

## CANVA AI-ASSISTED PRAYER LEARNING APPROACH IN ISLAMIC EDUCATION BASED ON THE TPACK MODEL

*Pendekatan Pembelajaran Solat Berbantu Canva AI dalam Pendidikan Islam berasaskan Model TPACK*

\*Mohamad Zarkhuan Zainol<sup>1</sup>, Norhisham Muhamad<sup>1</sup>, Muhammad Nazirul Mohd Sabri<sup>1</sup>

<sup>1</sup>Institut Penyelidikan & Pendidikan Tahfiz & Turath Islami (i-Furqan),  
Fakulti Sains Kemanusiaan  
Universiti Pendidikan Sultan Idris  
35900, Tanjong malim, Perak, Malaysia.

\*Corresponding author's email: [mzarkhuan@fsk.upsi.edu.my](mailto:mzarkhuan@fsk.upsi.edu.my)

Submitted:	Accepted:	Revised:	Published:
25-Nov-2025	10-Dec-2025	26-Dec-2025	30-Dec-2025

### Abstract

Prayer education in Islamic Education extends beyond ritual performance to encompass spiritual awareness, discipline, and moral development. However, existing studies indicate that many students perform prayers mechanically with limited appreciation of their spiritual meaning. This study aimed to develop and evaluate an Artificial Intelligence (AI)-assisted prayer learning application, Muallim-Prayer Exploration, grounded in the Technological Pedagogical Content Knowledge (TPACK) framework. A product-development approach was employed, followed by a quasi-experimental design involving 70 lower secondary students from two schools in the Muallim district. Participants were divided into an experimental group ( $n = 35$ ) and a control group ( $n = 35$ ) based on comparable academic achievement. The experimental group was taught using the Canva AI-based application, while the control group received conventional instruction. Pre- and post-tests were administered to measure students' mastery and appreciation of prayer. Quantitative data were analysed using paired-sample t-tests via SPSS version 26.0. The findings revealed a statistically significant improvement in the experimental group's post-test scores ( $M = 90.86$ ) compared to pre-test scores ( $M = 81.94$ ), with a larger mean gain than the control group. These results indicate that the AI-assisted, TPACK-informed learning approach significantly enhances students' mastery and appreciation of prayer. The study highlights the potential of AI-integrated instructional design to enrich spiritually meaningful learning in Islamic Education.

**Keywords:** Artificial Intelligence, Canva AI, TPACK, Islamic Education, Prayer Appreciation, Quasi-Experimental Study

### Abstrak

Pendidikan solat dalam Pendidikan Islam bukan sekadar pelaksanaan ritual, tetapi merangkumi pembinaan kesedaran spiritual, disiplin diri dan perkembangan akhlak. Namun, kajian lepas menunjukkan bahawa ramai pelajar melaksanakan solat secara mekanikal dengan tahap penghayatan makna spiritual yang terhad. Kajian ini bertujuan membangunkan dan menilai keberkesanan aplikasi pembelajaran solat berbantu Kecerdasan Buatan (AI), Muallim-Prayer Exploration, yang berasaskan kerangka Technological Pedagogical Content Knowledge (TPACK). Pendekatan penyelidikan pembangunan produk digunakan dan disokong dengan reka bentuk kuasi-eksperimen yang melibatkan 70 orang pelajar menengah rendah dari dua buah sekolah di daerah Muallim. Responden dibahagikan kepada kumpulan eksperimen ( $n = 35$ ) dan kumpulan kawalan ( $n = 35$ ) berdasarkan tahap pencapaian akademik yang setara. Kumpulan eksperimen mengikuti pembelajaran menggunakan aplikasi berasaskan Canva

*AI, manakala kumpulan kawalan menerima pengajaran konvensional. Ujian pra dan ujian pasca dilaksanakan bagi mengukur tahap penguasaan dan penghayatan solat pelajar. Data kuantitatif dianalisis menggunakan ujian-t sampel berpasangan melalui perisian SPSS versi 26.0. Dapatan kajian menunjukkan peningkatan yang signifikan secara statistik dalam skor ujian pasca kumpulan eksperimen ( $M = 90.86$ ) berbanding ujian pra ( $M = 81.94$ ), dengan peningkatan min yang lebih tinggi berbanding kumpulan kawalan. Hasil kajian membuktikan bahawa pendekatan pembelajaran berbantu AI berasaskan TPACK berupaya meningkatkan penguasaan dan penghayatan solat pelajar secara signifikan. Kajian ini menonjolkan potensi integrasi AI dalam reka bentuk pengajaran bagi memperkaya pembelajaran yang bermakna dan bersifat spiritual dalam Pendidikan Islam.*

