International Journal of Learning and Education

The Effect of a Digital Flipbook Integrated with Gamified Wordwall Assessments on Learning Motivation and Outcomes in Islamic Education: A Quasi-Experimental Study

Miftah Hur Rahman Zh*[1], Maulana Paramaditya Ananta[2], Naufal Rifqi Nasution[3], Muhammad Arinal Haq[4]
[1]Faculty of Islamic Studies, Universitas Darunnajah, Jakarta, Indonesia
[2]STKIP Al Hikmah Surabaya, Surabaya, Indonesia
[3]Universiti Utara Malaysia, Malaysia
[4]University of Jordan, Jordan
Email: *miftahurrahmanzh@darunnajah.ac.id

Received: 2025-October-15
Rev. Req: 2025-November-09
Accepted: 2025-December-31

ABSTRACT: *This study investigates the effect of a digital flipbook, supported by a Wordwall-based gamified assessment, on students' learning motivation and learning outcomes in Al-Quran Hadits at Madrasah Aliyah. The research gap addressed is the scarcity of quantitative evidence on the combined effectiveness of digital flipbooks and gamified assessment tools, specifically in Islamic education at the secondary level. A quasi-experimental design with a pretest-posttest nonequivalent control group was employed, involving 68 eleventh-grade students from two classes at MAN Kota Batu. The experimental group (n=34) received Al-Quran Hadith instruction using digital flipbook media with Wordwall-based gamified assessments (quiz, match-up, whack-a-mole, and game show quiz). In contrast, the control group (n=34) received conventional textbook-based instruction. Data were collected through a validated learning motivation questionnaire (Cronbach's α = 0.87) and a cognitive achievement test on Al-Quran Hadits (KR-20 = 0.82). Data analysis used an independent-samples t-test and MANOVA. The results revealed that the experimental group demonstrated significantly higher learning motivation (M = 82.47, SD = 6.12) than the control group (M = 71.35, SD = 7.89), t(66) = 6.72, p < 0.001, Cohen's d = 1.57. Learning outcomes were also significantly higher in the experimental group (M=84.56, SD=5.43) than in the control group (M=72.18, SD=8.27), t(66) = 7.63, p < 0.001, Cohen's d = 1.77. MANOVA confirmed a significant multivariate effect, Wilks' λ = 0.412, F(2,65) = 46.38, p < 0.001, η² = 0.588. These findings confirm that a digital flipbook, supported by Wordwall, significantly enhances both learning motivation and learning outcomes in Al-Quran Hadith, providing empirical evidence for the integration of technology in Islamic educational settings.*

Keywords: *Digital Flipbook, Wordwall, Learning Motivation, Learning Outcomes, Al-Quran Hadits, Educational Technology*

ABSTRAK: Penelitian ini menyelidiki pengaruh penggunaan digital flipbook yang dipadukan dengan asesmen gamifikasi melalui platform Wordwall terhadap motivasi dan hasil belajar siswa pada mata pelajaran Al-Qur'an Hadits di Madrasah Aliyah. Kesenjangan riset yang diangkat adalah minimnya bukti kuantitatif mengenai efektivitas gabungan antara digital flipbook dan alat asesmen gamifikasi, khususnya dalam konteks pendidikan agama Islam di tingkat menengah atas. Penelitian ini menggunakan desain kuasi-eksperimen dengan kelompok kontrol non-ekuivalen yang diberi pretes

