

DEVELOPMENT OF 'GO ABI' VR AS AN INTERACTIVE DIGITAL MEDIUM FOR ISLAMIC RELIGIOUS EDUCATION IN 2ND GRADE ELEMENTARY SCHOOL: A MEDIA REFERENCE FOR COMMUNITY SERVICE ACTIVITIES IN NONTHABURI, THAILAND

Ani Nur Aeni^{1*}, Maulana¹, Dety Amelia Karlina¹, Fatimah Az-Zahra¹, Dede Syaefudin¹, Nahda Laila¹, Anita Seli¹, Indri Deniawati¹, Lula Dwi Kamilah¹

¹Primary School Teacher Education, Sumedang Campus, Universitas Pendidikan Indonesia
Jl. Mayor Abdurahman, Sumedang, West Jawa, 45311 - Indonesia

*Corresponding Author: aninuraeni@upi.edu

ABSTRACT

Islamic Religious Education (IRE) at the elementary school level is still dominated by conventional methods such as lectures and rote memorization, resulting in low student engagement and comprehension. This study develops and evaluates "GO ABI" (Go Abraham Interactive), a web-based Virtual Reality (VR) platform designed as an interactive digital learning medium for second-grade elementary school students on the story of Prophet Ibrahim. Using the Design and Development (D&D) model with the ADDIE framework, data were collected through observation, interviews, and documentation at SDN Cikeusik 1, Majalengka Regency, involving 16 students. The platform integrates three core components: interactive learning materials, an educational game (Eduplay), and a 360-degree VR simulation depicting the City of Babylon, the Ka'bah, and the burning of Prophet Ibrahim. The results showed significant improvements, with the average score rising from 75.62 to 93.12 and the mastery rate increasing from 68.75% to 93.75%. Beyond academic gains, the immersive VR experience also enhanced students' motivation, concentration, and active participation. This study concludes that GO ABI is an effective and innovative digital learning medium that provides meaningful and immersive learning experiences, offering a promising alternative for improving IRE instruction quality in the digital age.

Keywords: *Virtual Reality, GO ABI, Learning Outcomes, Islamic Religious Education, Elementary School*

INTRODUCTION

In today's globalized world, advancements in digital technology have significantly transformed the field of education, necessitating changes in learning models, methods, and media to meet the demands of 21st-century students. Technology not only serves to improve efficiency but also creates a more engaging and meaningful learning process. One technology that is developing rapidly and holds great potential in education is Virtual Reality (VR), which allows students to experience an immersive and realistic learning process through simulated environments that cannot be achieved through conventional means (Hamilton et al., 2021). Theoretically, the use of visual and interactive media such as VR supports better information processing within the context of cognitive multimedia learning theory, which reveals that the combination of visual and auditory elements can significantly improve students' understanding and memory retention (Legi et al., 2023).

Islamic Religious Education (IRE) at the elementary school level plays a crucial role in shaping students' character, morals, and spirituality from an early age. However, the reality on the ground shows that IRE instruction is still dominated by traditional methods such as lectures and rote memorization (Aeni, Djuanda, et al., 2022). This results in a lack of student engagement, low interest, and difficulty in understanding abstract concepts. Given that second-grade elementary school students are in the concrete operational stage, they need learning media that is more contextual, visual, and interactive to better understand concepts. Previous studies have shown that the use of VR can enhance student motivation, engagement, and conceptual understanding; however, its application to the history of the prophets within the IRE curriculum at the elementary school level remains very limited. (Petersen et al., 2023).

Several previous studies have examined the use of digital media in Islamic Education, but the majority are still limited to the use of two-dimensional videos or simple device-based applications. There are still few studies that specifically target the development of VR media designed specifically for second-grade elementary school students for history lessons (Makransky & Petersen, 2021) There is a lack of research on how immersive media can help students understand complex historical events. Therefore, this study aims to introduce and test the effectiveness of the "GO ABI" VR media as an innovative solution.