**Kata kunci:** Kecerdasan Buatan, Canva AI, TPACK, Pendidikan Islam, Penghayatan Solat, Kuasi-Eksperimen

## 1.0 INTRODUCTION

Prayer is the second pillar of Islam and the foundation of religion that forms the basis of a Muslim's spiritual development. It not only involves physical movements and recitations but emphasizes deep spiritual appreciation of the meaning, wisdom, and etiquette of its implementation. According to al-Ghazali (2005), appreciation of prayer is the foundation for building the spirituality of a true Muslim. However, current reality shows a significant gap between the practice of prayer as a formal obligation and genuine appreciation of the worship. A study by Tengku Nursyahzanani and Zawawi Yusoff (2024) found that many secondary school students perform prayers routinely without understanding the spiritual value and true meaning of the worship. This situation is worsened by approaches to teaching prayer in schools that are often implemented theoretically and do not provide space for effective active and practical learning (Nasyitah Farhanah et al., 2022). Conventional teacher-centered methods cause students to become passive and unmotivated to deeply explore aspects of prayer.

The development of digital technology has opened new avenues in education, especially after the digital learning explosion post-COVID-19 pandemic (Hasin et al., 2022). Students of the digital generation or 'digital natives' are more attracted to interactive and technology-assisted learning (Prensky, 2001). Thus, incorporating artificial intelligence (AI) technology and gamification into prayer learning offers a promising and innovative method that can engage students more effectively while deepening their understanding and appreciation. The Muallim-Prayer Exploration application development project aims to leverage Canva AI technology, gamification elements, and the Explore Race concept to provide an interactive, enjoyable, and meaningful prayer learning experience. This application combines interactive videos, self-assessment quizzes, tiered challenges, and reward systems designed to meet 21st-century learning needs.

## 2.0 LITERATURE REVIEW

Prayer in Islam is not merely the execution of prescribed physical movements, but a holistic act of worship that nurtures moral character, self-discipline, and spiritual consciousness. Al-Ghazali (2005), in *Ihya' Ulum al-Din*, emphasizes that true appreciation of prayer (*khushu'*) involves full awareness of standing before Allah SWT, comprehension of the meanings of recitations, and internalization of the ethical and spiritual values embedded in the act of worship. This perspective highlights that

effective prayer education must transcend procedural accuracy and address the internal spiritual experience of learners. However, empirical evidence suggests that this holistic appreciation of prayer remains a significant challenge within contemporary Islamic Education contexts.

Studies conducted among secondary school students indicate a gap between ritual performance and spiritual understanding. Tengku Nursyahzanani and Zawawi Yusoff (2024) found that while most students consistently perform obligatory prayers, their understanding of the meanings of recitations and the wisdom behind prayer is relatively low. Their findings further demonstrate that prayer performed with conscious appreciation contributes positively to behavioural regulation, self-leadership, and moral development among adolescents. These results underscore the need for instructional approaches in Islamic Education that balance cognitive mastery and psychomotor skills with the affective and spiritual dimensions of learning, particularly in prayer instruction (Mamlu'ah et al., 2025).

In response to these pedagogical challenges, technological advancements have significantly reshaped educational practices, including the teaching and learning of Islamic Education. Hasin et al. (2022) note that the digital transformation of Malaysian education, accelerated by the COVID-19 pandemic, has expanded opportunities for innovative delivery of religious knowledge. Digital learning applications offer flexible, learner-centred platforms that align with students' digital lifestyles and support self-directed learning beyond the classroom. Nur Hafizah Razali and Fariza Khalid (2021) further report that digital learning applications enhance students' motivation and retention through interactive learning experiences. The integration of multimedia elements such as video, animation, and audio has been shown to support deeper understanding, consistent with Mayer's (2009) Multimedia Learning Theory, which posits that learning is more effective when information is presented through coordinated visual and auditory channels.

More recently, the integration of Artificial Intelligence (AI) in education has introduced new possibilities for personalising and enriching learning experiences (Fortuna et al., 2025). AI-supported learning environments enable adaptive content delivery, immediate feedback, and real-time analysis of learner performance (Wang et al., 2024). In the context of Islamic Education, AI has the potential to support differentiated instruction, cater to diverse learner abilities, and enhance engagement with abstract and spiritual concepts that are often difficult to convey through conventional methods (Zainal Arifin et al., 2025). Canva AI, in particular, offers an accessible platform for educators to design visually appealing and interactive learning materials without requiring advanced technical expertise (Daff, 2024). This accessibility is crucial in Islamic Education settings, where teachers may possess strong content knowledge but limited technological skills (Afiful Ikhwan, 2025).

Within the AI-assisted prayer learning application, AI features are utilised to adjust learning challenges according to students' achievement levels and to provide relevant learning suggestions, thereby supporting personalised learning pathways (Fortuna et al., 2025). Such AI-driven features are especially valuable in prayer education, as they allow students to progress at their own pace while deepening both understanding and appreciation of prayer. The use of AI also facilitates continuous formative assessment, enabling learners to reflect on their learning and educators to monitor progress more effectively (Tan et al., 2025).