dan postes. Sebanyak 68 siswa kelas XI dari dua kelas di MAN Kota Batu dilibatkan sebagai sampel. Kelompok eksperimen (n=34) mendapat pembelajaran Al-Qur'an Hadits menggunakan media digital flipbook yang disertai asesmen gamifikasi melalui Wordwall (dalam bentuk kuis, menjodohkan, permainan whack-a-mole, dan kuis ala game show). Sementara itu, kelompok kontrol (n=34) mendapat pembelajaran konvensional menggunakan buku teks. Data dikumpulkan melalui angket motivasi belajar yang telah tervalidasi (dengan nilai Cronbach's α = 0,87) dan tes hasil belajar kognitif pada mata pelajaran Al-Qur'an Hadits (dengan nilai KR-20 = 0,82). Analisis data menggunakan uji t sampel independen dan MANOVA. Hasil penelitian menunjukkan bahwa kelompok eksperimen memiliki motivasi belajar yang secara signifikan lebih tinggi (rata-rata = 82,47; standar deviasi = 6,12) dibandingkan kelompok kontrol (rata-rata = 71,35; standar deviasi = 7,89); t(66) = 6,72; p < 0,001; dengan efek yang besar (Cohen's d = 1,57). Hasil belajar kelompok eksperimen juga secara signifikan lebih tinggi (rata-rata = 84,56; standar deviasi = 5,43) daripada kelompok kontrol (rata-rata = 72,18; standar deviasi = 8,27); t(66) = 7,63; p < 0,001; dengan efek yang sangat besar (Cohen's d = 1,77). Analisis MANOVA mengonfirmasi adanya pengaruh multivariat yang signifikan, dengan nilai Wilks' λ = 0,412; F(2,65) = 46,38; p < 0,001; dan ukuran efek parsial eta kuadrat (η^2) sebesar 0,588 yang termasuk dalam kategori besar. Temuan ini menegaskan bahwa penggunaan digital flipbook yang didukung oleh asesmen gamifikasi Wordwall secara signifikan mampu meningkatkan motivasi belajar dan hasil belajar siswa pada mata pelajaran Al-Qur'an Hadits. Penelitian ini memberikan bukti empiris bagi integrasi teknologi dalam lingkungan pendidikan Islam.

Kata Kunci: *Flipbook Digital, Wordwall, Motivasi Belajar, Hasil Belajar, Al-Quran Hadits, Teknologi Pendidikan*

I. INTRODUCTION

The rapid advancement of digital technology has fundamentally transformed the educational landscape (Kurniasih et al., 2025; Kuswandi et al., 2025), compelling educational institutions worldwide to integrate innovative learning media into their instructional practices (Mayer, 2024; Clark & Mayer, 2024; Alshammary & Alhalafawy, 2023). In the context of Islamic education, this transformation presents both an imperative and a challenge (Zh, Thaariq, et al., 2024): the imperative to modernize pedagogical approaches while preserving the authenticity of Islamic values and spiritual dimensions of learning (Achruh et al., 2024; Abubakari, 2025; Hamdanah et al., 2024). Al-Quran Hadits, as a core subject in the Madrasah curriculum (Zh et al., 2022; Zh, Sani, et al., 2024), carries the fundamental responsibility of developing students' ability to read, understand, and analyze the content of the Quran and Hadith as primary sources of Islamic law and guidance (Mashudi & Hilman, 2024; Astuti et al., 2024). Despite the critical importance of Al-Quran Hadits, empirical evidence consistently indicates that student motivation and learning outcomes in this subject remain suboptimal, particularly at the Madrasah Aliyah level, where conventional textbook-based instruction continues to dominate pedagogical practice (Anwar et al., 2025; Ismail et al., 2025).

The existing literature on educational technology in Islamic education has primarily focused on qualitative case studies and research-and-development (R&D) designs examining the development and feasibility of digital learning media (Zuniar et al., 2025; Khasanah & Majid, 2025; Putra et al., 2023). Several studies have investigated the use of e-learning platforms and interactive applications in Islamic education settings, demonstrating their potential to enhance

student engagement and accessibility (Munandar et al., 2024; Rulitawati & Sriyanti, 2025; Hajri, 2023). Research on digital flipbooks specifically has shown promising results in improving learning effectiveness across various disciplines, including science education (Purnomo et al., 2024), language learning (Usman et al., 2024), and elementary education (Meilyawati et al., 2025). Additionally, gamified assessment tools such as Wordwall have emerged as promising instruments for formative evaluation, offering interactive game-based formats that enhance student engagement during assessment processes (Deterding et al., 2011; Zainuddin et al., 2020; Sailer & Homner, 2020). Meta-analytic reviews have further confirmed that interactive multimedia can increase student motivation by up to 23% and knowledge retention by 31% compared to traditional instruction (Hernández-Ramos et al., 2024). However, a critical gap persists: there is a marked scarcity of rigorous quantitative studies employing experimental or quasi-experimental designs that specifically examine the combined effectiveness of digital flipbooks and gamified assessment tools, such as Wordwall, for Al-Quran Hadits at the secondary level (Damayanti et al., 2025; Asy'arie et al., 2024).