The purpose of this study is to evaluate the effectiveness of the "GO ABI" VR platform in improving the learning outcomes of second-grade elementary school students on the story of Prophet Abraham, as well as to observe its impact on student motivation and participation during the learning process. It is hoped that this study will contribute by offering an alternative interactive digital learning medium that can level the playing field in terms of student understanding and provide a more engaging and meaningful learning experience (Makransky & Mayer, 2022). By presenting captivating visualizations such as the City of Babylon and the burning of Prophet Ibrahim, this medium is expected to overcome the limitations of lecture-based methods and improve the overall quality of Islamic Religion Education (IRE) instruction.

METHOD

In this study, the author employed the D&D (Design and Development) model. The approach used was a qualitative method, with data collection techniques including observation, online interviews, and documentation. Since the research problem pertains to human aspects, the qualitative approach was deemed appropriate as it involved a comprehensive examination of the research subjects, who served as the primary instruments for data collection (Rohana, 2025).

The research was conducted at an elementary school located in Majalengka Regency, namely SDN Cikeusik, on March 11, 2026. The criteria for research subjects selected by the researcher were individuals possessing knowledge, experience, and information regarding second-grade elementary school teachers and students. The research population consisted of all 21 second-grade students at Cikeusik 1.

This study aims to introduce the Ka'bah, the city of Babylon, idols, and the story of the burning of Prophet Ibrahim to second-grade elementary school students (Kreativitas et al., n.d.). Additionally, this study aims to develop and utilize Virtual Reality (VR) technology as a learning medium. In its implementation, the researcher used a VR-based learning medium containing the story of Prophet Ibrahim presented in the form of a 360-degree video in developing the learning materials, the author used the ADDIE model. The methods used to collect data for this study were interviews and observation (Zahriah et al., 2025).

Interviews were used as a data collection technique to obtain the information needed for this study. The data collected pertained to the informants' opinions regarding the research topic. In this study, the researcher interviewed Islamic Education teachers who possessed knowledge of and were responsible for the subject under study. Observation was used as a method to directly observe the use of the VR product developed by the researcher among second-grade students and teachers at SDN Cikeusik 1.

Through this observation activity, the researcher was able to observe the use of VR as a learning medium in introducing the story of Prophet Ibrahim in the PAI subject, as applied to second-grade teachers and students

RESULT AND DISCUSSION

a. Result

The development of the VR GO ABI web application utilized the ADDIE model, which comprises the stages of Analysis, Design, Development, Implementation, and Evaluation. The analysis stage is the first and most critical step in the educational media development process, as it involves a thorough identification of students' needs, challenges, and characteristics. This analysis was conducted in the second grade at SDN Cikeusik 1 using interviews and direct classroom observations. Interviews with the Islamic Religion Education (IRE) teacher revealed that the teaching methods used were still dominated by lectures and assignments relying on textbooks. These findings indicate that video not only functions as a medium for delivering information, but also as a tool that can optimize learners' cognitive processes (Waryanti et al., 2025). These methods tend to be one-sided, resulting in students being less active in the learning process.

1. Analysis

The results of the implementation showed very significant progress in student learning outcomes. The average student score increased from 75.62 to 93.12, a rise of 17.50 points. In terms of percentage, the learning completion rate rose from 68.75% to 93.75%, representing an increase of 25%. Meanwhile, the percentage of students who did not meet the learning standards dropped sharply from 31.25% to just 6.25% (Baroroh et al., 2024). In terms of student characteristics, second-grade elementary school students are in the concrete operational stage, so they require media that can provide real, visual, and interactive learning experiences. This initial condition is also reflected in the students' learning outcomes prior to the use of the media, where the average pre-test score was only 75.62, which is at the threshold of the Learning Objective Achievement Criteria (LOAC) (Ilham, 2023). Furthermore, the learning completion rate was only 68.75%, indicating that 31.25% of students had not yet fully grasped the material.

