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VIRTUAL REALITY IN MADRASAH LEARNING: EVALUATING THE IMPACT ON QUR'ANIC MEMORIZATION AND ENGAGEMENT

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Abstract

This study aims to evaluate the impact of using Virtual Reality (VR) technology in madrasah learning, specifically on improving Quran memorization and student engagement. Using a literature review method, this study identified and analyzed various empirical studies, academic reports, and publications related to the integration of VR in technology-based Islamic and general education. The study's results indicate that VR has significant potential to enhance immersive learning experiences, helping students visualize the context of Quranic verses, and improving focus and memory retention through multisensory stimulation. Furthermore, the use of VR in madrasah learning has been shown to increase student motivation and engagement by providing an interactive and engaging learning environment. However, challenges such as limited infrastructure, device costs, teacher training requirements, and ethical issues related to the use of technology in religious education remain significant concerns. This study emphasizes the need for a structured approach and supportive policies to ensure the effective, sustainable, and consistent implementation of VR in Quranic learning in madrasahs.

Keywords: Virtual Reality, madrasah learning, Quran memorization, student engagement

INTRODUCTION

The development of digital technology in the last two decades has brought about major transformations in various aspects of life, including the world of education. One technology that has experienced significant development is Virtual Reality (VR), an immersive technology that allows users to experience three-dimensional experiences as if they were present in a virtual environment. In the formal education sector, especially in religious-based institutions such as madrasas, the use of VR is beginning to gain

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attention as an innovative learning medium that can increase student motivation, concentration, and learning effectiveness (Shobri et al., 2025a). Madrasas, as Islamic educational institutions that integrate religious values with general knowledge, have unique learning needs, particularly in the context of teaching the Qur'an, which demands memorization, precision, and appreciation (Asyari et al., 2025). In this context, VR technology is beginning to be considered as a new approach that has the potential to enrich the process of learning to memorize the Qur'an to make it more engaging and more effective, tailored to the characteristics of 21st-century students.

The process of memorizing the Quran, or tahfidz, generally requires intensive repetition, a consistent learning environment, and a high level of cognitive focus. However, in practice, many students experience challenges such as boredom, a lack of varied methods, limited facilities, and difficulty maintaining concentration during the memorization process. The traditional approach still dominant in madrasas often centers solely on the teacher as the primary resource, resulting in monotonous learning and under-facilitating visual and kinesthetic learning styles. In such situations, VR technology can offer new, more immersive, engaging, and adaptive learning experiences (Alahmadi et al., 2024). With the ability to create environments that mimic specific environments, such as simulated mosques, quiet environments, or thematic learning spaces, VR can help create a more conducive learning environment, enhancing student emotional engagement and concentration. Furthermore, VR technology allows for the presentation of Quranic verses in interactive visual forms, which can strengthen memory through simultaneous visual and auditory stimulation.

At the same time, the need to foster student engagement in learning is a crucial issue in modern education. Learning engagement is a significant factor influencing academic success, including in religious studies. VR, with its multisensory experience, can enhance student engagement through interactive elements, a sense of immersion, and exploratory experiences that conventional learning media cannot provide. In Quranic learning, increasing engagement is crucial because the memorization process requires strong internal willpower and a fun learning experience so that students not only memorize but also understand and enjoy the process (Aldaghaishi et al., 2025a). Therefore, research on the effectiveness of VR in increasing Quranic learning engagement and memorization skills is relevant given the growing need for learning innovation in madrasas to keep pace with technological developments and the needs of digital-generation students.

Despite its significant potential, the use of VR in Quranic learning in madrasas has not been extensively researched. Most previous research has focused on the use of VR in science, language, or technical training subjects, while studies on its implementation in the context of Islamic education, particularly memorization (tahfidz), are still limited. This indicates a research gap that needs to be filled to determine the extent to which VR can have a tangible impact on improving memorization skills, pronunciation quality, and students' emotional and cognitive engagement in learning the Quran (Aziz et al., 2024a). Furthermore, this research is crucial for assessing the feasibility of using VR in madrasah environments, which often have limited technological facilities. Evaluating the effectiveness, challenges, and opportunities for VR adoption can be an important consideration for Islamic education policymakers in developing future learning strategies that are more creative, inclusive, and relevant to current needs.