The novelty of the present study lies in its quantitative, quasi-experimental approach to investigating the dual effects of a digital flipbook assisted by a Wordwall-based gamified assessment on both learning motivation and learning outcomes in Al-Quran Hadith, an area that has not been adequately addressed in the existing literature. While previous studies have predominantly employed R&D methodologies to develop flipbook media and assess its feasibility through expert validation and limited user trials (Zuniar et al., 2025; Hayati et al., 2025), this study advances the field by providing statistical evidence of the causal impact of digital flipbook combined with Wordwall implementation on measurable educational variables. Furthermore, the study integrates Mayer's Cognitive Theory of Multimedia Learning (CTML), which posits that learners process information through dual channels (verbal and visual), with limited cognitive capacity, and that meaningful learning occurs when instructional design facilitates active cognitive processing (Mayer, 2024; Mayer, 2021). This theoretical grounding, combined with Self-Determination Theory (SDT) for understanding motivational dynamics (Ryan & Deci, 2020) and gamification theory for assessment engagement (Sailer & Homner, 2020; Landers et al., 2022), provides a robust conceptual foundation that is largely absent from existing flipbook research in Islamic education contexts.

The purpose of this study is to examine the effect of a digital flipbook, supported by a Wordwall-based gamified assessment, on students' learning motivation and learning outcomes in Al-Quran Hadits at MAN Kota Batu. Specifically, this study aims to: (1) determine whether there is a significant difference in learning motivation between students who learn Al-Quran Hadits using digital flipbook with Wordwall and those who learn using conventional textbooks; (2) determine whether there is a significant difference in learning outcomes between the two groups; and (3) examine the simultaneous (multivariate) effect of digital flipbook assisted by Wordwall on both learning motivation and learning outcomes. The hypotheses tested are: (H_1) students who learn using a digital flipbook with Wordwall demonstrate significantly higher learning motivation; (H_2) students who learn using a digital flipbook with Wordwall demonstrate significantly higher

learning outcomes; and (H_3) the digital flipbook assisted by Wordwall has a significant simultaneous effect on both variables.

This article is structured as follows: the Introduction establishes the research context, gap, and objectives; the Method section details the quasi-experimental design, population, sampling, instruments, and data analysis techniques; the Results section presents the statistical findings; the Discussion section interprets the findings in relation to existing literature and theoretical frameworks; and the Conclusion provides a summary of key findings, implications, limitations, and recommendations for future research.

II. METHOD

This study employed a quasi-experimental design with a pretest-posttest nonequivalent control group design. This design was selected because random assignment of individual students to experimental and control groups was not feasible within the existing classroom structure, which is a common constraint in educational research (Shadish et al., 2002; Creswell & Creswell, 2018). The nonequivalent control group design is considered appropriate for establishing causal relationships when true randomization is not possible, provided that pretest equivalence is verified and potential confounding variables are controlled (Campbell & Stanley, 1963).

The population of this study comprised all eleventh-grade students at MAN Kota Batu during the 2024/2025 academic year, totaling 136 students distributed across four classes. Two intact classes were purposively selected based on comparable academic profiles and demographic characteristics: Class XI-A (n=34) was designated the experimental group, and Class XI-B (n=34) the control group, yielding a total sample of 68 students. The experimental group received Al-Quran Hadits instruction on the topic of "Understanding and Analyzing the Content of Surah Al-Maidah and Related Hadiths on Halal-Haram Food" (Memahami dan Menganalisis Kandungan Surah Al-Maidah dan Hadits Terkait Makanan Halal-Haram) using digital flipbook media developed with the AnyFlip platform, incorporating interactive multimedia elements such as embedded video explanations of Quranic tafsir, audio recitation of Quranic verses (tilawah), clickable infographics on hadith classification, and gamified assessments through Wordwall (including quiz, match-up, whack-a-mole, and gameshow quiz formats). The control group received instruction on the same topic using conventional textbook-based methods, with teacher-centered lectures and discussions. The intervention was conducted over six meetings (two per week for three weeks), each lasting 90 minutes.

