lesson material, and used by students to be directly involved in mathematics learning." Media investigate a pattern, and do the exercises.

In the past, multimedia technology featured a slideshow for images, an audio recorder and an overhead projector for text. Today, at the time when software and hardware became capable and adept at using more than one environment, the term multimedia is used to define software applications and computer presentations that used more than one medium [30]. Hamali argues in that "learning resources are part of a learning system that plays an important role in contributing to the quality of teaching and learning." Thompson and Munir suggest [8] that it is a system that describes texts, images, videos, animations and sounds in order to give interactivity. Multimedia is divided into two categories: linear multimedia and interactive multimedia. The use of multimedia, in the learning process, which supports the communication of the teacher with the students throughout the learning process through texts, audios, images, animations, videos and graphics, would be more memorable and meaningful [8].

Effective learning requires planning, both in terms of means and other elements of support. For best results, the media must take into account several critical factors. According to the criteria of Sudjana [34], some of the criteria are the accuracy of the learning objectives, the support to the content of the learning materials (2), the availability of resources (4) to express the ideas of the teacher's skills and the adaptation (5) to the level of thinking of the students. In teaching and learning process, needs are a crack between students' current skills, abilities and attitudes.

Computer-based interactive multimedia models are: a) the tutorial is an informative presentation in which the material is delivered in a tutorial as a tutorial made by a teacher; (b) drilling and practice are intended to improve their knowledge or reinforce superiority over a concept; (c) Multi M is a simulation of dynamic processes occurring in the real world; and d) play is one of the computer-based interactive multimedia learning methods [34].

3.2. Uses of multimedia in education

In recent years, the presentation of multimedia-sponsored information reinforces and hardens richness and meaning by facilitating learners' learning and completing learning vividly [29]. It consists of the synchronization of powerful synchronized outputs, organized in sections connected through hypermedia. Students can access information channels in less time, establish links between appropriate topics and establish their knowledge by relating to meaningful information [22]. Alternative learning is important for students to have a deeper level of understanding in student participation, adapting time and establishing information based on individual differentiation [3],[16].

Learning content from different resources in the presentation of information can help students learn effectively [3], since their brain will process more information to integrate and reorganize variable information [28]. Today, there are many uses of multimedia-based educational programs to meet the needs of different types of learners. Moreover, it is not limited to conventional teaching and learning methods. However, creating good tools for learning is difficult, as it needs more strength to develop fun multimedia learning methods in the learning process [17],[18].

3.3. Learning Islamic Education (PAI) Using Interactive Multimedia

Teachers should be more selective in defining Islamic education learning resources (MYPs), depending on the type and quality of teaching in secondary schools [16]. Thus, they can enrich the learning process of Islamic secondary education by empowering computers [21]. It can also increase the interest, attention, motivation and sense of pleasure of students who use the computer as interactive multimedia [15]. There are now adequate computers in schools, especially in secondary schools. Use, on the other hand, is limited to traditional teaching and learning methods. Therefore, it is time to use the computer to learn Islamic religious education, not only to solve the problems of Islamic religious education, but also to offer help for the delivery of material in interesting ways [18]. For the learning of Islamic religious education with computers, computer programs designed and created by teachers of Islamic religious education were used [5], ready for use as software [2]. Interactive learning by computer means has advantages such as improving the capacity of students in the MYP, greater predominance of the concepts that students study [15],[20] pupil adherence is longer and pupils' attitudes towards Islamic religious education are becoming more positive [23]. In interactive learning of Islamic religious education, teaching materials are made in a special design to respond to the dynamic incentive of interaction between students and computers [33]. Computers offer students the ability to provide students with information that responds to the computer, or vice versa.

The answer can be used as a new incentive to give more answers that reinforce students' concepts and memory [4],[20]. Through multimedia computers, the teacher can explain a concept, especially a movement with audio, a change, an animation or a recurring explanation [13],[12]. Students obtain information through the media [20] and teachers must present different points of view to combine learning and teaching styles [4],[23].

This study shows findings on the use of interactive multimedia in secondary schools in the Bengkulu. Learning resources are the most important part of curriculum implementation. Learning pathways determine the outcome of the learning process. Teachers should provide interactive learning resources to establish effectiveness and effectiveness learning process. From interviews with students, teachers have used resources to learn. They are images, real objects and environment. Teachers have used high-tech learning resources, such as the LCD projector. However, no subjects have been established for interactive use by students. Teachers only use single-direction, less attractive learning resources for students. They don't become as active, as the method used is teacher-centered learning.

