TA'DIB JOURNAL, 27 (2), 2024, (July-December)

ISSN: 1410-8208 (*Print*) 2580-2771 (*Online*)
Available online at https://ejournal.uinmybatusangkar.ac.id/ojs/index.php/takdib

Spiritual Pilgrimage Through Virtual Reality (VR): Transforming Islamic Religious Education in Madrasahs

Received: 25-05-2024; Revised: 21-10-2024; Accepted: 18-11-2024

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Abstract: The use of virtual reality (VR) technology in Islamic Religious Education learning in schools has become an interesting topic to improve students' understanding of religious concepts. This study explores the impact of virtual reality (VR) technology in simulating religious pilgrimage on students' understanding of religious concepts and teachers' perceptions. The research conducted used a case study design with a qualitative approach. The research setting was purposively selected at Madrasah Tsanawiyah Negeri (MTsN) 1 Kota Bengkulu. The subjects in this study were Islamic Religious Education teachers and students. The data in this study were collected through observation, interviews, and documentation. Data validity testing in this study was carried out using the triangulation test method. Data analysis in this study adopted a descriptive approach involving several stages, namely data condensation, data presentation, and data conclusion drawing and verification. The results showed: that *first*, there was a positive acceptance from students towards using Virtual Reality (VR) technology in simulating religious pilgrimage, with many students feeling an enchanting and immersive experience. *Second*, VR plays a significant role in improving students' understanding of religious concepts, especially in understanding the historical context and spiritual meaning of holy places. *Third*, Islamic religious education teachers have a positive perception of the use of VR in learning. The teachers see VR as a tool for increasing student engagement and expanding the learning experience.

Abstrak: Penggunaan teknologi realitas virtual (VR) dalam pembelajaran Pendidikan Agama Islam di sekolah-sekolah telah menjadi topik menarik untuk meningkatkan pemahaman siswa tentang konsep-konsep agama. Studi ini mengeksplorasi dampak teknologi realitas virtual (VR) dalam mensimulasikan perjalanan ibadah agama terhadap pemahaman konsep-konsep agama siswa dan persepsi guru. Penelitian yang dilakukan menggunakan desain studi kasus dengan pendekatan kualitatif. Setting penelitian dipilih secara purposif di Madrasah Tsanawiyah Negeri (MTsN) 1 Kota Bengkulu. Subjek dalam penelitian ini adalah guru Pendidikan Agama Islam dan siswa. Data dalam penelitian ini dikumpulkan melalui observasi, wawancara, dan dokumentasi. Pengujian validitas data dalam penelitian ini

dilakukan menggunakan metode uji triangulasi. Analisis data dalam penelitian ini mengadopsi pendekatan deskriptif yang melibatkan beberapa tahap, yaitu kondensasi data, presentasi data, dan penarikan serta verifikasi kesimpulan data. Hasilnya menunjukkan: bahwa pertama, ada penerimaan positif dari siswa terhadap penggunaan teknologi Realitas Virtual (VR) dalam mensimulasikan ziarah agama, dengan banyak siswa merasakan pengalaman yang menawan dan mendalam. Kedua, VR memainkan peran penting dalam meningkatkan pemahaman siswa tentang konsep-konsep agama, terutama dalam memahami konteks sejarah dan makna spiritual dari tempat-tempat suci. Ketiga, guru pendidikan agama Islam memiliki persepsi positif terhadap penggunaan VR dalam pembelajaran. Para guru melihat VR sebagai alat untuk meningkatkan keterlibatan siswa dan memperluas pengalaman belajar.

Keywords: Religious Concepts Understanding, Islamic Education, Religious Pilgrimage Simulation, Virtual Reality Technology.

INTRODUCTION

In today's modern technological era, Islamic Religious Education learning in madrasas is faced with the challenge of remaining relevant and attractive to young people who are increasingly connected to the digital world (Prastowo et al., 2020; Remiswal & Firman, 2018). One important aspect of Islamic education is spiritual understanding and experience, which is often gained through the practice of pilgrimage to historical and holy places. Islamic education emphasizes the importance of spiritual experiences in the formation of student's religious identity and moral values (Remiswal et al., 2022). Direct experiences, such as pilgrimages to historical and sacred places, have long been considered an important means of enhancing religious understanding and spiritual experience (Zheng et al., 2020).