This research is crucial not only in the context of developing Quranic learning methods but also in encouraging madrasahs to be more adaptive to technological advances without compromising the traditional values of Islamic education (Basir et al., 2024). By evaluating the impact of VR on memorization skills and student engagement, this research is expected to provide both academic and practical contributions to the development of innovative memorization learning models. Furthermore, the results of this study can provide new directions for the development of digital curricula in madrasas and encourage the creation of a more effective, enjoyable, and student-centered Quranic learning ecosystem (Ismail et al., 2025). Thus, the use of VR is not simply a technological trend, but rather a pedagogical breakthrough with the potential to strengthen the quality of Islamic education in the future.

RESEARCH METHOD

This research method uses a literature review approach to in-depth examine the effectiveness of using Virtual Reality technology in madrasah learning, particularly in improving Quran memorization and student engagement. The literature review was conducted by collecting, selecting, and analyzing relevant previous research results from international and national journals, academic books, conference proceedings, and research reports related to the implementation of VR in Islamic religious education. The research focused on studies exploring how immersive technology influences cognitive and affective processes in Quran memorization learning, including aspects of motivation, learning focus, the effectiveness of repetition methods, and learning experiences enriched by virtual environments.

The analysis was conducted using a thematic synthesis approach to identify patterns, relationships, and key findings from various literature sources, thus obtaining a comprehensive picture of the extent to which VR supports improving the quality of madrasah learning. This synthesis process included a critical assessment of the methodology and results of previous research, the validity of the findings, and their contextual relevance to teaching tahfiz in madrasahs. By combining these findings, this study seeks to provide a strong theoretical understanding of the impact of VR on Quran memorization and student engagement, while providing an argumentative basis for the development of more effective immersive technology-based learning strategies in Islamic educational institutions.

RESULT AND DISCUSSION

Design and Implementation of Virtual Reality for Tahfidz Learning

The design and implementation of Virtual Reality (VR) in tahfidz learning presents a new approach that combines spiritual values, learning comfort, and immersive technological support. Tahfidz, as a process that demands calm, repetition, mental focus, and emotional connection with the verses of the Quran, requires a conducive, distraction-free environment. VR technology can provide a learning space specifically designed to meet these needs by creating thematic and atmospheric settings that resemble spiritual environments (Asril et al., 2023). Virtual environments can be designed to resemble traditional mosque interiors, calming gardens, or a quiet night with dim lighting, so students feel as if they are in a calm and sacred space. Visual displays consistent with Islamic aesthetics, such as calligraphy, geometric carvings, or arabesque patterns, help foster psychological comfort and a sense of reverence, facilitating memorization. At the same time, ambiance-based audio design, such as the soft recitation of verses, the sound of trickling water, or the echo effects typical of mosque spaces, can strengthen emotional engagement and improve student concentration. The presence of an atmosphere resembling a prayer room is crucial for building students' intrinsic motivation, making the memorization process more meaningful (Sudiro & Munjin, 2024).

The implementation of VR for tahfidz (memorization) not only creates a supportive spiritual atmosphere but also provides interactive simulations that ensure a more dynamic learning experience. In the virtual space, users can interact with the Quranic text displayed in three dimensions or on a floating screen that follows their gaze. This simulation allows for more efficient implementation of talaqqi and tikrar methods. For example, a feature allows the reciter to pause, slow down, or repeat the recitation of verses

automatically (Hamzah et al., 2024). Students can imitate the recitation while receiving immediate feedback from a voice recognition-based system that detects errors in pronunciation, length, or tajweed inconsistencies. Furthermore, VR can provide interactive experiences, such as navigating between verses or surahs with simple hand gestures, eliminating the need for frequent manual interactions that can distract students. The presence of a ustadz avatar or virtual mentor is also part of the design, strengthening the pedagogical approach. Users feel the presence of a teacher providing corrections, guidance, or motivation during the memorization process (Huda M et al., 2023). Thus, interactions that typically require face-to-face interaction can be recreated through an intuitive and personalized VR environment.

Memorization-supporting features are a key element that make VR relevant for memorization learning. One such feature is a difficulty-based memorization repetition mode. The system can adjust the repetition of verses that users find difficult or frequently mispronounce, thus making the muraja'ah process more structured (Ahmadi & Saad, 2024). VR technology allows for the storage of memorization progress data, allowing users to visually track their progress through graphs or memorization journeys visualized as thematic routes, such as a journey through a virtual mosque that becomes more open as memorization progresses. Furthermore, the system can provide personalized notifications regarding verses or surahs that require additional repetition based on a previously implemented error-mapping algorithm. Another very important feature is focus mode, which disables all interactive elements except the verse being memorized. This mode helps students avoid visual and audio distractions, allowing them to achieve a higher quality of memorization.