Students get into trouble when they learn abstract material, such as Islamic Religious Education. Nor will the usual learning resources used in teaching and learning activities be as motivated. Students prefer to choose high-tech learning resources when playing smartphones and computers. Most students have learned interactive multimedia and watched interactive multimedia. Students need multimedia to display images, videos and animations.

They interviewed three high school teachers to learn about the topics they used to meet their needs when using interactive multimedia. Teachers use learning media such as books, pictures, real objects, and the environment. Sometimes LCD projectors are used to display images and videos.

From the results of the observations made by the researchers, it was found that the teacher has used interactive multimedia. Students found it easier to understand the material the teacher gave them. Most high school teachers have their personal computers. However, the team has not been optimized to create resources to learn. All teachers are used to interactive multimedia, but the use of interactive multimedia remains rare in high schools. They clearly supported it, and only two teachers used interactive multimedia in teaching and learning activities.

Very suitable resources for students are interactive multimedia [31],[6],[37]. [39] has pointed out that "multimedia learning tools can help increase student motivation, since traditional teaching modalities and the main vision of learning are complementary through application and practice". Interactive multimedia, combined with games, can help students understand the material in terms of the characteristics of students who enjoy having fun. According to [26] video games, video games can improve students' cognitive skills, such as memory skills and reaction speed. "The tools of an educational game provide psychological needs and benefits in the learning process and have become mainstream for educators, governments and parents" [35]. Interactive multimedia can also provide student learning styles, so teachers need to adapt to students' favourite styles [7],[4],[12].

The use of inappropriate subjects with students does not motivate them so much in teaching and learning activities [15],[5],[2]. Students are not as satisfied with teaching and learning activities when they are exempt from subjects such as real-world images and objects [31]. [6],[37],[33]. According to the media [27], the media allows to change learning activities to increase the motivation of students. Therefore, teachers should use a wide variety of engaging learning resources such as interactive subject-based multimedia. [13],[24],[5],[23],[2],[20].

4. CONCLUSION

Based on this study, it can be concluded that teachers have used resources for learning (1), such as images, concrete models and everything that can be found in the environment in the learning process. (2) Teachers and students should adopt interactive subject-based multimedia; (3) Teachers should use interactive multimedia adapted to students' preferred styles and styles. From the results of the research, there are a number of recommendations. The results of this study underline the need to use interactive multimedia based on topics that help students and teachers understand that the material of the learning process is the predominant one. Multimedia technology is an environment that combines images, texts, graphics, photographs, audio and two animation and computer elements. Multimedia technology falls into two categories, just like linear multimedia and interactive multimedia. Linear multimedia is multimedia and has no drivers that can be used by students. This multimedia is materialized in a sequential and interactive way with a controller that the user can use for the next process. Learning is a process of environmental conditioning that allows a learning process. Therefore, the most important part of learning is the creation of the learning conditions of the students. As for mental activity, learning means that students can interact with their environment, which occurs in fairly constant changes in behavior. Consequently, the environment is an important factor in learning and learning activities. The important thing is how this environment is created, organizing its elements so that they influence the behavior of the students. Multimedia technology can be used in the learning process for the transmission of knowledge, skills and attitudes, as well as to promote thoughts, feelings, attention and desire for learning, so that the learning process is more meaningful, directed, controlled and enjoyable.

References

Adnan, A. H. M., and Zamari, Z. M. Computer-Aided Self-Access Language Learning: Views of Indonesian, Malaysian and New Zealand Practititoners. Procedia-Social and Behavioral Sciences, 67, 49-60. 2012. https://doi.org/10.1016/j.sbspro.2012.11.306

Albantani, Azkia Muharom, & Madkur, Ahmad. Teaching Arabic in the era of Industrial Revolution 4.0 in Indonesia: Challenges and opportunities. ASEAN Journal of Community Engagement, 3 (2). 2019. https://doi.org/10.7454/ajce.v3i2.1063

Alessi, S.M. & Trollip, S.R. Multimedia for learning: Methods and development. (3rd ed.). Boston: Allyn & Bacon. 2001.