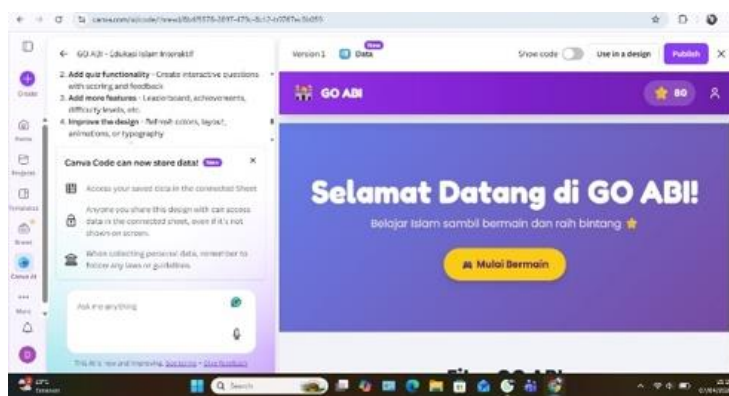


Figure 1. Initial Concept of GO ABI

Based on these issues, the developers formulated a solution in the form of a Virtual Reality (VR)-based learning medium—an interactive web platform named GO ABI (Go Abraham Interactive). This medium is designed to provide an immersive learning experience through the integration of content, interactive games (Eduplay), and 3D VR simulations depicting the Ka'bah, the burning of Prophet Ibrahim, idols, and the state of buildings during that era. Thus, this analysis phase serves as a strong foundation for designing a medium capable of addressing low student participation and learning outcomes.

2. Design

The design phase is the stage where the primary focus is on planning the structure, flow, and presentation of the GO ABI learning media. Here, developers organize the material in PowerPoint format, which will serve as the foundation for content development. The material is organized in a systematic, simple, and relevant manner to align with the characteristics of elementary school students.



Figure 2. PPT Presentation Design

This instructional design incorporates various multimedia elements such as text, images, audio, and video, in accordance with multimedia learning principles that demonstrate how the combination of visual and audio elements can enhance students' understanding and retention. Additionally, there are three main components designed within the GO ABI media, interactive materials about the story of Prophet Ibrahim, Eduplay educational game The expected web-based game design features attractive colors, includes practice questions, has a duration of 10–15 minutes, and is interactive, engaging, and enjoyable. It is also intended to increase students' interest and motivation, as well as help them better understand the material (Aeni et al., 2022). which develops understanding through question-based gameplay and immediate feedback, and a 3D VR simulation that gives students the opportunity to directly experience historical events.

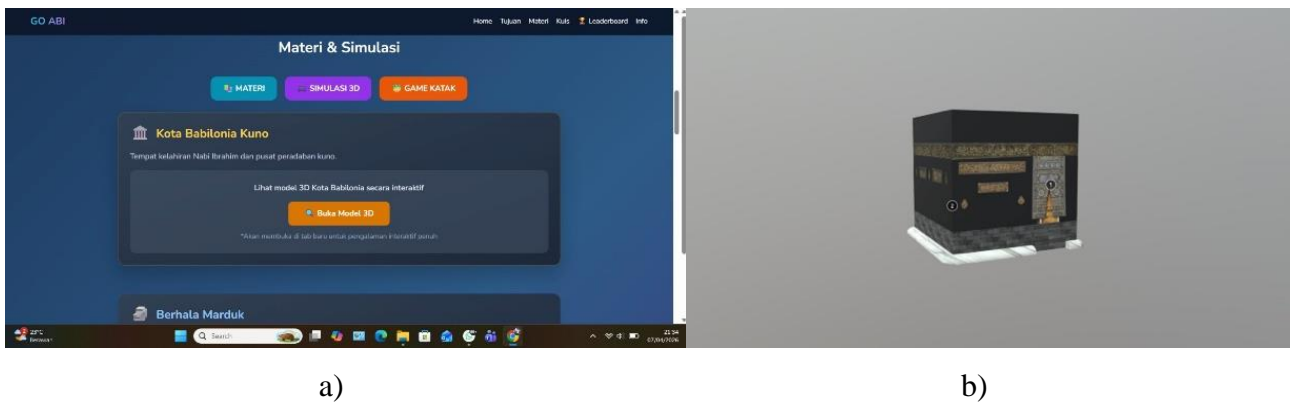


Figure 3. a) Media Storyboard; b) Initial Interface Design

This design also includes storyboards and media navigation paths to ensure ease of use. With a well-designed approach, this media is expected to increase student participation, which was previously low, as evidenced by the initial condition with a completion rate of only 68.75%.

3. Development

The development phase is the stage where the completed design is brought to life. The development of GO ABI media is carried out using various digital applications, such as Canva for graphic design, Sketchfab for creating 3D objects, Smart Apps Creator for building interactive applications, CapCut for video editing, and YouTube as an integration platform for 360° video content.

