

Qur'an Memorisation in Tahfiz Education: A Systematic Review

Sheryl Talisha Salsabila*¹

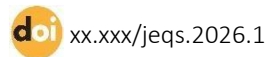
¹Universitas Islam Negeri Sultan Aji Muhammad Idris Samarinda, Indonesia

* Corresponding author: sherly11@gmail.com

Received: 2026-January-08

Rev. Req: 2026-February-11

Accepted: 2026-May-27



How to cite this paper: Salsabila, Sheryl Talisha., (2026). Qur'an Memorisation in Tahfiz Education: A Systematic Review. *Journal of Empirical Quranic Studies (JEQS)*, 1(1), 54–66.

This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International license (<https://creativecommons.org/licenses/by/4.0/>)

ABSTRACT: *Qur'an memorisation in tahfiz education combines devotional preservation, oral recitation, disciplined repetition, semantic comprehension, and teacher-mediated correction. This systematic review synthesised evidence on pedagogical methods, digital tools, cognitive outcomes, and institutional conditions shaping contemporary Qur'an memorisation. The review used seven Scopus RIS exports dated 30 July 2026 and screened empirical, design, validation, survey, qualitative, modelling, and mixed-method studies published from 2016 to 2026. From 193 records, 35 duplicates were removed, 158 unique records were screened, and 60 studies were retained for narrative synthesis. The evidence clustered into four domains: digital and artificial-intelligence-supported memorisation; pedagogical, linguistic, and revision methods; curriculum and institutional pathways; and cognitive, affective, and well-being outcomes. The synthesis suggests that memorisation quality is not explained by repetition alone. It depends on an ecology of semantic cues, regular murāja'ah, teacher correction, suitable digital scaffolds, institutional time design, and ethical safeguards. The main limitation is that most included records were appraised from metadata and abstracts; therefore, full-text dual-reviewer validation remains essential before final journal submission.*

Hafalan Al-Qur'an dalam pendidikan tahfiz menggabungkan penjagaan teks suci, pelafalan lisan, pengulangan disiplin, pemahaman makna, dan koreksi guru. Tinjauan sistematis ini mensintesis bukti tentang metode pedagogis, perangkat digital, hasil kognitif, serta kondisi institusional yang membentuk hafalan Al-Qur'an kontemporer. Basis telaah menggunakan tujuh ekspor RIS Scopus bertanggal 30 Juli 2026 dan menyaring studi empiris, desain, validasi, survei, kualitatif, pemodelan, dan metode campuran yang diterbitkan pada 2016–2026. Dari 193 rekaman, 35 duplikasi dihapus, 158 rekaman unik disaring, dan 60 studi dipertahankan untuk sintesis naratif. Bukti terkumpul dalam empat domain: dukungan digital dan kecerdasan buatan; metode pedagogis, linguistik, dan murāja'ah; kurikulum dan jalur institusional; serta hasil kognitif, afektif, dan kesejahteraan. Sintesis menunjukkan bahwa mutu hafalan tidak hanya ditentukan oleh pengulangan, tetapi oleh ekologi belajar yang memadukan makna,

koreksi guru, jadwal revisi, dukungan teknologi, desain waktu institusional, dan perlindungan etis.

Keywords: *Hifz Learning; Murāja'ah; Qur'anic Recitation; Islamic Education; Educational Technology*

I. INTRODUCTION

Qur'an memorisation is a distinctive educational practice because it joins sacred textual preservation with ordinary cognitive demands: attention, encoding, retrieval, oral production, correction, and long-term retention. In tahfiz education, the quality of learning is therefore not reducible to the number of verses or juz' memorised. Accuracy, fluency, stability after time, and the ability to maintain older portions during new memorisation are central indicators of meaningful progress. This broader framing is supported by evidence that Qur'anic expertise is highly domain-specific rather than a general enhancement of all memory functions (Black et al., 2020).

The review question also requires a careful distinction between memorisation and comprehension. Several tahfiz studies argue that meaning, Arabic schemata, and semantic familiarity can support memorisation by providing retrieval cues and reducing confusion between similar verses (Hussin et al., 2021). At the same time, psychological evidence complicates any simple claim that Arabic comprehension is always necessary, because one experimental study showed that a Hafiz who did not understand Arabic still performed comparably to an Arabic-understanding Hafiz (Black et al., 2020).

Contemporary tahfiz education is also changing through mobile applications, artificial intelligence, gamification, learning analytics, and automated recitation verification. The EzHifz application, for example, operationalised VARK learning preferences and memorisation techniques within a mobile interface and obtained favourable alpha-testing agreement (Mustafa et al., 2021). Technical work on Siamese LSTM recitation verification similarly shows that automated support can move beyond presentation of text and audio toward verification of recited verses (Rajagede & Hastuti, 2021).