In developing VR for memorization, physical and psychological comfort must be taken seriously to ensure effective implementation. Color selection, light intensity, and visual movement must be designed to be gentle to avoid eye fatigue. The duration of each VR session must also be regulated to avoid vertigo or motion sickness. Using devices with high image quality and a stable frame rate is essential for a smooth learning experience. Furthermore, every design must respect the sacred values of the Quranic text. This means all text, audio, and visual elements displaying verses must be created with precision and respect, without distortion or effects that could diminish the value of Qur'anic etiquette. From a pedagogical perspective, VR implementation must be designed in harmony with the existing memorization curriculum in madrasas or Islamic boarding schools. This can be achieved through the integration of memorization modules, muraja'ah schedules, and teacher

monitoring features that allow ustadz to monitor students' progress in real time through a dedicated dashboard outside the VR headset (Haura et al., 2025). Thus, VR technology does not replace the role of the teacher, but rather strengthens it through more measurable and systematic learning facilities.

Overall, the design and implementation of VR in tahfidz learning represents an innovative step that combines spirituality, immersive technology, and adaptive pedagogical strategies. VR can provide a learning experience filled with serenity, emotional engagement, and interaction that supports the internalization of Quranic verses. Specially designed thematic environments help create a conducive atmosphere, while interactive features enable more personalized and efficient learning. Enhanced monitoring functions, automatic feedback, and a memorization repetition system make VR a potential tool for improving the quality of students' memorization. With a design that considers technical aspects, aesthetics, and Islamic values, the implementation of VR can be a significant milestone in the modernization of tahfidz learning, while offering a more relevant learning alternative for the digital generation without losing the spiritual spirit that is at the heart of the Quranic memorization process.

The Role of Virtual Reality in Improving Concentration and Retention of Quran Memorization

The role of Virtual Reality (VR) in improving concentration and retention of Quranic memorization is gaining increasing attention in the development of Islamic educational technology, particularly in madrasahs and tahfidz institutions (Sufian et al., 2020). The use of VR in the memorization process extends beyond the use of sophisticated devices to include a more immersive, structured learning experience, integrated with neuroeducational principles. One of VR's key advantages is its ability to provide a fully controlled and focused learning environment, allowing students to enter a specially designed digital learning space with an atmosphere conducive to memorizing Quranic verses. In this virtual space, distractions from the external environment are significantly minimized, enabling students to achieve higher levels of concentration compared to conventional methods. The visual and auditory immersion created through VR creates a state of deep focus, helping students direct their full attention to the recitation, tartil, and patterns of the verses being memorized.

The multisensory engagement in VR significantly impacts the quality of attention and memory retention. The process of memorizing the Quran is not only a verbal and auditory activity, but also a high-level cognitive engagement

that requires comprehension, repetition, and consolidation. When students are in a VR space featuring thematic visualizations such as mosque scenes, natural landscapes, or a supportive spiritual atmosphere, the brain responds to the experience by activating more sensory pathways. Visual engagement, soothing background sounds, recitation echoes, and interactive narratives create a rich learning experience, thus strengthening the memory encoding process. In memory theory, the more senses are engaged simultaneously, the more likely the information is to be stored in long-term memory. VR helps translate this principle into the context of memorization, so that memorization relies not only on repetition but also on meaningful associations of experiences (Wijaya, 2024).

Another important aspect is VR's ability to eliminate or reduce distractions that often arise during classroom and home learning. Many students face challenges such as noise, distracted attention, or a lack of a conducive learning space. In a VR environment, these distractions are eliminated because students are only exposed to stimuli designed to support memorization. Minimalist digital environments can be designed without unnecessary elements, while thematic environments can be implemented when needed to create a profound spiritual atmosphere. This ability to control distractions improves the quality of internal focus, making it easier for students to enter a state of flow, a state where someone is deeply immersed in their activity and fully focused on the material being studied. This flow state is believed to be a determining factor in successful memorization (Wijaya, 2024).