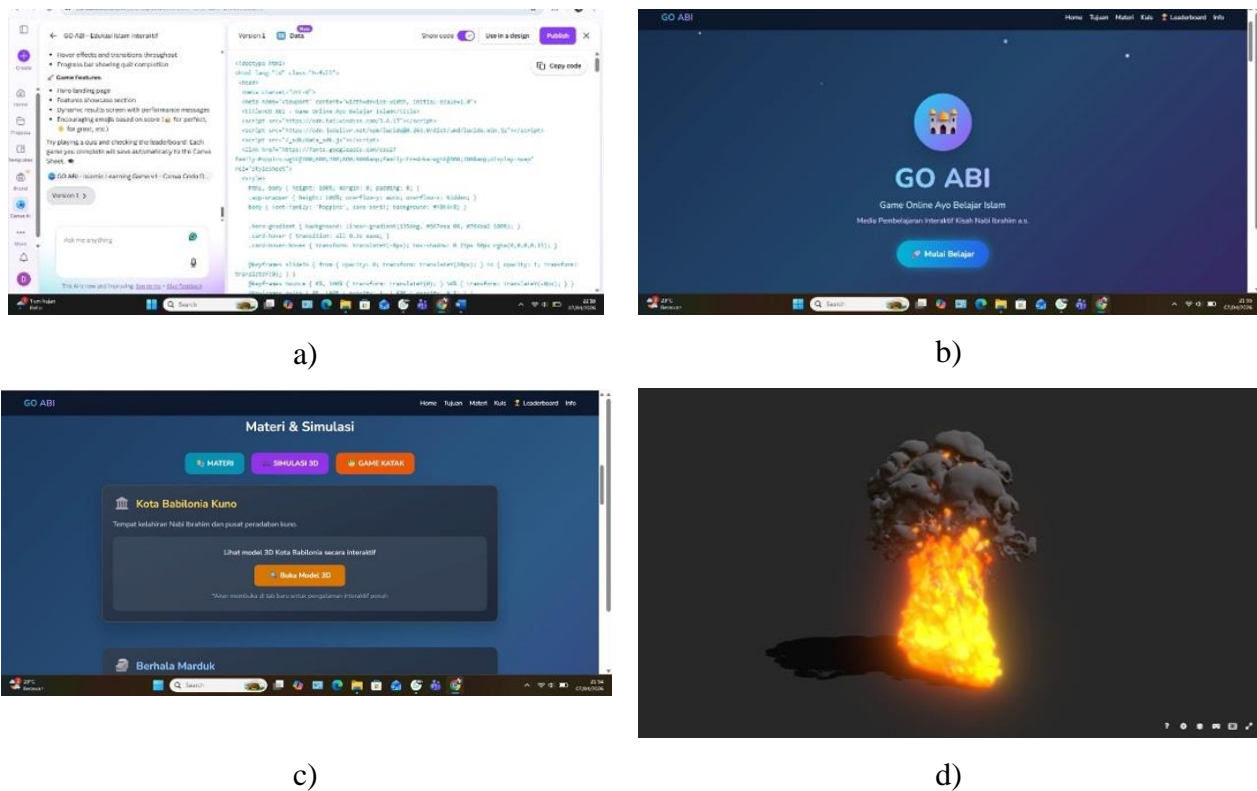


Figure 4. a) Creation Process in Canva; b) GO ABI App Interface; c) GO ABI Main Menu Interface, d) 3D Fire Object

All these elements are combined into a comprehensive, interactive, and engaging VR learning medium. The resulting product not only conveys the material but also provides a deep learning experience through visual simulations and direct interaction. The development of this media was specifically designed to address the issues identified in the analysis phase, which included low student comprehension, as evidenced by an initial score of 75.62, and insufficient learning mastery. Therefore, the interactive features and 3D visualizations within this media are expected to significantly improve student comprehension.