However, limited access, cost, and time are often barriers for students to experience the pilgrimage firsthand. To overcome such barriers, virtual reality (VR) technology has emerged as an interesting and innovative alternative (Lege & Bonner, 2020). Virtual reality (VR) technology expands the boundaries of human experience by creating simulated environments that resemble the real world. It creates an imaginary world that allows users to interact with the environment in real-time (Greengard, 2019). In educational literature, it has been recognized that the use of technology in the learning process can increase student engagement. VR provides a more interactive learning experience and facilitates a better understanding of concepts (Bond et al., 2020). Experiential learning, where students are actively engaged in hands-on experiences, is effective in facilitating deeper and sustained understanding (Remiswal et al., 2023).

Empirical observations at the research locus show that by utilizing virtual reality (VR), students can make pilgrimages to holy and historical places virtually. This provides an immersive experience and is close to reality without having to leave the classroom. This opens up new opportunities in learning Islamic Religious Education, where the use of technology can be an effective means to improve students' understanding and spiritual experience. This problem is also an attraction to explore it in depth through research activities that focus on "the impact of using

virtual reality (VR) in simulating religious pilgrimages on student understanding and teacher perceptions when using it".

Although there has been research on the use of virtual reality (VR) technology in education (McGovern et al., 2020; Rohman et al., 2021; Yu, 2023). This research fills the gap by focusing on the impact of its use on students' understanding of religious concepts and teachers' perceptions in learning Islamic Religious Education. The paucity of research exploring the impact of virtual reality (VR) on students' understanding of religious concepts and teachers' perceptions in Islamic Education learning indicates the need for further research in the area. Therefore, this study fills the knowledge gap by investigating the impact of using virtual reality (VR) in a religious pilgrimage simulation on students' understanding and teachers' perceptions when using it. This study aims to explore the impact of using virtual reality (VR) technology in a religious pilgrimage simulation on students' understanding of religious concepts and teachers' perceptions when using it.

METHOD

This research was conducted using a case study design with a qualitative approach (Arikunto, 2011). The qualitative approach in this research is used to explore in depth how the impact of using virtual reality (VR) technology in simulating religious pilgrimages on students' understanding of religious concepts and teachers' perceptions. The qualitative approach is very relevant in this research because this research aims to reveal the subjective perceptions and understandings of the informants. Using a quantitative approach may not be sufficient in exploring the emotional aspects and deep perceptions related to the impact of VR technology on learning religious concepts. The research setting was purposively selected at Madrasah Tsanawiyah Negeri (MTsN) 1 Kota Bengkulu (Stommel & Wills, 2004). The setting selection is based on the suitability of the research focus to be studied. This research took place from September to December 2023, outside the schedule of making proposals and other activities.

The subjects in this study were Islamic Education teachers and students who took the subject. The selection of students and teachers was carried out using a purposive sampling technique, by considering certain criteria. These considerations include direct involvement in the use of VR technology and curiosity about the pilgrimage simulation experience. The Islamic Education teacher was chosen as a key informant because he has a deep understanding of the curriculum and the impact of this technology integration on student understanding. Students were also selected based on their active involvement in learning with VR simulation, as well as references from teachers who know students who show better understanding or have difficulties in understanding religious concepts (Creswell, 2012; Given, 2008). The data in this study was collected through various techniques, including observation, interviews, and documentation (Arikunto, 2011; Bungin, 2007; Ratna, 2010). These various techniques are used to obtain primary data related to research on the impact of using virtual reality (VR) technology in simulating religious pilgrimages on students' understanding of religious concepts and teachers' perceptions when using it.

Testing the validity of the data in this study was carried out using the triangulation test method (Moleong, 2011). Triangulation was conducted by verifying information from three main sources: students, teachers, and learning documentation. Each informant was allowed to provide different views, and data from interviews were compared with classroom observations and documentation records. In addition, the triangulation

technique also involves time variation in data collection, where data is collected in different learning situations, such as before, during, and after the use of VR technology. Data analysis in this study will adopt a descriptive approach by referring to the model introduced by Miles, et al., (2014). This model involves several stages, such as data condensation, data presentation, conclusion drawing, and data verification.