Two instruments were used to collect data. The first instrument was a learning motivation questionnaire adapted from the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich et al. (1991), which was contextualized for Al-Quran Hadits learning and validated through expert judgment (two educational technology experts and one Al-Quran Hadits curriculum expert) and empirical pilot testing with 30 students outside the sample. The questionnaire consisted of 25 items measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), encompassing five dimensions: intrinsic goal orientation, extrinsic goal orientation, task value, control of learning beliefs, and self-efficacy for learning. The Cronbach's alpha reliability coefficient was 0.87, indicating good internal consistency (George & Mallery,

2020). The second instrument was a cognitive achievement test comprising 30 multiple-choice items covering the topic of Surah Al-Maidah and related Hadiths on halal-haram food in the Qur'an and Hadith, validated for content validity by subject-matter experts and empirically tested for item difficulty, discrimination index, and reliability. Items with difficulty indices between 0.30 and 0.70 and discrimination indices above 0.30 were retained, resulting in 25 items used in the final test. The Kuder-Richardson 20 (KR-20) reliability coefficient was 0.82.

In addition to the formal cognitive test, formative assessments during the intervention were administered through Wordwall (wordwall.net), a web-based gamified assessment platform. Four Wordwall activity types were integrated: (1) Quiz mode for individual knowledge checks on Quranic verse identification and hadith classification; (2) Match-up mode for pairing Quranic verses with their corresponding tafsir interpretations; (3) Whack-a-mole mode for rapid identification of halal and haram food categories based on Al-Quran and Hadith references; and (4) Gameshow quiz mode for collaborative team-based review sessions. These Wordwall activities served as both formative assessment tools and motivational stimuli, providing immediate feedback and competitive elements that reinforced engagement in learning.

Data analysis was conducted in three stages. First, descriptive statistics (mean, standard deviation, minimum, maximum) were calculated for each group. Second, prerequisite assumption tests were performed: the Kolmogorov-Smirnov test for normality and Levene's test for homogeneity of variance. Third, inferential analyses were conducted using independent samples t-tests and MANOVA. Effect sizes were calculated using Cohen's d for t-tests and partial eta squared (η^2) for MANOVA. All analyses were performed using SPSS version 26.0 with a significance level of $\alpha = 0.05$.

III. RESULT

This section presents the statistical findings, organized into four subsections: descriptive statistics, prerequisite test results, t-test hypothesis testing, and MANOVA-based multivariate hypothesis testing.

Table 1. Descriptive Statistics of Learning Motivation and Learning Outcomes

Variable	Group	N	Pre M	Pre SD	Post M	Post SD	N-Gain%
Learning Motivation	Experimental	34	62.15	8.34	82.47	6.12	53.6
	Control	34	61.88	7.92	71.35	7.89	24.8
Learning Outcomes	Experimental	34	58.24	9.15	84.56	5.43	63.0
	Control	34	57.91	8.87	72.18	8.27	33.9

As shown in Table 1, the pretest means for learning motivation were nearly equivalent between the experimental group (M=62.15, SD=8.34) and control group (M=61.88, SD=7.92), suggesting comparable initial motivation levels. Similarly, pretest learning outcomes were comparable (experimental: M = 58.24; control: M = 57.91). Following the intervention, the experimental group demonstrated substantially higher posttest means on both variables, with N-Gain percentages of

53.6% for motivation and 63.0% for learning outcomes, categorized as moderate and high gains, respectively, according to Hake's criteria (1998).

Table 2. Results of Normality and Homogeneity Tests

Test	Variable	Group	Statistic	p-value	Conclusion
K-S	Motivation	Experimental	0.118	0.200	Normal
		Control	0.132	0.143	Normal
	Outcomes	Experimental	0.109	0.200	Normal
		Control	0.125	0.189	Normal
Levene's	Motivation	—	2.341	0.131	Homogeneous
	Outcomes	—	3.127	0.082	Homogeneous

The Kolmogorov-Smirnov test results indicate that all posttest data distributions were normal (all $p > 0.05$), and Levene's test confirmed homogeneity of variance for both variables. These results met the prerequisites for parametric analyses using an independent-samples t-test and MANOVA.