To ensure the pedagogically sound integration of AI and technology, this study is grounded in the Technological Pedagogical Content Knowledge (TPACK) framework (Figure 2.1). Originally proposed by Mishra and Koehler (2006), the TPACK model emphasizes the dynamic interaction between content knowledge (CK), pedagogical knowledge (PK), and technological knowledge (TK) in effective

teaching. In this study, content knowledge (CK) is anchored in authentic Islamic sources, including the Qur'an, hadith, and classical fiqh texts, ensuring the accuracy and integrity of prayer-related content. Pedagogical knowledge (PK) is reflected through the application of game-based learning, experiential learning, and reflective activities, particularly through the Explore Race and gamification elements designed to foster active participation and affective engagement. Technological knowledge (TK) is embodied in the use of Canva AI to develop interactive multimedia content such as animations, instructional videos, and quizzes that enhance learners' motivation and comprehension.

The intersection of these three domains within the TPACK framework enables a holistic learning environment that supports not only procedural mastery of prayer but also its spiritual appreciation. By aligning AI-supported technological tools with appropriate pedagogical strategies and authentic Islamic content, the AI-assisted prayer learning application addresses the long-standing challenge of nurturing khushu' and meaningful engagement in prayer education. This integrated approach highlights the critical role of AI-enhanced learning in advancing Islamic Education towards more engaging, personalised, and spiritually impactful learning experiences (Alhammad et al., 2025).

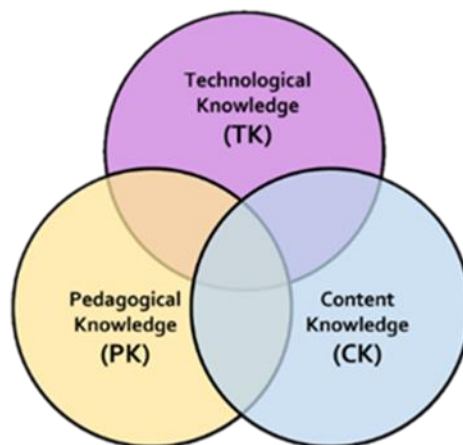


Figure 2.1: The Technological, Pedagogical, and Content Knowledge (TPACK) framework was originally proposed by Mishra and Koehler (2006).

### 3.0 METHODOLOGY

#### 3.1 Product Development

The development of the Muallim-Prayer Exploration application was guided by the Design and Development Research (DDR) approach, which is widely used in educational research to systematically design, develop, and evaluate instructional products within authentic learning contexts. The DDR approach was chosen because it allows for the integration of theoretical foundations, practitioner input, and empirical testing to ensure both pedagogical relevance and practical effectiveness (Richey & Klein, 2007).

The product development process was conducted in several phases:

- a) Analysis Phase – Identifying students' needs and current challenges in prayer learning through observation and teacher feedback.

- b) Design Phase – Structuring learning modules based on prayer concepts aligned with curriculum standards and integrating suitable AI-generated multimedia elements using Canva AI.
- c) Development Phase – Creating the Muallim-Prayer Exploration application with interactive modules, Explore Race challenges, and self-assessment features developed through Canva AI's generative tools.
- d) Implementation Phase – Introducing the application to students in the experimental group during Islamic Education lessons.
- e) Evaluation Phase – Assessing its effectiveness using pre- and post-tests covering understanding, practice, and appreciation of prayer across the cognitive, psychomotor, and affective domains.

The Muallim-Prayer Exploration application is a digital innovation designed to integrate Islamic learning content with generative artificial intelligence (AI) through the Canva AI platform. It was developed as an interactive learning medium aimed at helping students understand, practice, and appreciate the acts of prayer (solat) through a combination of gamification and Explore Race approaches. The application aligns with the TPACK model, ensuring that technological tools are effectively combined with sound pedagogical design and authentic Islamic content.

The development process began with the content design phase, in which key prayer topics, such as intention (niyyah), recitations, physical movements, and spiritual appreciation were identified based on the Islamic Education curriculum and verified by subject matter experts. Each topic was then mapped to specific learning outcomes across the cognitive, psychomotor, and affective domains.

Next, during the technology integration phase, Canva AI was used to create visually engaging and interactive learning materials. Developers generated web-based pages, animations, and quizzes by providing text-based prompts that Canva AI converted into design elements and coding structures automatically. This process significantly streamlined application development, enabling non-technical educators to produce multimedia-rich content without advanced programming skills. Canva AI's Magic Design and Text-to-Image features were utilized to produce custom visual assets, while AI animation tools added motion effects to simulate real prayer movements.