RESULTS AND DISCUSSION

Student Acceptance and Experience in the Use of Virtual Reality (VR) Technology

The results showed that there was positive student acceptance of the use of virtual reality (VR) technology in simulating religious pilgrimages. The students described the experience of using virtual reality (VR) as an engaging and immersive tool. VR allowed each student to experience being in holy places that were previously inaccessible. Some students even stated that the experience enhanced their emotional and spiritual connection with Islamic religious material. These results suggest that the use of virtual reality (VR) technology can be an effective tool in enhancing the understanding of religious concepts. Furthermore, the students argued that VR can deepen the spiritual experience in students.

A review of the above findings based on constructivism and experiential learning theory indicates that VR can be an effective tool in supporting emotionally and spiritually relevant experiential learning. Within the framework of constructivism, where knowledge is built through direct experience. VR acts as a medium that allows students to actively experience religious concepts and deepen their understanding with intense engagement (Olusegun, 2015). Furthermore, experiential learning theory that emphasizes four stages of learning - namely concrete experience, observational reflection, abstract conceptualization, and active experimentation - is also relevant in this analysis (Kolb, 2015). With VR, students gain concrete experience through simulations that are close to reality. This is followed by a personal reflection that allows them to relate the religious material to personal experiences, both from an emotional and spiritual perspective. This stage shows that the use of VR in Islamic education encourages deep reflection and more meaningful understanding.

Furthermore, the findings of the above study are consistent with the findings of several previous studies that show a positive acceptance of the use of virtual reality (VR) technology in the context of education. Research by Yildirim et al., (2018), for example, found that students responded enthusiastically to the use of virtual reality (VR) in history learning, finding that virtual experiences were able to increase student interest and engagement in learning. Similarly, research by Matovu et al., (2023) which examined the use of virtual reality (VR) in science learning showed that students showed a positive response to the use of virtual reality (VR) technology. They cited an engaging and immersive learning experience and improved understanding of scientific concepts. Therefore, the findings from this study provide additional strong evidence of the effectiveness and students' positive acceptance of the use of virtual reality (VR) technology in an educational context, particularly in deepening students' spiritual understanding and experience through simulated religious pilgrimages.

In addition, the results also noted that some students felt a significant improvement in their understanding of religious concepts after participating in the virtual reality pilgrimage simulation. This shows that the use of virtual reality (VR) technology in Islamic

religious education can provide real benefits in improving students' understanding of Islamic religious materials and enriching their learning experience. The findings of this study also strengthen the findings of previous studies which show that the use of virtual reality (VR) technology can improve students' understanding of learning materials.

Research by Remolar et al., (2021) which investigated the use of virtual reality (VR) in history learning and found that virtual experiences can improve students' understanding of historical concepts and cultural contexts. Likewise, research by Xu and Ke (2016) which examined the use of virtual reality (VR) in mathematics learning found that students experienced significant improvements in their understanding of mathematical concepts after participating in the virtual learning experience. Therefore, these findings contribute further evidence of the potential of virtual reality (VR) technology as an effective tool in improving students' understanding of various subjects, including Islamic Education, by providing an immersive and engaging learning experience.

The results show that several factors influence students' acceptance of virtual reality (VR) technology in the context of religious pilgrimage simulation. One of the main factors is the quality of experience provided by virtual reality (VR) technology. The findings show that students tend to be more accepting of virtual reality (VR) technology if the experience presented feels realistic, immersive, and engaging. This highlights the importance of content quality and design in the development of effective virtual reality (VR) experiences. In addition, the factors of accessibility and infrastructure support also play an important role in student acceptance of virtual reality (VR) technology. Students who have easier access to virtual reality devices and technical support tend to be more accepting of this technology in learning.