Not only does VR improve focus, it also supports long-term memorization retention through repetition mechanisms combined with contextual experiences. In memorization learning, repetition is key to strengthening memory synapses. VR can combine verse repetition with interactive activities such as tracing verses, following murattal recitations, or responding to commands in a virtual space, making each repetition more engaging and less monotonous. By eliminating boredom and increasing emotional engagement, students are more likely to retain verses strongly and consistently. This interactive experience helps build a bridge between declarative memory (verbal memorization) and episodic memory (personal experiences), resulting in deeper and more lasting memorization (Aldaghaishi et al., 2025b).

Furthermore, VR allows students to visualize verse structures, rhyme patterns, and thematic meanings that are often difficult to grasp through traditional methods. When students are given the opportunity to "experience" verses through contextual visual simulations, such as the scene of the verse's

revelation or symbolic illustrations that are safe and appropriate to etiquette, the brain connects verbal memorization with a strong mental image. This powerful imagery can enhance recall because the brain tends to remember information presented in concrete visual form more easily than abstract information. The connection between verses and meaningful visual experiences makes it easier for students to recall the sequence, keywords, and meaning of the verses (Haryono et al., 2022).

From a pedagogical perspective, the use of VR also creates a more personalized and adaptive learning experience. Students can choose the memorization pace, type of virtual environment, or interaction style that best suits their learning preferences. Neuropsychological findings indicate that personalized learning increases intrinsic motivation, which in turn increases focus intensity and prolongs retention duration. When students feel comfortable and engaged, psychological barriers such as anxiety, boredom, or pressure can be reduced, resulting in more effective learning. On the other hand, teachers or musyrifs can monitor student progress through digital analytics, identify difficult-to-memorize verses, and provide timely feedback to strengthen the learning process (Aziz et al., 2024b).

The role of VR in strengthening concentration and retention of Quranic memorization is ultimately closely related to the notion that modern learning requires a holistic approach that combines technology with Islamic pedagogical principles (Gulamhusein & Momanyi, n.d.). VR environments do not replace the role of teachers, sanads, or spiritual aspects in tahfidz (Quran memorization), but rather serve as a supporting medium that allows students to maximize their cognitive potential. Immersion, directed focus, reduced distractions, and multisensory experiences make VR an innovation that not only enriches the tahfidz method but also helps students instill memorization more deeply and sustainably. With the continued development of technology and increasingly affordable VR devices, the potential integration of VR in tahfidz education could be a strategic step towards improving the quality of memorization among young Muslims in the context of digital-era learning.

The Influence of Virtual Reality on Madrasah Student Engagement

The influence of virtual reality on madrasah students' engagement in Quranic learning is becoming increasingly prominent with the increasing use of immersive technology in Islamic education. Student engagement is a fundamental element in ensuring the success of the learning process, particularly in the madrasah context, which emphasizes spiritual, cognitive, and practical worship. Through VR, students can experience a learning

environment that integrates visual, audio, and direct interaction, creating a more lively, engaging learning space that captures their focus more intensively than conventional methods. This technology presents new opportunities for madrasahs to develop Quranic learning processes that are more relevant to the characteristics of the digital generation without losing the spiritual essence that is at the heart of Islamic education (Spiritual Pilgrimage Through Virtual Reality (VR), n.d.).

Student cognitive engagement increases significantly when VR is integrated into Quranic learning. Cognitively, students not only read or listen to verses but also process them in a rich visual context, such as being in an environment depicting Mecca and Medina, being in a mosque, or entering a thematic room that illustrates the values of the verses being studied. Immersive three-dimensional visualizations help students' brains maintain focus longer due to the complementary multisensory stimuli. When students feel like they're in a space different from their everyday lives, their attention naturally increases, strengthening their ability to comprehend meaning, remember text, and connect concepts. At this stage, VR not only supports memorization but also helps internalize the meaning of verses through a more immersive cognitive experience (Lin et al., 2024).

Emotionally, VR provides an experience that evokes feelings of spiritual closeness and connection with the Quranic material. Students often feel calmer, more focused, and more spiritually connected when immersed in a virtual environment designed with religious elements, such as clear murattal recitation, soft lighting, and scenery that creates a contemplative atmosphere. This positive emotional experience fosters intrinsic motivation, the drive to learn from within the student, rather than simply driven by teacher encouragement or assignments. When students enjoy the learning process and experience the inner calm emanating from the VR experience, they become more enthusiastic about repeating the lesson, refining their memorization, and exploring new verses. A stable and positive emotional state is crucial for Quranic learning, as a close connection to the holy verses also plays a role in strengthening memorization and understanding (Rafiq et al., 2022).