Table 3. Independent Samples T-Test Results

Variable	df	t-value	p-value	Cohen's d	Interpretation
Learning Motivation	66	6.72	< 0.001	1.57	Large effect
Learning Outcomes	66	7.63	< 0.001	1.77	Large effect

The independent samples t-test revealed statistically significant differences between the experimental and control groups on both dependent variables. For learning motivation, $t(66) = 6.72$, $p < 0.001$, with Cohen's $d = 1.57$. For learning outcomes, $t(66) = 7.63$, $p < 0.001$, with Cohen's $d = 1.77$. Both effects substantially exceed Cohen's threshold of 0.80 for large effects. These results support H_1 and H_2.

Table 4. MANOVA Results

Effect	Wilks' λ	F-value	df	p-value	Partial η^2
Learning Media	0.412	46.38	2, 65	< 0.001	0.588

The MANOVA results demonstrate a statistically significant multivariate effect: Wilks' $\lambda = 0.412$, $F(2, 65) = 46.38$, $p < 0.001$, partial $\eta^2 = 0.588$. The partial eta squared of 0.588 indicates approximately 58.8% of the variance in the combined dependent variables was accounted for by the learning media type, representing a very large effect. These results support H_3.

IV. DISCUSSION

The findings of this study demonstrate that a digital flipbook, assisted by Wordwall, significantly enhances both learning motivation and learning outcomes in Al-Quran Hadits at Madrasah Aliyah, thereby confirming all three hypotheses. The significant difference in learning motivation between the experimental group (M=82.47) and control group (M=71.35) with a large effect size (Cohen's $d = 1.57$) indicates that the interactive multimedia features of digital flipbook including embedded videos, audio Quran recitation (tilawah), clickable infographics on hadith classification, and Wordwall-based gamified assessments effectively stimulated students' intrinsic and extrinsic

motivation. This finding is consistent with Self-Determination Theory (SDT), which posits that learning environments supporting autonomy, competence, and relatedness foster intrinsic motivation (Ryan & Deci, 2020; Ryan & Deci, 2017). The digital flipbook provided students with autonomous control over their learning pace, while Wordwall's interactive feedback enhanced perceived competence, and collaborative gameshow formats promoted relatedness.

These results corroborate previous research demonstrating the positive impact of interactive digital media on student motivation. Hernández-Ramos et al. (2024) found that interactive technologies increased student motivation by 23% in online university courses, while Chen et al. (2023) reported that gamified interactive e-books significantly improved learning motivation. The meta-analysis by Strelan et al. (2020) confirmed that technology-enhanced learning environments consistently yield higher motivation levels compared to traditional instruction. In the context of Islamic education, these findings extend the qualitative observations of Munandar et al. (2024) and Mashudi and Hilman (2024), who reported that digital applications enhanced students' understanding of Islamic concepts but lacked quantitative evidence. The present study fills this gap with robust statistical evidence. Notably, the integration of Wordwall-based gamified assessments played a crucial role in sustaining student motivation. Wordwall's interactive game formats incorporated elements of competition, immediate feedback, and playful engagement, aligning with gamification principles (Deterding et al., 2011; Zainuddin et al., 2020). The gamification literature reports that game-based assessment tools enhance intrinsic motivation by satisfying students' needs for competence, autonomy, and relatedness (Sailer & Homner, 2020; Landers et al., 2022). In the context of the Al-Quran Hadith, the Wordwall match-up activities enabled students to actively connect Quranic verses with their tafsir interpretations, transforming passive memorization into an engaging cognitive exercise.