The above research findings corroborate previous findings that emphasize the importance of quality of experience. The findings also factor in access and infrastructure in students' acceptance of virtual reality (VR) technology in learning. Research by Pletz (2021) highlighted that the quality of content and design in the development of virtual reality (VR) experiences greatly influences the level of student acceptance of the technology. This finding is also supported by Calvert dan Abadia (2020) which shows that realistic and engaging virtual reality (VR) experiences strengthen students' interest in using technology for learning. In addition, (Bower et al., 2020) highlighted that easy access and adequate technical support from schools can increase students' acceptance of virtual reality (VR) technology in an educational context. Therefore, the results of this study confirm that aspects of experience quality and infrastructure support play a crucial role in influencing students' acceptance of virtual reality (VR) technology in learning.

The Impact of Using Virtual Reality (VR) Technology on Students' Understanding of Religious Concepts

The results revealed a significant improvement in students' understanding of religious concepts after participating in a virtual reality (VR) pilgrimage simulation. Students reported that the virtual experience enabled them to better understand the historical context and spiritual significance behind the holy places. The improvement in understanding of religious concepts after engaging in the virtual reality pilgrimage simulation shows that VR can be an effective tool in improving students' understanding of Islamic religious materials. Students felt the tangible benefits of the virtual experience

which allowed them to feel a deeper sense of closeness and connection with the Islamic teachings.

A review of the above findings indicates that the improvement in understanding of religious concepts experienced by students is in line with the principles of constructivism and experiential learning. This principle emphasizes direct experience to encourage students to internalize their knowledge through personal reflection and active involvement in the learning process (Kolb, 2015; Olusegun, 2015). VR facilitates concrete learning experiences where students engage, reflect, and relate religious material with meaningful values to enrich their spiritual experience and understanding of religious concepts. Furthermore, the above research findings also reflect previous findings which show that the use of virtual reality (VR) technology has the potential to improve students' understanding of various learning concepts.

Parong dan Mayer (2018), then, found that virtual experiences were able to improve students' understanding of complex scientific concepts through presenting learning content in a more interactive and immersive format. Similar findings were also found in a study by Dhimolea et al. (2022) which investigated the use of virtual reality (VR) in language learning. Students reported significant improvements in language comprehension and mastery after engaging in the virtual learning experience. Therefore, the results of this study provide additional support to the idea that virtual reality (VR) technology can be an effective tool in improving students' understanding of learning materials, including in the context of understanding religious concepts in Islamic religious education.

In addition, it is important to note that the findings of this study also highlight the importance of experiential dimensions and students' emotional connections in Islamic religious learning. Previous research exploring the use of virtual reality (VR) technology in the context of Islamic religious education, such as research by Hornbeck dan Barrett (2008), showed that virtual experiences can deepen students' understanding of spiritual values and facilitate personal reflection on religious teachings. In this context, the results of this study corroborate the idea that virtual experiences are not just a tool for transferring information, but also a means to enrich students' spiritual experiences and build deep connections with Islamic material.

Teacher Perceptions and Supporting Factors for the Use of Virtual Reality (VR) Technology

Research results through interviews with Islamic teachers revealed that there is great potential in the use of virtual reality (VR) technology as a means to enhance Islamic Education learning in secondary schools. Islamic Education teachers specifically highlighted the advantages of using virtual reality (VR) technology in creating fun and engaging learning experiences for students, as well as expanding the scope of learning beyond the classroom. The results of this study are in line with previous findings which show that teachers widely see the potential of virtual reality (VR) technology in enhancing students' learning experiences.

Bogusevschi et al. (2020) found that teachers in various disciplines welcomed the use of virtual reality (VR) in learning, stating that the technology could enhance student engagement and enrich their learning experience. Similarly, research by Alfalah (2018) who researched teachers' perceptions of the use of virtual reality (VR) in science education found that teachers recognize the potential of virtual reality (VR) technology to enhance student understanding and add a dimension of exploration in learning.

Therefore, the results of this study affirm the view that virtual reality (VR) technology has great potential to enrich students' learning experiences in various subjects, including in the context of Islamic Education learning in madrasahs.

Islamic Education teachers also emphasize that supporting factors such as school administration support and the availability of technological resources are considered important in the success of implementing virtual reality (VR) technology in learning. The interview results confirm that, despite the great potential to utilize virtual reality (VR) technology in Islamic education, support from various parties within the school is a key factor determining its success. The results of this study confirm previous findings that highlight the importance of school administration support and the availability of virtual reality (VR) technology resources in the educational context.