The pedagogical design phase emphasized gamification elements such as point systems, badges, leaderboards, and tiered challenges. These were integrated within the Explore Race module, where students' complete checkpoints that test different prayer competencies from basic understanding of movements and recitations to deeper appreciation and reflection. Each checkpoint combines interactive videos, self-assessment quizzes, and scenario-based tasks, encouraging active engagement, collaboration, and critical thinking among students.

The final implementation phase involved embedding audio instructions, Qur'anic recitations, and short animated explanations within each module. The interface was designed for ease of navigation, with a responsive layout compatible with both desktop and mobile devices. The application also includes a progress tracking dashboard, enabling students to monitor their achievements while allowing teachers to assess learning outcomes through built-in analytics.

Overall, the Muallim-Prayer Exploration application represents a convergence of faith-based content, innovative pedagogy, and AI-assisted design, offering a meaningful and technologically enhanced learning experience in Islamic education.

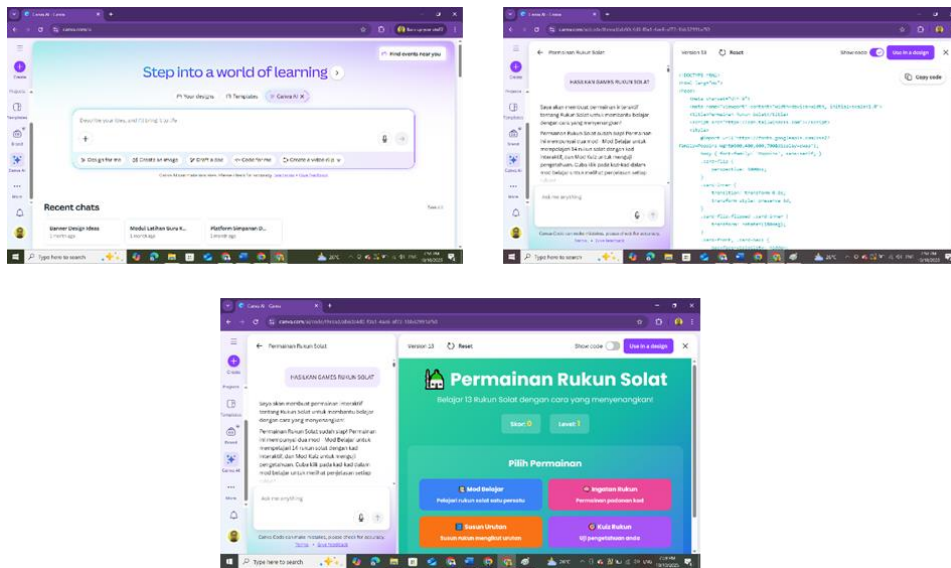


Figure 3.1 Display of Application Development through Canva AI.

Figure 3.1 shows Canva AI was used to produce multimedia webpages displaying short videos, animated graphics, and audio instructions for each pillar of prayer. Canva AI helps ensure the overall design is harmonious and easy to use by students. Overall, the construction of the Muallim-Prayer Exploration application using Canva AI has transformed the approach to teaching prayer from theoretical to interactive learning and experience.

Figure 3.1.2 shows the developed application contains several main components:

### 1. Interactive Learning Module

Comprises five units covering prayer fundamentals, structured according to Bloom's Taxonomy to ensure progressive cognitive development:

- a) Unit 1: Conditions and pillars of prayer (foundational knowledge)
- b) Unit 2: Prayer movements and sequence (procedural understanding)
- c) Unit 3: Recitations and their meanings (comprehension and application)
- d) Unit 4: Common mistakes and corrections (analysis and evaluation)
- e) Unit 5: Spiritual dimensions and reflection (synthesis and spiritual appreciation)

### 2. Explore Race Module

Seven progressive checkpoints testing integrated knowledge and skills, designed according to scaffolding principles that gradually increase cognitive demand:

- a) Checkpoint 1 - Foundation Station: Basic terminology and prayer times (10 multiple-choice questions)
- b) Checkpoint 2 - Purity Point: Wudu (ablution) procedure demonstration and quiz
- c) Checkpoint 3 - Position Plaza: Identifying and sequencing prayer positions through drag-and-drop activities
- d) Checkpoint 4 - Recitation Ridge: Audio matching of prayer recitations with written Arabic text
- e) Checkpoint 5 - Meaning Mountain: Translation comprehension of key prayer phrases

- f) Checkpoint 6 - Wisdom Valley: Scenario-based questions on prayer etiquette and spiritual mindfulness
- g) Checkpoint 7 - Mastery Peak: Comprehensive practical demonstration recorded via video submission

### 3.2 Gamification System

The application employs comprehensive gamification mechanics designed to enhance intrinsic motivation and sustained engagement:

- a) Point System: Earn 10-50 points per completed activity
- b) Achievement Badges: 15 collectible badges (e.g., "Perfect Posture," "Recitation Master," "Consistent Worshipper")
- c) Leaderboard: Class and school-wide rankings updated daily, with options for individual or team competition
- d) Daily Challenges: Bonus questions for extra points, refreshed at dawn prayer time.
- e) Streak Tracker: Rewards for consecutive days of practice, encouraging habit formation
- f) Self-Assessment Quiz