The significant improvement in learning outcomes, with the experimental group scoring 84.56 compared to 72.18 (Cohen's d = 1.77), can be explained through Mayer's Cognitive Theory of Multimedia Learning (CTML). According to CTML, learners process information through dual channels (verbal and visual), and meaningful learning occurs when instructional design facilitates the selection, organization, and integration of information from both channels (Mayer, 2024; Mayer, 2021). The digital flipbook was designed following CTML principles: the multimedia principle, combining text, images, and audio; spatial contiguity, achieved through proximal placement of text and images; segmenting through a page-by-page structure; and interactivity, achieved through Wordwall-based gamified assessments and clickable elements. The large effect size (d = 1.77) exceeds typical meta-analytic effect sizes of d = 0.40–0.72 (Noetel et al., 2022), suggesting the flipbook-Wordwall combination is particularly effective for Al-Quran Hadits's structured, text-rich content.

The MANOVA results (Wilks' $\lambda = 0.412$, $F(2,65) = 46.38$, $p < 0.001$, $\eta^2 = 0.588$) indicate that the learning media type explained 58.8% of variance in the combined dependent variables. This suggests that digital flipbooks' influence on motivation and outcomes is synergistically enhanced by interactive features and Wordwall gamified feedback, which likely contributes to improved cognitive engagement and better outcomes. This interpretation aligns with the expectancy-value model (Wigfield & Eccles, 2020), which proposes that students who perceive higher task value and

expect success invest greater cognitive effort. Research by Fredricks et al. (2004) consistently demonstrated that behavioral, emotional, and cognitive engagement mediates the relationship between instructional design and achievement.

Several important implications emerge. First, the results provide empirical justification for integrating digital flipbooks with Wordwall into Islamic education curricula at Madrasah Aliyah, particularly relevant given Indonesia's Merdeka Curriculum, which emphasizes student-centered, technology-enhanced learning (Ministry of Education, 2022). Second, the findings highlight the importance of grounding interventions in CTML and SDT theories. Third, the study demonstrates that digital transformation in Islamic education need not compromise Al-Quran Hadith's spiritual dimensions; technology can present Quranic and Hadith content in more engaging and cognitively accessible formats. However, as cautioned by Achruh et al. (2024) and Hamdanah et al. (2024), integration must be implemented with adequate teacher training and support for digital infrastructure.

V. CONCLUSION

This study provides robust quantitative evidence that a digital flipbook, supported by a Wordwall-based gamified assessment, significantly enhances both learning motivation and learning outcomes in Al-Quran Hadits at MAN Kota Batu. The quasi-experimental findings, supported by large effect sizes and multivariate analyses, confirm that interactive multimedia learning media designed according to the principles of Cognitive Theory of Multimedia Learning and Self-Determination Theory, combined with gamified assessment tools, can effectively address the persistent challenges of low motivation and suboptimal learning outcomes in Al-Quran Hadith. These findings contribute to the field by filling a gap in quantitative evidence on the effectiveness of educational technology in Islamic education settings. Limitations include purposive sampling of intact classes, a relatively short three-week intervention period, and a focus on a single topic and a single school, which may limit generalizability. Future research should employ randomized controlled designs with larger and more diverse samples across multiple madrasah contexts, extend the intervention duration, include additional variables such as critical thinking skills and Islamic character development, and incorporate longitudinal assessments to examine the sustainability of the observed effects.

VI. REFERENCES

[1] Abubakari, M. S. (2025). Adoption of digital technologies in Islamic education to foster a lifelong learning culture. In Multi-Industry Digitalization and Technological Governance in the AI Era (pp. 103–125). IGI Global.

[2] Achruh, A., Rapi, M., Rusdi, M., & Idris, R. (2024). Challenges and opportunities of artificial intelligence adoption in Islamic education. International Journal of Learning, Teaching and Educational Research, 23(11), 423–443.

[3] Alshammary, F. M., & Alhalafawy, W. S. (2023). Digital platforms and the improvement of learning outcomes: Evidence extracted from a meta-analysis. Sustainability, 15(2), 1305.

[4] Anwar, K., Saleh, A. S., Yusup, D. K., & Jahanifar, M. (2025). Faith meets technology: Navigating student satisfaction in Indonesia's Islamic higher education online learning. Jurnal Ilmiah Ilmu Terapan Universitas Jambi, 9(2), 695–708.