Awla, Hawkar Akram. Learning Styles and Their Relation to Teaching Styles. International Journal of Language and Linguistics, 2 (3), 241-245. 2014. doi: 10.11648/j.ijll.20140203.23

Bensalem, E. The Impact of WhatsApp on EFL students' Vocabulary Learning. Arab World English Journal, 9 (1). 2018. https://dx.doi.org/10.2139/ssrn.3150707

Cook, John et al. Ideas in Mobile Learning. Journal of Interactive Media in Education, 18 (1), 1–2. 2015.

Gilakjani, Abbas Pourhosein. Visual, Auditory, Kinaesthetic Learning Styles and Their Impacts on English Language Teaching. Journal of Studies in Education, 2 (1), 104-113. 2012. http://dx.doi.org/10.5296/jse.v2i1.1007

Gunawan et al. Multimedia Interaktif dalam Pembelajaran Konsep Listrik Bagi Calon Guru.1(1), 1-6. 2017. https://doi.org/10.29303/jpft.v1i1.230

Hamzah, Mohd Isa et al. Multimedia Usage among Islamic Education Lecturers at Higher Education Institution. International Education Studies, 7 (13). 2014. http://dx.doi.org/10.5539/ies.v7n13p157

Hazlina, Wan Noor et al. Using Multimedia in Teaching Islamic Studies. Journal Media and Communication Studies. 1(5) 086-094. 2009.

Iskandar. Methodology Penelitian Pendidikan dan Sosial, Jakarta: GP Press. 2008.

Jamulia, Jumahir. Identifying Students Learning Style Preferences at IAIN Ternate. International Journal of Education, 10 (2), 121-129. 2018. https://doi.org/10.17509/IJE.V10I2.1631

Jusoh, Wan Noor Hazlina Wan, & Jusoff, Kamaruzaman. Using multimedia in teaching Islamic studies. Journal Media and Communication Studies, 1(5) 86-94 . 2009.

Kasali, Rhenald. Disruption "Tak Ada yang Tak Bisa Diubah Sebelum Dihadapi Motivasi Saja Tidak Cukup" Menghadapi Lawan-Lawan Tak Kelihatan dalam Peradaban Ube, Jakarta: PT Gramedia Pustaka Utama. 2017.

Leow, Fui-Theng. Interactive Multimedia Learning: Innovating Classroom Education in a Malaysian University. Turkish Online Journal of Educational Technology, 13 (2), 99-110. 2014.

Ma, A.K.F., O'Toole, J. & Keppell, M. An investigation of student teachers' attitudes to the use of media triggered problem-based learning. Australasian Journal of Educational Technology, 24(3), 311-325. 2008.

Martin, F. & Klein, J.D. Effects of Objectives, Practice, and Review in Multimedia Instruction. Journal of Educational Multimedia and Hypermedia, 17 (2), 171-189. 2008.

Mishra, S. & Sharma, R.C. Interactive Multimedia in Education and Training. India: Idea Group Publishing. 2004.

Moleong, Lexy J. Metodologi Penelitian Kualitatif, Bandung:Remaja Rosdakarya. 2004.

Mudinillah, Adam. The Development of Interactive Multimedia Using Lectora Inspire Application in Arabic Language Learning. Jurnal Iqra', 4(2), 285–300. 2019.

Özcan, Oguzhan, & Akarun, Lale. Teaching Interactive Media Design. International Journal of Technology and Design Education, 19, 161–171. 2002.

Parekh, R. Principles of Multimedia. New Delhi: Tata McGraw-Hill. 2006.

Ramadhani, Reda, & Muhtadi, Ali. Development of Interactive Multimedia in Learning Islamic Education, International Journal of Multicultural and Multireligious Understanding, 5 (6), 13. 2018.

Ramma, Yashwantrao et al. Teaching and learning physics using technology: Making a case for the affective domain. Education Inquiry. 2017.

Reda et al. Development of Interactive Multimedia in Learning Islamic Education. International Journal of multicultural and multireligious Understanding, 5 (6), p. 9. 2018.

Rosidin. Problematika Pendidikan Islam Perspektif Maqasid Shari'ah, Maraji'. Jurnal Studi KeIslaman, 3(1), 186. 2016.

Sanaky, Hujair AH. Media pembelajaran interaktif-inovatif. Yogyakarta: Kaudaba Dipantara. 2013.