From a behavioral engagement perspective, VR can increase student engagement in the learning material and environment. VR allows for immediate responses such as repeating readings, following the guidance of a virtual tutor, selecting verses to memorize, and exploring interactive spaces specifically designed to support Quranic learning (Jannah, 2024). When students are given control over the learning process, their participation increases because learning becomes more independent and exploration-

oriented. Furthermore, interactions in VR tend to be more engaging than conventional methods because students feel physically "involved" in the learning activity through head and hand movements and sustained visual attention. This creates a more proactive, disciplined, and sustainable learning behavior pattern, which significantly impacts the quality of memorization and perseverance in muraja'ah (recitation).

Madrasah students' motivation to learn also receives a significant boost through the use of VR. A fun and non-monotonous learning experience makes students more enthusiastic about participating in learning sessions, even on material previously considered difficult or boring. VR provides a variety of learning experiences that enrich students' experiences, such as simulating the interpretation of verses, exploring holy sites, or playing memorization-based educational games. The combination of curiosity and immersive experiences fosters long-term motivation, unlike the fleeting motivation that typically arises from lectures or traditional memorization exercises. When students experience small accomplishments in each VR session, such as completing a memorization session or recognizing the meaning of a verse, their self-confidence increases, which in turn strengthens their drive to continue learning (Einsthendi et al., 2024).

Students' interest in Quranic learning has also undergone a positive transformation through a VR-based approach. Learning interest is often influenced by students' perceptions of the material's difficulty and the variety of learning methods. In this context, VR can provide a fresher, more modern atmosphere, and one that aligns with the technological developments favored by the younger generation. An aesthetic and interactive learning environment can make students more interested in starting study sessions without being forced. This interest then develops into more independent learning habits, as students perceive that memorizing the Quran can be done in a more enjoyable, creative, and less monotonous way. When interest develops naturally, learning effectiveness is maximized.

Furthermore, interaction in Quranic learning undergoes significant changes when VR is used as a medium. VR enables both individual and collaborative learning. In individual mode, students have a private space to focus without external distractions, allowing their interaction with the holy verses to deepen. Meanwhile, in collaborative mode, VR can be integrated with multi-user features, allowing students to study together in the same virtual space, much like a digital halaqah (Islamic study group). Teachers can monitor, provide guidance, and assess students' memorization performance in a more dynamic and engaging environment. The interaction that occurs through VR

creates a more constructive learning relationship between teachers and students, as teachers can provide more flexible and targeted feedback tailored to each student's needs.

Overall, the impact of VR on madrasah students' engagement in Quranic learning encompasses cognitive, emotional, and behavioral aspects that mutually reinforce each other. VR is not simply a technological tool, but also a spiritual medium capable of creating a reverent, focused, and meaningful learning atmosphere. By increasing attention, triggering positive emotions, enriching interactions, and fostering student motivation and interest, VR has the potential to be a significant breakthrough in modernizing madrasah education without diminishing its underlying Islamic values. Appropriate and thoughtful integration of VR and Quranic learning can bring about significant transformations in how students understand, memorize, and internalize the words of Allah more deeply and sustainably.

Opportunities and Prospects for Developing Virtual Reality for Qur'an Education

The development of Virtual Reality (VR) technology in Quranic education offers extensive opportunities for long-term transformation, both in learning methods, spiritual experiences, and the effectiveness of the memorization process as a whole. In the context of madrasas and Islamic educational institutions, the use of VR is not merely seen as a technological innovation, but as a strategic effort to create a more immersive, focused learning environment that engages students' cognitive, affective, and psychomotor aspects. VR's long-term potential lies in its ability to create a fully controlled, distraction-free learning space that simulates environments traditionally difficult to achieve in a physical classroom. This allows students to experience Quranic learning in conditions that support full focus, strengthen emotional bonds with the material, and facilitate stronger memorization retention through multisensory experiences (Shobri et al., 2025b). With the development of increasingly affordable VR devices and the maturation of educational software, the prospects for utilizing this technology in Quranic learning can evolve toward a more holistic and sustainable ecosystem. A significant opportunity arises when VR is developed specifically for the purpose of learning the Quran, rather than simply adapting it from general educational platforms. Thematically designed Quranic VR platforms can include recreations of spiritual settings such as the Grand Mosque, the Prophet's Mosque, or a classic Islamic boarding school classroom, which can strengthen the spiritual atmosphere and increase students' spiritual sensitivity while

memorizing holy verses. This technology can provide interactive simulations that allow students to practice pronunciation, tajweed, and recitation rhythm with real-time feedback, as well as visualize the relationships between verses, the context in which they were revealed, or the structure of the surah in 3D (Akem et al., 2025).