Over 200 questions across three difficulty levels, implementing adaptive learning principles:

- a) Beginner (40% of questions): Foundational recall and recognition
- b) Intermediate (40% of questions): Application and analysis
- c) Advanced (20% of questions): Evaluation and synthesis

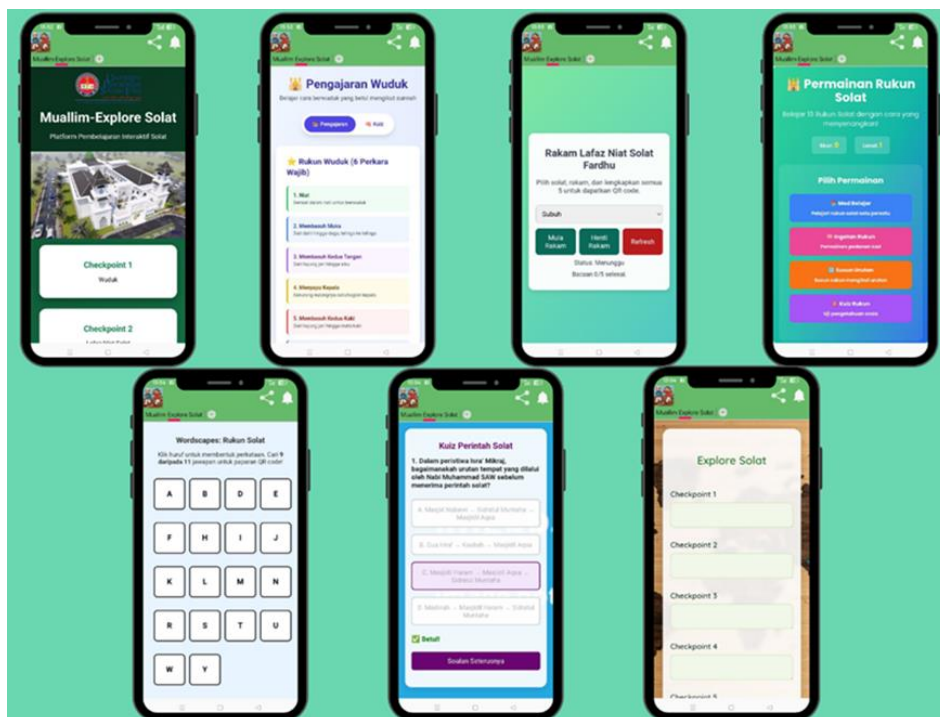


Figure 3.1.2: Display of Muallim Prayer Exploration Application.

### 3.3 Quasi-Experimental Design

This study adopted a quasi-experimental research design using a pre-test and post-test control group approach to examine the effectiveness of a Canva AI-based prayer learning application on students' mastery and appreciation of prayer. The

quasi-experimental design was considered appropriate as the study was conducted in real classroom settings where random assignment of participants was not feasible due to administrative and logistical constraints (Reichardt, 2019). To minimise selection bias, participants in both groups were matched based on similar academic achievement in Islamic Education (Hallberg et al., 2018).

The research sample comprised 70 lower secondary students from two secondary schools in the Muallim district. Purposive sampling was employed to select participants who demonstrated comparable academic performance to ensure baseline equivalence between groups. The students were divided equally into an experimental group ( $n = 35$ ) and a control group ( $n = 35$ ). The experimental group was exposed to instruction using the Canva AI-assisted prayer learning application, while the control group received conventional instruction based on textbook use, teacher explanations, and standard classroom activities. Both groups were taught the same prayer-related content over an identical instructional period to control for content and time variables.

Data were collected using structured assessment instruments administered as pre-tests and post-tests (Reichardt, 2019). The instruments measured two main constructs, students' mastery of prayer, encompassing cognitive understanding and procedural knowledge, and students' appreciation of prayer, which reflected their affective engagement, interest, and perceived relevance of prayer in daily life. The instruments were reviewed by experts in Islamic Education to establish content validity, and reliability analysis was conducted prior to the main study to ensure internal consistency (Creswell & Creswell, 2022).

The research procedure began with the administration of the pre-test to both groups to determine baseline levels of mastery and appreciation of prayer. Following this, the experimental group participated in the learning intervention using the Canva AI-based application, which incorporated visual representations, interactive elements, and AI-assisted features to enhance understanding and engagement. In contrast, the control group continued learning through conventional instructional methods. Upon completion of the intervention, a post-test was administered to both groups using the same instruments.