A study by Chandra dan Kumar (2018), for example, found that the success of implementing virtual reality (VR) technology in learning depends on the support and commitment from the school administration as well as the availability of adequate technological infrastructure. Similarly, research by Pellas et al. (2021) examines the implementation of virtual reality (VR) technology in mathematics learning. This research highlights the importance of support from various parties in schools, including administration, teachers, and technical staff, to ensure the smooth and successful use of the technology. Therefore, the results of this study emphasize that these non-technical factors play a crucial role in ensuring the successful implementation of virtual reality (VR) technology in Islamic Education learning in madrasahs.

Overall, the research results indicate that Islamic Religious Education teachers' perceptions of the use of virtual reality (VR) technology in Islamic Religious Education learning are very positive. The teachers see it as a tool that can change the learning paradigm and enhance student engagement in understanding Islamic teachings. These research findings are consistent with previous studies that show teachers have a positive perception of the use of virtual reality (VR) technology in education.

On another research, Smutny (2023), found that teachers in various subjects welcomed the use of virtual reality (VR) technology in learning, considering it a tool that can stimulate student interest and engagement. In addition, research by Hossain Maghool et al. (2018) which explores teachers' perceptions of the use of VR in science education shows that teachers believe that virtual reality (VR) technology has the potential to deepen students' understanding of complex scientific concepts. Therefore, the results of this study provide additional support for the view that virtual reality (VR) technology can bring positive changes to the learning paradigm in various disciplines.

The research results indicate the presence of suggestions from teachers regarding the effective integration of virtual reality (VR) technology, taking into account several considerations. First, it is necessary to develop a curriculum that integrates the use of virtual reality (VR) technology in a structured manner within Islamic Religious Education. This involves planning the use of virtual reality (VR) technology as an integral part of the learning process, which includes selecting relevant content, designing appropriate learning activities, and developing adequate evaluations. Second, it is important to involve teachers in this integration process by providing adequate training and support. Teachers who are skilled and trained in the use of virtual reality (VR) technology will be able

to optimize the potential of this technology in delivering Islamic religious education more effectively. In addition, support from the school and government in providing the necessary facilities and infrastructure is also a key factor in the successful integration of virtual reality (VR) technology into the Islamic Religious Education curriculum in madrasahs.

The findings of the research reinforce previous findings that emphasize the importance of structured planning and teacher involvement in the integration of virtual reality (VR) technology into the educational curriculum. Research by Marougkas et al. (2023) shows that the use of virtual reality (VR) technology in education requires careful planning, including the selection of relevant content and the development of learning activities that align with educational objectives. In addition, findings by Alalwan et al. (2020) highlighting the importance of training and support provided to teachers to ensure the effective use of virtual reality (VR) technology in learning. Therefore, the results of this study provide a deeper understanding of the steps that need to be taken in integrating virtual reality (VR) technology into Islamic Education learning in madrasahs. These steps involve not only careful planning and support from the madrasah but also the involvement of skilled and trained teachers in the use of this technology.

CONCLUSION

The conclusion of this study highlights the main finding that the use of Virtual Reality (VR) technology in Islamic religious education at the secondary school level has significant potential in enhancing students' understanding of religious concepts. Religious pilgrimage simulations through VR have proven capable of creating deep, engaging learning experiences and fostering stronger emotional and spiritual connections with the teaching material. The main findings also show that students involved in VR simulations are more enthusiastic about learning religious concepts, with a better understanding compared to conventional methods. However, the main challenge in implementing this technology is the limited technological resources in schools and the lack of strong administrative support.

For future implementation, madrasahs need to increase investment in technological infrastructure and provide training to teachers so that they can effectively utilize VR in learning. The development of VR content relevant to the Islamic religious curriculum is crucial to ensure that the material aligns with learning outcomes. Further research can focus on the comparison between the effectiveness of VR and conventional methods, as well as the exploration of factors influencing the adoption of VR in schools. With adequate infrastructure support and more in-depth research, VR technology is expected to become an innovation that supports the more effective teaching of Islamic religion in madrasahs.

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