Furthermore, the presence of avatars of ustadz (Islamic teachers) or virtual mentors programmed with Quranic pedagogical standards provides the opportunity to create personalized, structured, and accessible learning experiences without the constraints of time and space. Thus, VR can develop into a content-rich, interactive Quranic learning platform that supports diverse learning styles, including visual, auditory, and kinesthetic. The integration of VR with artificial intelligence opens up broader prospects for creating deeply adaptive and personalized learning experiences. AI can be used to identify reading error patterns, memorization fluency, and reading rhythm for each student, then provide practice recommendations tailored to individual needs. AI-powered systems in VR environments can monitor intonation, recitation length, and the application of Tajweed laws through sophisticated voice processing, then provide accurate, immediate feedback like a professional tahfidz teacher. In the context of tahfidz, AI can also map students' memorization progress, predict which verses are likely to be forgotten, and design automated recitation schedules tailored to the student's capacity and learning rhythm. This integration provides long-term prospects for Qur'anic learning that is entirely based on data and intelligent analytics, enabling educational institutions to evaluate achievements more objectively, measurably, and focus on continuous improvement (Sanusi, 2024).

In addition to AI, gamification in VR Quranic platforms is a crucial aspect with the potential to significantly increase student motivation and engagement. The incorporation of game elements such as levels, rewards, thematic challenges, or specific achievements can encourage students to be more consistent in their recitation and memorization practices. A gamified VR environment not only provides enjoyment but can also be designed to maintain the blessings and etiquette of Quranic learning. For example, an achievement system can be designed based on recitation quality, consistency of muraja'ah (recitation), or the ability to understand the meaning of verses, so that students focus not only on mechanical memorization but also on spiritual depth and meaning. Gamification in VR also provides opportunities for collaboration between students in virtual spaces, such as group practice, Quranic recitation competitions, or virtual khataman (community completion)

activities, which can strengthen solidarity and a sense of brotherhood within the madrasah environment (Andri et al., 2025).

Learning analytics is the next strategic dimension in the development of VR for Quranic education. Data collected from student activities in VR environments, such as practice duration, focus level, frequency of verse repetition, tendency toward misreading, and memorization achievement, can be processed into comprehensive reports for teachers and madrasahs. With these analytics, teachers can gain a deeper understanding of each student's development, identify frequently occurring difficulties, and design more targeted interventions. Analytics also enable data-driven evaluation of the tahfidz curriculum, facilitating the development of learning strategies tailored to the characteristics of the digital generation. In the long term, this data can contribute to evidence-based research on Quranic education, opening up new opportunities for developing modern tahfidz methods that remain grounded in tradition (Andri et al., 2025).

Given these overall prospects, the development of VR for Quranic education has significant potential to become a comprehensive and sustainable digital learning ecosystem. Challenges such as infrastructure readiness, teacher technological literacy, device procurement costs, and the etiquette and ethics of using VR in the context of Quranic education still require serious attention. However, if managed properly, VR can become not just a learning tool, but a methodological transformation capable of connecting traditional values with modern technological innovation. Ultimately, VR offers a glimpse into the future of Quranic education that is more inclusive, adaptive, and measurable, while still maintaining the sanctity of the process of teaching and learning the holy book in the midst of the ever-evolving digital era.

CONCLUSION

The conclusion of research on the application of virtual reality in learning in madrasas indicates that this immersive technology has significant potential to improve the quality of Quran memorization and encourage deeper learning engagement. Virtual reality provides a more focused, interactive, and distraction-free learning environment, allowing students to practice memorizing Quranic verses with greater concentration. Furthermore, the visual and auditory experiences created by VR help strengthen memory through multisensory stimuli, supporting the internalization of the sacred text more effectively than conventional methods.

This research also confirms that VR is not merely a technological innovation but can be a pedagogical medium capable of increasing student

motivation, curiosity, and active participation in Quranic learning. The emotional and cognitive engagement fostered through immersive experiences allows students to feel a stronger connection with the material, strengthens their understanding of the verses' meanings, and fosters sustained interest in Quranic study. However, the use of VR still requires infrastructure preparation, teacher training, and wise management to optimize its benefits and remain aligned with Islamic educational values.

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