4. Implementation

The implementation phase is when the GO ABI platform is integrated into the learning process in the second-grade classroom at SDN Cikeusik 1. Lessons are conducted using a smartboard for traditional presentations, as well as smartphones and VR headsets to provide students with a more

immersive learning experience. During the implementation, students were not merely passive listeners but actively engaged in exploring the material, playing games, and participating in VR simulations. Additionally, this media can be accessed independently at home via mobile phones, thereby supporting more flexible learning.

(Nur Baiti Rohmah et al., 2022)

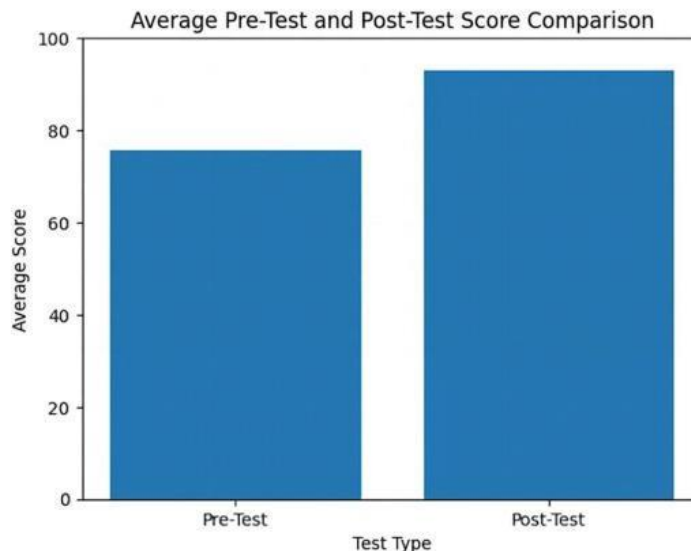


Figure 5. Comparison of Average Pre-Test and Post-Test

The results of the implementation showed very significant progress in student learning outcomes. The average student score increased from 75.62 to 93.12, a rise of 17.50 points. In terms of percentage, the learning completion rate rose from 68.75% to 93.75%, representing an increase of 25%. Meanwhile, the percentage of students who did not meet the learning standards dropped sharply from 31.25% to just 6.25% (Anggraini et al., 2026). This improvement indicates that the use of the VR GO ABI platform can have a very significant positive impact on students' understanding. Additionally, based on observations, students appeared more active, more focused, and more enthusiastic in participating in the learning process.

5. Evaluation

The evaluation process was conducted to assess the overall effectiveness of the GO ABI media through three methods: expert validation, observation, and assessment of learning outcomes.

The results of the expert validation indicated that this media is suitable for use in terms of both content and design. Observations revealed an increase in student engagement, as students appeared more active, focused, and enthusiastic compared to before the media was used (Irwan & Kamarudin, 2021). The assessment of learning outcomes showed a very significant improvement, both in terms of scores and the percentage of students who achieved mastery. Student interest in the use of VR

media was very high, and they found it easier to understand the material presented (Rifka Alkhilyatul Ma'rifat, I Made Suraharta, 2024)

Table 1. Student Learning Outcomes

Stage	Number of Students	Passed	Not Passed	Percentage
Pre-Test	16	11	5	68,75%
Post-Test	16	15	1	93,75%

These data indicate that the use of the VR GO ABI media significantly improved student learning outcomes. The 25% increase in mastery and the decrease in the number of students who did not meet the criteria from 31.25% to 6.25% provide strong evidence of the effectiveness of this media (Pratama & Roihan, 2026). Additionally, the increase in student motivation, attention, and participation also signifies the success of using this media.

b. Discussion

The most significant finding of this study is that the use of the GO ABI Virtual Reality (VR) platform significantly improved learning outcomes and student participation among second-grade elementary school students in the Islamic Religious Education (IRE) subject (Ozi et al., 2025). Several weaknesses include the lack of variation in teaching methods, where the dominance of lecture-based instruction causes students to become passive (Waryanti et al., 2025).

The shift from conventional lecture methods to an immersive digital environment had a major impact on raising average scores and achieving near-perfect mastery of the material.

1. Scientific Interpretation and Analysis

The significant increase in scores from a pre-test average of 75.62 to a post-test average of 93.12 indicates that VR successfully connects abstract historical narratives with a more tangible understanding. Scientifically, these results align with cognitive multimedia learning theory, which states that the combination of visual and audio elements can reduce cognitive load while enhancing students' memory retention (Anggraini et al., 2026). The use of technology in learning is expected to improve the quality of education, encourage active student engagement, and develop their digital skills (Petisi, 2025).