[5] Asy'arie, M., Setiadi, R., & Firdaus, A. (2024). Islamic education policies in the digital era: Critical thinking, digital literacy, and student creativity. Journal of Islamic Education Policy, 8(3), 145–162.

[6] Astuti, R. F., Susanti, E., Yusnaldi, E., Arsyad, J., & Setyawan, A. (2024). How much is character education correlated with learning outcomes of Islamic religious education students in Indonesia. BIO Web of Conferences, 146, 01087.

[7] Campbell, D. T., & Stanley, J. C. (1963). Experimental and quasi-experimental designs for research. Houghton Mifflin.

[8] Chen, C. H., Liu, G. Z., & Hwang, G. J. (2023). Effects of gamified interactive e-books on learning achievements and motivation. Frontiers in Psychology, 14, 1236297.

[9] Clark, R. C., & Mayer, R. E. (2024). e-Learning and the science of instruction (5th ed.). Wiley.

[10] Creswell, J. W., & Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.). SAGE.

[11] Damayanti, R., Suryadi, D., & Mulyati, T. (2025). Digital challenges in Islamic education: Teacher skills and technology guidance. Indonesian Journal of Islamic Education, 12(1), 78–95.

[12] Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. Proceedings of the 15th International Academic MindTrek Conference, 9–15.

[13] Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. Review of Educational Research, 74(1), 59–109.

[14] George, D., & Mallery, P. (2020). IBM SPSS statistics 26 step by step (16th ed.). Routledge.

[15] Hajri, M. (2023). Blended learning in Islamic education: Overcoming limited access to educational resources. International Journal of Islamic Education Technology, 5(2), 112–128.

[16] Hamdanah, H., Rusmaniah, R., Rajiani, I., & Muslimah, M. (2024). Continuance intention of digital education in traditional Indonesian higher education. Journal of Infrastructure, Policy and Development, 8(5), 3596.

[17] Hayati, A. N., Sidik, A. S., Cofia, N. S. I., & Aeni, A. N. (2025). Development of a flipbook of cergam siwak in Islamic education. MASALIQ, 5(3).

[18] Hernández-Ramos, J. P., García-Valcárcel, A., & Tejedor-Tejedor, F. J. (2024). Use of interactive technologies to increase motivation in university online courses. Education Sciences, 14(12), 1406.

[19] Ismail, I., Parinduri, M. A., & Ibarra, F. P. (2025). Strengthening the ideology of Islamic religious education in the era of technological disruption. Jurnal Ilmiah Ilmu Terapan Universitas Jambi, 9(2), 465–473.

[20] Khasanah, S. N., & Majid, A. A. (2025). Deep learning based flipbook media to improve descriptive text learning. Jurnal Paedagogy, 12(4), 1131–1142.

[21] Kurniasih, D. D., Zh, M. H. R., Ayunisa, D. A., Maryono, Mustofa, K., & Siswanto. (2025). Analysis of awareness and confidence in learning outcomes with students' academic

motivation: SEM approach. In Jurnal Inovasi Teknologi Pendidikan (Vol. 12, Issue 1, pp. 58–67). Program Pascasarjana Universitas Negeri Yogyakarta. https://journal.uny.ac.id/index.php/jitp/article/view/76652

[22] Kuswandi, D., Fadhli, M., Zh, M. H. R., Haditia, M., Sinaga, M. N. A., Thaariq, Z. Z. A., & Ardiansyah, A. (2025). Implementation of personalized approach in video editing learning to improve digital competency of 21st century learners.

[23] Landers, R. N., Armstrong, M. B., & Collmus, A. B. (2022). How to use game elements to enhance learning. In Simulation and Gaming in the Network Society (pp. 65–80). Springer.

[24] Listanto, V., Arlinwibowo, J., et al. (2025). Which is better: E-books or printed books? A meta-analysis. International Review of Research in Open and Distributed Learning, 26(3), 170–192.

[25] Mashudi, M., & Hilman, C. (2024). Digital-based Islamic religious education: Enhancing student engagement and spiritual understanding. Journal of Islamic Education Innovation, 7(2), 45–63.