Quantitative data obtained from the pre-test and post-test were analysed using the Statistical Package for the Social Sciences (SPSS) version 26.0. Descriptive statistics, including means and standard deviations, were calculated to summarise students' performance. Paired-sample t-tests were conducted to examine the significance of differences between pre-test and post-test mean scores within each group, thereby determining the impact of the Canva AI-based application on students' mastery and appreciation of prayer. Statistical significance was set at the  $p < .05$  level (Reichardt, 2019).

#### 4.0 RESULTS

Table 4.1 presents the results of the paired-sample t-test analyses comparing pre-test and post-test scores for both the treatment (experimental) and control groups. This analysis was conducted in line with the quasi-experimental pre-test and post-test control group design adopted in the methodology, with the aim of examining within-group changes following the instructional intervention.

For the experimental group, the paired-sample t-test revealed a substantial and statistically significant improvement in students' performance after the implementation of the Muallim-Prayer Exploration application. The mean score increased from 81.94 ( $SD = 4.481$ ) in the pre-test to 90.86 ( $SD = 4.481$ ) in the post-test,

resulting in a paired mean difference of 8.91. The obtained t-value of 11.769 with a p-value of less than .001 indicates that the improvement was highly significant. This finding demonstrates that the Canva AI-based learning intervention had a strong positive effect on students' mastery and appreciation of prayer, supporting the effectiveness of the treatment described in the research procedure. The marked increase in post-test scores suggests that the interactive and AI-assisted features of the application contributed meaningfully to students' cognitive and affective learning outcomes.

For the control group, the paired-sample t-test also indicated a statistically significant increase in mean scores from the pre-test to the post-test. The pre-test mean score was 82.11 (SD = 3.939), while the post-test mean score increased to 86.80 (SD = 3.939), yielding a paired mean difference of 4.69. The t-value of 7.038 with a p-value of less than .001 confirms that conventional instruction also led to learning gains over time. However, consistent with the methodological design that contrasted traditional teaching with an AI-assisted approach, the magnitude of improvement in the control group was noticeably smaller than that of the experimental group.

Overall, these results align with the study's methodology, which controlled for content, duration, and baseline achievement across both groups. While both instructional approaches resulted in significant improvements, the larger mean difference observed in the experimental group provides empirical evidence that the Canva AI-based Muallim-Prayer Exploration application was more effective than conventional teaching methods in enhancing students' mastery and appreciation of prayer. This supports the methodological assumption that technology-enhanced learning, when systematically integrated into classroom instruction, can yield superior learning outcomes compared to traditional approaches alone. Table 4.1 shows comparison of Pre and Post Test Scores

Table 4.1: Explore Race gamification Activities

Groups	Tests	N	M	SD	Paired Mean Difference	t-value	p-value
Treatment	Post Test	35	90.86	4.481	8.914	11.769	.000
	Pre-Test	35	81.94				
Control	Post Test	35	86.80	3.939	4.686	7.038	.000
	Pre-Test	35	82.11				

Note:  $p < 0.05$  indicates a statistically significant difference.



## 5.0 DISCUSSION

The findings of this study prove that the integration of Canva AI and gamification in the Muallim-Prayer Exploration application successfully enhanced secondary school students' prayer learning significantly. The mean score increases of 8.91 for the experimental group compared to 4.69 for the control group shows the positive effect of digital technology use in prayer education. This effectiveness aligns with Prensky's (2001) view emphasizing that digital generation students are more attracted to interactive and technology-assisted learning. The use of Canva AI in producing attractive visual content has successfully captured students' attention and increased their engagement in the learning process. Multimedia elements such as animated videos, interactive graphics, and recitation audio produced through Canva AI provide a richer and more meaningful learning experience. These findings also support Mayer's (2009) Multimedia Learning Theory which emphasizes that integrated combinations of visual and audio can enhance understanding and information acquisition. Students in the experimental group showed deeper understanding of the meaning of prayer recitations and the wisdom behind them, proving that the multimedia approach can enhance meaningful learning.

The Explore Race module developed with seven tiered checkpoints successfully encouraged active and collaborative learning among students. Each checkpoint is designed to test different aspects of prayer learning, basic knowledge, recitation, movements, and appreciation, ensuring comprehensive and effective learning. These findings align with Elina Jääskä and Kirsi Aaltonen's (2022) study which found that game-based methods can enhance learning experiences through collaboration, critical thinking, and problem-solving. Explore Race activities involving physical and digital challenges enable students to apply their knowledge in practical contexts, thereby strengthening learning.

The Muallim Prayer Exploration application emphasizes the concept of prayer interactively and supports students in appreciating prayer comprehensively. As emphasized by al-Ghazali (2005), appreciation of prayer is the foundation for building Muslim spirituality. This application successfully translates these principles through approaches suitable for 21st-century learning. These findings also support Tengku Nursyahzanani and Zawawi Yusoff's (2024) study which emphasizes that prayer practiced with appreciation can shape effective behaviour and self-leadership among teenagers. Students using the application reported higher awareness of the meaning of the worship performed.