The significant increase in scores from a pre-test average of 75.62 to a post-test average of 93.12 indicates that VR successfully connects abstract historical narratives with a more tangible

understanding. Scientifically, these results align with cognitive multimedia learning theory, which states that the combination of visual and audio elements can reduce cognitive load while enhancing students' memory retention. (Nur Baiti Rohmah et al., 2022). At this stage of development, students require contextual and visual stimulation to understand complex concepts. The "immersive" nature of VR allows students to feel as though they are "inside" that historical event, which explains the increase in learning achievement rates from 68.75% to 93.75%.

2. Relation to Objectives and Previous Research

The significant increase in scores from a pre-test average of 75.62 to a post-test average of 93.12 indicates that VR successfully connects abstract historical narratives with a more tangible understanding. Scientifically, these results align with cognitive multimedia learning theory, which states that the combination of visual and audio elements can reduce cognitive load while enhancing students' memory retention (Pemanfaatan et al., 2024).

The significant increase in scores from a pre-test average of 75.62 to a post-test average of 93.12 indicates that VR successfully connects abstract historical narratives with a more tangible understanding. Scientifically, these results align with cognitive multimedia learning theory, which states that the combination of visual and audio elements can reduce cognitive load while enhancing students' memory retention (Kulon, 2026).

3. Analysis of Similarities and Differences

The significant increase in scores from a pre-test average of 75.62 to a post-test average of 93.12 indicates that VR successfully connects abstract historical narratives with a more tangible understanding. Scientifically, these results align with cognitive multimedia learning theory, which states that the combination of visual and audio elements can reduce cognitive load while enhancing students' memory retention (Dion Fahrizal H DG Pacidda, M. Nusran, Yan Herdianzah, 2024).

The similarity is that, like other studies on VR in education, this research confirms that immersion can enhance conceptual understanding. The difference is that, unlike studies that focus solely on general-purpose device-based applications, this research highlights that VR content specifically designed for the history of the Prophet is more effective in meeting the developmental needs of lower-grade elementary school students compared to general digital media.

In conclusion, the GO ABI VR platform serves as a transformative tool that not only improves academic performance but also revitalizes the delivery of spiritual and moral education in the digital age.

CONCLUSION

Based on the research and development conducted, one of the primary ways to address the shortcomings of traditional teaching methods in Islamic Religious Education (IRE) is by implementing the GO ABI Virtual Reality (VR) platform. This technology is introduced as a new solution for second-grade elementary school students who are in the concrete operational stage, where they require more contextual, visual, and interactive learning tools to understand abstract historical concepts (Mayer, 2024). By presenting immersive visualizations such as the City of Babylon and the burning of Prophet Ibrahim in 360-degree video format, this platform can provide a realistic learning experience that cannot be obtained through conventional teaching methods. Empirically, the implementation of VR GO ABI has proven successful in enhancing the effectiveness of Islamic Education (PAI) learning, as evidenced by a significant improvement in students' academic performance (Aeni, Nofriani, et al., 2022). This solution successfully raised the average student score from 75.62 to 93.12 and significantly increased the course completion rate from 68.75% to 93.75%. Beyond cognitive benefits, this immersive medium also addresses the issue of low student engagement, as it has been shown to boost motivation, concentration, and active participation during learning activities. Thus, the development of this interactive digital medium offers an effective alternative for creating a more immersive and meaningful learning experience for elementary school students.

ACKNOWLEDGMENT

This community service was funded by the Annual Work Plan and Budget of Universitas Pendidikan Indonesia for the 2026 Fiscal Year, under the Rector's Decree Number: 534/UN40/PT.01.01/2026.