SEG Research. Understanding Multimedia Learning: Integrating multimedia in the K-12 classroom. PA: New Hope. 2008

Shank, P. The Value of Multimedia in Learning. Adobe Design Center. 2005. [On-line].Available: http://www.adobe.com/designcenter/thinktank/valuemedia/The_Value_of_Multimedia.pdf

Shelly et al. Teachers discovery computers: Integrating technology and digital media in the classroom. Boston, MA: Thomson Course Technology. 2006.

Smeda, Najat et al. The effectiveness of digital storytelling in the classrooms: a comprehensive study. Smart Learning Environments, 1 (6), 1-22. 2014.

Sugiyono. Metode Penelitian. Bandung: Alfabeta. 2018.

Tanjung, Ellisa Fitri. Improving the Quality of Religious Islamic Education Learning through Collaborative Learning Approach in SMP Al-Muslimin Pandan District Tapanuli Tengah. Advances in Social Science, Education and Humanities Research, 231, 205-207. 2018.

Tiara, Anggia Dwi. Implementasi Multimedia Interaktif dalam Pembelajaran Ekonomi di Sekolah. 3(2), 1-10. 2015.

Tilaar, H. R. Beberapa Agenda Reformasi Pendidikan Nasional dalam Persfektif Abad 21, Magelang: Tera Indonesia. 1998.

Wetzel, K., Zambo, R., & Padget, H. A Picture of Change in Technology-rich k 8 classrooms. Journal of Computing in Teacher Education. 18 1), 5-11. 2002.

Wiana, Winwin et al. The Effectiveness of Using Interactive Multimedia Based on Motion Graphic in Concept Mastering Enhancement and Fashion Designing Skill in Digital Format. IJET, 13 (2), 4-20. 2018. http://dx.doi.org/10.3991/ijet.v13i02.7830

Yuniasih, dwi et al. Need Assessment of Interactive Multimedia Based on Game in Elementary School: A Challenge into Learning in 21st Century. International Journal of Educational Research Review. 3(3),1-8. 2018.

ZA, Ahmad et al. Study guide for Islamic Studies. Petaling Jaya: Prentice Hall Pearson Malaysia Sdn. Bhd. 2006.

Zaid, Mohammad, et al. Relationship Between the Technology and Education in Improving Learning Quality. Procedia-Social and Behavioral Sciences. 2012.

Zezulka, F., Marcon, P., Vesely, I., & Sajdl, O. Industry 4.0–An Introduction in the phenomenon, IFAC-PapersOnLine, 49 (25), 8-12. 2016. https://doi.org/10.1016/j.ifacol.2016.12.002

Y. Xing, Z., Qi, "Development of creativity in physical education teachers using interactive technologies: involvement and collaboration," Educ. Inf. Technol., vol. 28, no. 5, hal. 5763–5777, 2023, [Daring]. Tersedia pada: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85141440239&doi=10.1007%2Fs10639-022-11422-9&partnerID=40&md5=DOI: 10.1007/s10639-022-11422-9

Z. Liu, "Regeneration of Liangzhu culture: multimedia exhibition, simulated restoration, innovative cultural products, nearby area integration, virtual reality and augmented reality," Humanit. Soc. Sci. Commun., vol. 10, no. 1, hal. 374, 2023, [Daring]. Tersedia pada: https://www.scopus.com/inward/record.uri?eid=2-s2.0-

85163889543&doi=10.1057%2Fs41599-023-01865-x&partnerID=40&md5=DOI:
10.1057/s41599-023-01865-x

L. Kinzer, C.K., Verhoeven, "Interactive literacy education: Facilitating literacy environments through technology," Interact. Lit. Educ. Facil. Lit. Environ. Through Technol., hal. 1–323, 2023, [Daring]. Tersedia pada: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162963771&doi=10.4324%2F9781003417965&partnerID=40&md5=c596d1af388940d9b d20a30ff7e925ed%0ADOI: 10.4324/9781003417965

W. Rehman, I., Hanif, M.S., Ali, Z., Jan, Z., Mawuli, C.B., Ali, "Empowering neural collaborative filtering with contextual features for multimedia recommendation," Multimed. Syst., vol. 29, no. 4, hal. 2375–2388, 2023, [Daring]. Tersedia pada: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85160752325&doi=10.1007%2Fs00530-023-01107-9&partnerID=40&md5=DOI: 10.1007/s00530-023-01107-9