Mobile applications provide advantages in terms of flexibility and self-directed learning. Students can access content at anytime and anywhere, allowing them to learn at their own pace and convenience. These findings are consistent with Nur Hafizah Razali and Fariza Khalid's (2021) study which found that mobile learning applications can strengthen motivation and enhance students' memory through interactive learning experiences. The unlimited content repetition feature allows students who need more time to master a topic to do so without feeling pressured or embarrassed. This encourages inclusive learning that considers individual student differences.

Although the application is designed for self-directed learning, the teacher's role remains important as a facilitator and guide. Teachers use the reporting system provided in the application to monitor student progress and provide appropriate interventions. These findings align with Sylviano Abu Bakar's (2020) view that mobile technology functions as a complement and not a replacement for teacher instruction. Teachers involved in the study reported that the application helps them identify students requiring special attention more quickly. Time saved in preparing

teaching aids can be used for more meaningful learning activities such as discussions, reflection, and hands-on activities. This enhances the overall quality of teaching and learning.

One strength of the Muallim-Prayer Exploration application is its content based on authentic sources from the Quran, hadith, and authoritative fiqh guidance. Every piece of information delivered has been verified by an expert panel consisting of Islamic Education academics and scholars. This provides confidence to teachers, parents, and students in the authenticity of the content. This aspect is important in the context of religious education where information accuracy not only influences understanding but also impacts worship implementation. This approach aligns with Sylviano Abu Bakar's (2020) recommendation emphasizing the need to ensure Islamic education applications are based on authentic sources and verified by experts.

## 6.0 CONCLUSION

This study successfully achieved its stated objectives by developing and assessing the effectiveness of the Muallim-Prayer Exploration application integrating Canva AI artificial intelligence and gamification. Study findings statistically prove that this application is effective in enhancing knowledge, understanding, and appreciation of prayer among secondary school students.

The significant mean score increases for the experimental group (8.91) compared to the control group (4.69) shows that digital learning approaches integrating AI, gamification, and Explore Race are more effective than conventional teaching methods. More importantly, the increase in the affective domain proves that this application not only delivers knowledge but also touches students' hearts and spirituality. Interactive elements, multimedia content, and attractive reward systems successfully captured digital generation students' interest while providing meaningful learning experiences.

This study makes an important contribution to the field of Islamic Education in the digital era by offering a learning model that combines the authenticity of religious knowledge with the latest technological innovations. It proves that Islamic education can develop according to the needs of the times without sacrificing the basic principles and values of religion. The Muallim-Prayer Exploration application is not merely a technological innovation, but it symbolizes efforts to produce a Muslim generation that is not only proficient in performing prayer correctly from an external perspective but also appreciates the meaning and wisdom behind each movement and recitation. This is the highest goal of prayer education - building a meaningful relationship between servant and Creator.

With continuous support from stakeholders including the Malaysian Ministry of Education, schools, teachers, parents, and researchers, this application has the potential to make a significant impact on Islamic education in Malaysia. It can be used as a model for developing digital learning applications for other topics in Islamic Education, subsequently contributing to the nation's education digital transformation agenda.

In conclusion, this study proves that the integration of artificial intelligence and gamification in the Muallim-Prayer Exploration application is an effective innovation for enhancing secondary school students' prayer appreciation. With continuous improvements based on user feedback and technological developments, this application has the potential to become an important instrument in efforts to produce righteous and quality Muslim generations.