SUPPLEMENTARY MATERIALS OR APPENDICES

The GO ABI (Go Abraham Interactive) Virtual Reality platform was developed using several digital tools, including Canva for graphic and interface design, Sketchfab for creating three-dimensional (3D) objects, Smart Apps Creator for building the interactive web-based application, CapCut for video editing, and YouTube as the integration platform for 360-degree video content. All visual assets, interactive materials, and VR simulations incorporated in this study were either originally created by the research team or used in accordance with applicable open-access licensing terms. The pre-test and post-test instruments used to assess student learning outcomes were developed and validated by the research team. Documentation of the implementation process, including classroom observation records and student assessment data, was collected at SDN Cikeusik 1, Majalengka Regency, West Java, Indonesia, on March 11, 2026. The GO ABI platform can be accessed via mobile

devices and web browsers, supporting flexible and independent learning beyond the classroom setting.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest in the publication of this article. This study was conducted solely for academic and scientific purposes. The development and implementation of the GO ABI Virtual Reality platform were carried out independently by the research team without any financial or personal interest that could have influenced the results or conclusions of this study. The funding received from the Annual Work Plan and Budget of Universitas Pendidikan Indonesia (RKAT UPI) for the 2026 Fiscal Year was used exclusively to support the research activities and did not create any conflict of interest.

REFERENCES

- Aeni, A. N., Djuanda, D., Nursaadah, R., Baliani, S., & Sopian, P. (2022). Pendidikan Guru Sekolah Dasar Volume 11 Nomor 6 Desember 2022 Sebagai Media Pembelajaran Untuk Memahami Materi Development of Word Wall Educative Game As Learning Media To Understand Islamic Religious Education Learning Subjects for Eleme. *Primary, 11*, 1835–1852.
- Aeni, A. N., Nofriani, A. N., Fauziah, I. A., & Fauzi, I. A. (2022). Pemanfaatan Media Animasi Berbasis Aplikasi Renderforest Dalam Membentuk Kepribadian Islami Bagi Siswa Sekolah Dasar Kelas 4 Pendidikan Guru Sekolah Dasar, Universitas Pendidikan Indonesia, Indonesia Utilization of Renderforest Application-Based Animati. *Jurnal Pendidikan Dan Teknologi Indonesia (JPTI), 2*(6), 279–287.
- Aini, N. N., Azizah, M., Bekti, R. S., & Thohir, M. A. (2023). Efektivitas Penggunaan Media Pembelajaran Virtual Reality terhadap Hasil Belajar Siswa pada Pembelajaran IPA di SD. *Caruban: Jurnal Ilmiah Ilmu Pendidikan Dasar, 6*(2), 267. <https://doi.org/10.33603/caruban.v6i2.8611>
- Anggraini, D. P., Sauri, S., & Khalid, S. M. (2026). Analisis Penerapan Prinsip Multimedia Mayer dalam Video Pembelajaran Bahasa Arab di Channel YouTube Learn Arabic with Asmae. *6*(1), 14–27.
- Baroroh, R. N., Zulfitri, & Ahmad, J. R. (2024). Inovasi Virtual Reality (VR) sebagai Media yang Efektif pada Pembelajaran Sejarah Kebudayaan Islam. *Jurnal Pendidikan Agama Islam, 3*(2), 235–238.
- Clif Mims Sharon E. Smaldino, D. L. L. (2010). Instructional technology and media for learning. In *Revista mexicana de investigación educativa* (Vol. 15, Number 44).
- Dion Fahrizal H DG Pacidda, M. Nusran, Yan Herdianzah, A. F. (2024). Scientica Scientica. *Optimalisasi Efisiensi Rantai Pasokan: Studi Perbandingan Metode Economic Order Quantity (EOQ) Dan Just-In-Time (JIT) Di PT. SSC, 2*, 251–255.
- Hamilton, D., McKechnie, J., Edgerton, E., & Wilson, C. (2021). Immersive virtual reality as a pedagogical tool in education: a systematic literature review of quantitative learning outcomes and experimental design. In *Journal of Computers in Education* (Vol. 8, Number 1). Springer