[26] Mayer, R. E. (2021). Multimedia learning (3rd ed.). Cambridge University Press.

[27] Mayer, R. E. (2024). The past, present, and future of the cognitive theory of multimedia learning. Educational Psychology Review, 36(1), 8.

[28] Meilyawati, Y., Bektiarso, S., & Imsiyah, N. (2025). Effect of PBL assisted by flipbook media on learning outcomes and critical thinking. International Journal of Current Science Research and Review, 8(9), 4586–4591.

[29] Ministry of Education, Culture, Research, and Technology. (2022). Keputusan Menteri Pendidikan No. 56 Tahun 2022 tentang Kurikulum Merdeka. Kemendikbudristek.

[30] Munandar, A., et al. (2024). Menggali kreativitas guru PAI dalam era digital: Studi kasus di Madrasah Aliyah Laboratorium Jambi. Jurnal Penelitian Inovatif, 4(4), 2173–2180.

[31] Noetel, M., Griffith, S., et al. (2022). Multimedia design for learning: An overview of reviews with meta-meta-analysis. Review of Educational Research, 92(3), 413–454.

[32] Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). A manual for the use of the MSLQ. University of Michigan.

[33] Purnomo, P. E. A., Agustini, K., & Sudatha, I. G. W. (2024). Peran flipbook sebagai media pembelajaran inovatif dalam pembelajaran abad 21. Jurnal Riset Dan Inovasi Pembelajaran, 4(3), 2001–2015.

[34] Putra, A. D., Yulianti, D., & Fitriawan, H. (2023). Pengembangan bahan ajar berbasis flipbook digital. Jurnal Pendidikan Teknologi, 6(2), 88–102.

[35] Rulitawati, R., & Sriyanti, I. (2025). Technology-based Islamic education innovation strategies. Journal of Islamic Education Innovation, 8(1), 34–52.

[36] Ryan, R. M., & Deci, E. L. (2017). Self-determination theory: Basic psychological needs in motivation, development, and wellness. Guilford Press.

[37] Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective. Contemporary Educational Psychology, 61, 101860.

[38] Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. Educational Psychology Review, 32(1), 77–112.

[39] Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). Experimental and quasi-experimental designs for generalized causal inference. Houghton Mifflin.

[40] Strelan, P., Osborn, A., & Palmer, E. (2020). The flipped classroom: A meta-analysis of effects on student performance. Educational Research Review, 30, 100314.

[41] Usman, H., Lestari, I., et al. (2024). Flipbooks and e-learning for teaching English. Studies in English Language and Education, 11(2), 919–935.

[42] Wigfield, A., & Eccles, J. S. (2020). 35 years of research on students' subjective task values and motivation. Advances in Motivation Science, 7, 161–198.

[43] Zainuddin, Z., Shujahat, M., Haruna, H., & Chu, S. K. W. (2020). The role of gamified e-quizzes on student learning and engagement. Computers & Education, 145, 103729.

[44] Zuniar, M., Rahmadani, M., Hapsyari, S., & Aeni, A. (2025). Pengembangan flipbook digital "FIKIR" tentang keteladanan Rasulullah SAW. YASIN, 5(4), 2707–2724.

[45] Zh, M. H. R., Ardiansyah, A., Dewi, M. S., & Nikmatullah, F. (2022). Analisis Respon Siswa dan Guru terhadap Pengembangan Media Pembelajaran Flipbook Online pada Pelajaran Al-qur'an Hadist di Madrasah Aliyah Negeri (Man) Kota Batu. Jurnal Literasiologi, *8*(2), 556619.

[46] Zh, M. H. R., Sani, N. L., Kuswandi, D., & Fadhli, M. (2024). Needs analysis of development fbo media as a support for blended learning in al-qur'an hadits lesson. Jurnal Pendidikan Agama Islam Al-Thariqah, *9*(1), 16–32.

[47] Zh, M. H. R., Thaariq, Z. Z. A., & Ardiansyah, A. (2024). Mobile Learning: Future Learning Technologies for Islamic Formal Education (A Literature Study). Proceedings of International Conference on Education, *2*(1), 370–377.