## 7.0 REFERENCES

- Afiful Ikhwan. (2025). The Role of Teachers in Realizing the Vision of Modern Islamic Education. *Journal of Islamic Education*, 9, 860-872. Doi.10.52615/jie.v9i2.659.
- Al-Ghazali, A.H.M. (2005). *Ihya' Ulum al-Din*. Dar Ibn Hazm.
- Alhammad, N., Awae, F., & Yussuf, A. (2025). Integrating Artificial Intelligence in Islamic Education: A Review on Pedagogical Approaches and Learning Outcomes. *International Journal of Academic Research in Business and Social Sciences*, 15(7), 563-579. <https://doi.org/10.6007/ijarbss/v15-i7/25947>
- Creswell, J. W., & Creswell, J. D. (2022). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
- Daff, C. (2024, February 21). How to use Canva's AI tools to wow your classroom. Canva. <https://www.canva.com/learn/how-to-use-canva-ai-tools-in-classroom/>
- Fortuna, A., Prasetya, F., Samala, A. D., Rawas, S., Criollo-C, S., Kaya, D., Raihan, M., Andriani, W., Safitri, D., & Nabawi, R. A. (2025). Artificial intelligence in personalized learning: A global systematic review of current advancements and shaping future opportunities. *Social Sciences & Humanities Open*, 12, 102114-102131. <https://doi.org/10.1016/J.SSAHO.2025.102114>
- Hallberg, K., Cook, T.D., Steiner, P.M., & Clark, M.H. (2018). Pretest Measures of the Study Outcome and the Elimination of Selection Bias: Evidence from Three Within Study Comparisons. *Prevention Science*, 19(3), 274-283. doi: 10.1007/s11121-016-0732-6.
- Hasin, I., Othman, R., Abdullah, N. S., Mohd Yusoff, K., & Ab Rahman, M. R. (2022). Issue and challenge on national transformation of digital learning in post-Covid-19: Isu dan Cabaran Pembelajaran Digital dalam Transformasi Pendidikan Negara Pasca Covid-19. *Jurnal Pendidikan Bitara UPSI*, 15(2), 23-32. <https://doi.org/10.37134/bitara.vol15.2.3.2022>
- Mamlu'ah, A., May, L. & Purnama, M. (2025). Strategies and Challenges in Implementing Pesantren-Based Da'wah Education. *Fikroh: Jurnal Pemikiran dan Pendidikan Islam*, 18(3), 443-451. doi.10.37812/fikroh.v18i3.2051.
- Mayer, R. E. (2009). *Multimedia Learning*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511811678>
- Miller, C.J., Smith, S.N. & Pugatch, M. (2020). Experimental and quasi-experimental designs in implementation research. <https://doi.org/10.1016/j.psychres.2019.06.027>
- Mishra, P., and Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6): 1017-1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Nasyitah Farhanah, Mohammad Zaini Yahaya, Ahmad Munawar Ismail, Muhammad Adib Samsudin & Syaidatun Nazirah Abu Zahrin. (2022). Implementasi Pengajaran Solat dalam Membina Kemahiran Pembelajaran Aktif Menggunakan Model Pengajaran. *International Journal of Interdisciplinary & Strategic Studies*, 3(4), 254-267. <https://doi.org/10.47548/ijistra.2022.41>
- Nur Hafizah Razali & Fariza Khalid. (2021). Penggunaan Aplikasi Pembelajaran Mudah Alih dalam Pembelajaran Matematik bagi Pelajar Sekolah Menengah. *Malaysian Journal of Social Sciences and Humanities*, 6(6), 73-85. <https://doi.org/10.47405/mjssh.v6i6.812>
- Prensky, M. (2001). Digital Natives, Digital Immigrants. *On the Horizon*, 9(5), 1-6. <https://doi.org/10.1108/10748120110424816>
- Reichardt, C. S. (2019). *Quasi-experimentation: A guide to design and analysis*. The Guilford Press.

- Richey, R.C., & Klein, J.D. (2007). *Design and Development Research: Methods, Strategies, and Issues* (1st ed.). Routledge. <https://doi.org/10.4324/9780203826034>
- Sailer, M., Hense, J.U., Mayr, S.K. & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior*, 69, 371-380. <https://doi.org/10.1016/j.chb.2016.12.033>
- Siti Fatimah Osman. (2023). Factors in Teaching Aids that Support Islamic Education Teachers' Critical Thinking Practice in Improving 21st Century Learning Skills. *Sains Insani*, 8(1), 51-57.
- Tan, X., Cheng, G., & Ling, M. H. (2025). Artificial intelligence in teaching and teacher professional development: A systematic review. *Computers and Education: Artificial Intelligence*, 8, 100355 - 100374. <https://doi.org/10.1016/J.CAEAI.2024.100355>
- Tengku Nursyahzanani & Zawawi Yusoff. (2024a). Implikasi Amalan Solat Terhadap Akhlak Pelajar Sekolah Menengah Kebangsaan Kompleks Mengabang Telipot. *Jurnal Islam dan Masyarakat Kontemporari*, 25(1), 25-37.
- Tengku Nursyahzanani & Zawawi Yusoff. (2024b). Peranan Ibadah Solat Dalam Membentuk Tingkah Laku Dan Kepimpinan Diri Yang Efektif Dalam Kalangan Remaja di Malaysia. *Malaysian Journal of Islamic Studies (MJIS)*, 8(2), 102-120. <https://doi.org/10.37231/mjis.2024.8.2.279>
- Wang, S., Wang, F., Zhu, Z., Wang, J., Tran, T. & Du, Z. (2024). Artificial intelligence in education: A systematic literature review. *Expert Systems with Applications*, 252, 1-19. <https://doi.org/10.1016/j.eswa.2024.124167>.
- Zainal Arifin Ahmad, Ahmad Taufiq Hidayatur Rohman, Darlina Kartika Rini, Khoiriyah & Loso Judijanto. (2025). The Role of Artificial Intelligence in Enhancing Pedagogical Methods in Modern Islamic Education. *Journal of Hunan University Natural Sciences*, 52(6), 101-112. <https://doi.org/10.55463/issn.1674-2974.52.6.9>