Berlin Heidelberg. <https://doi.org/10.1007/s40692-020-00169-2>

- Ilham, S. (2023). Tren dan Efektivitas Penggunaan Virtual Reality dalam Pembelajaran Pendidikan Agama Islam di Era Digital. *Wangsa: Journal of Education and Learning*, 02(05), 28–36. <https://www.ejournal.mannawasalwa.ac.id/index.php/wangsa/article/view/588>
- Kreativitas, P., Dalam, G., Berpikir, K., Siswa, K., & Era, D. I. (n.d.). *U s a n t a r a*. 6, 35–44.
- Kulon, M. (2026). *PENGEMBANGAN MEDIA ARTSTEPS VR UNTUK MENINGKATKAN HASIL BELAJAR STRUKTUR LAPISAN BUMI SISWA KELAS V SDN*. 341–349.
- Legi, H., Damanik, D., & Giban, Y. (2023). Transforming Education Through Technological Innovation In The Face Of The Era Of Society 5.0. *Educenter : Jurnal Ilmiah Pendidikan*, 2(2), 102–108. <https://doi.org/10.55904/educenter.v2i2.822>
- Makransky, G., & Mayer, R. E. (2022). Benefits of Taking a Virtual Field Trip in Immersive Virtual Reality: Evidence for the Immersion Principle in Multimedia Learning. *Educational Psychology Review*, 34(3), 1771–1798. <https://doi.org/10.1007/s10648-022-09675-4>
- Makransky, G., & Petersen, G. B. (2021). The Cognitive Affective Model of Immersive Learning (CAMIL): a Theoretical Research-Based Model of Learning in Immersive Virtual Reality. *Educational Psychology Review*, 33(3), 937–958. <https://doi.org/10.1007/s10648-020-09586-2>
- Mayer, R. E. (2024). The Past, Present, and Future of the Cognitive Theory of Multimedia Learning. *Educational Psychology Review*, 36(1), 1–25. <https://doi.org/10.1007/s10648-023-09842-1>
- Nur Baiti Rohmah, A., Putra Romadhona, E., Azmia Putri, L., Arifin, Z., Kartikasari, V., Tarbiyah dan Ilmu Keguruan, F., & Sunan Kalijaga Yogyakarta, U. (2022). Pembelajaran Pendidikan Islam Melalui Virtual Reality (Vr). *Jurnal Tarbiyah Islamiyah*, 7, 373–385.
- Ozi, Wiji Aziiz Hari, M., Zulkarnain, Kurniawan, & Erdianti. (2025). Efektivitas Media Virtual Reality Dalam Pembelajaran Ipa. *Jusi*, 1(1 SE-Articles), 12–17. <https://journal.innoscientia.org/index.php/jusi/article/view/165>
- Pemanfaatan, P., Reality, V., Media, S., Di, P., & Digital, E. (2024). *JDPP*. 12(1).
- Petersen, G. B., Stenberdt, V., Mayer, R. E., & Makransky, G. (2023). Collaborative generative learning activities in immersive virtual reality increase learning. *Computers and Education*, 207(July). <https://doi.org/10.1016/j.compedu.2023.104931>
- Petisi, J. (2025). 1 , 2 , 3 , 4. *06(02)*, 169–179.
- Pratama, B. N., & Roihan, R. A. (2026). *Jurnal Pendidikan Indonesia : Potensi Virtual Reality (VR) Sebagai Media Pembelajaran Mukhtakhir Dalam Pendidikan Agama Islam (Studi Kasus Smk Muhammadiyah 1 Bantul)*. 6(1). <https://doi.org/10.59818/jpi.v6i1.2689>
- Rifka Alkhilyatul Ma'rifat, I Made Suraharta, I. I. J. (2024). *No Title 濟無No Title No Title No Title*. 2, 306–312.
- Rohana. (2025). Model Manajemen Kelas Virtual Reality (VR): Studi Pustaka dalam Perspektif Teknopedagogi Masa Depan. *Jurnal IHSAN Jurnal Pendidikan Islam*, 2(2), 261–269. <https://doi.org/10.61104/ihsan.v2i2.1208>
- Waryanti, Z. N., Rochmawan, A. E., & Nur, H. (2025). Kemampuan Berfikir Kritis Siswa Kelas Viii Di Mts N 6 Boyolali. *Jurnal Pendidikan Islam*, 5(1), 27–36.

Zahriah, Fera Annisa, T. Murdani Saputra, Marlisa Rahmi, & Najwa Fitria. (2025). Aplikasi Teknologi Virtual Reality (VR) dalam Pembelajaran : Sebuah Studi Literatur. *Jka*, 2(1), 1–10. <https://doi.org/10.26811/9b148j90>