The institutional dimension is equally important. Tahfiz programmes increasingly operate inside integrated schooling, higher education, and pesantren ecosystems, where memorisation competes with academic workload, curriculum expectations, and adolescent well-being. Studies of Plus Tahfiz and school climate show that memorisation cannot be separated from curriculum integration, teacher supervision, and the learning environment (Awang et al., 2025). The included evidence therefore points to tahfiz education as a multi-layered learning ecology rather than a single memorisation technique.

The novelty of this review lies in bringing these dispersed strands into one synthesis. Prior work in the supplied corpus tends to focus on a single dimension: mobile application

design, cognitive performance, meaning-based memorisation, gamified murāja'ah, or institutional pathways. No included record offered a combined evidence model connecting pedagogy, digital scaffolds, cognition, institutional context, and learner well-being. This review addresses that synthesis gap by asking how Qur'an memorisation has been studied as a pedagogical, technological, cognitive, and institutional system.

The primary review question was: how have pedagogical methods, digital tools, cognitive-affective outcomes, and institutional conditions for Qur'an memorisation been studied in contemporary tahfiz education? Secondary questions examined the types of strategies represented, the outcomes reported, the methodological limitations constraining inference, and the integrated model that can explain the relationship between memorisation practice, technological support, and institutional conditions.

II. METHOD

This review was conducted as a systematic review with narrative synthesis. The reporting structure was aligned with PRISMA 2020, the search-reporting logic followed PRISMA-S, and the decision not to pool effect estimates followed SWiM guidance because the included studies varied substantially by population, intervention, tool type, design, and outcome (Page et al., 2021). The review also used the Cochrane principle that synthesis and risk assessment should be appropriate to study design rather than forced into a single generic quality score (Higgins et al., 2024).

The information source for the finalised draft was a set of seven Scopus RIS exports supplied by the author and exported on 30 July 2026. The search syntax focused on Qur'an memorisation, tahfiz, hifz, huffaz, murāja'ah, tasmi', recitation, memorisation tools, artificial intelligence, gamification, learning analytics, and educational outcomes. Appendix-level search documentation was moved into the reference-validation file because the target journal limits manuscript length and discourages pushing major findings into supplementary text.

Eligibility criteria were defined around the population, focal phenomenon, outcomes, designs, and publication window. Eligible records addressed tahfiz or hifz learners, Qur'an memorizers, teachers, institutions, or learning environments in which memorisation, recitation, revision, or memorisation-relevant outcomes were studied. Reviews, bibliometric papers, purely conceptual manuscripts, general Islamic-education papers without a memorisation-relevant outcome, and records without sufficient metadata were excluded.

After deduplication, titles and abstracts were screened against the criteria in Table 1. Data extraction captured author, year, title, study focus, evidence domain, design, outcome category, and available verification notes. Risk-of-bias judgments were treated cautiously

because full-text methods were attached only for the five cornerstone articles; for the wider corpus, the appraisal relied on supplied metadata and abstract-level information.

Table 1. Eligibility Criteria Used for the Systematic Review.

Domain	Inclusion Criteria	Exclusion Criteria
Population	Tahfiz/hifz learners, Qur'an memorizers, teachers, institutions, or classes in formal or semi-formal Qur'anic education.	General Islamic education without memorisation, recitation, revision, or tahfiz-relevant outcomes.
Phenomenon	Memorisation methods, murāja'ah, tasmi', meaning-based learning, digital tools, AI support, recitation verification, curriculum, or institutional conditions.	Theological, historical, administrative, or general technology papers with no memorisation-relevant evidence.
Outcomes	Memorisation performance, retention, recitation accuracy, engagement, motivation, well-being, academic outcomes, usability, or implementation conditions.	No extractable educational, cognitive, affective, institutional, or tool-related outcome.
Design	Empirical, design/development, validation, survey, qualitative, comparative, modelling, or mixed-method studies.	Narrative reviews, scoping reviews, bibliometric studies, conceptual papers, editorials, or proceedings summaries.
Years and Source	2016–2026 records from the user-supplied Scopus RIS exports dated 30 July 2026.	Records before 2016 or unverified records outside the supplied corpus.

Table 1 was used to keep the review focused on memorisation-relevant evidence rather than Islamic education in general. Table 1 was also rechecked against the reviewer's request to sharpen the operational boundary of Qur'an memorisation practices.

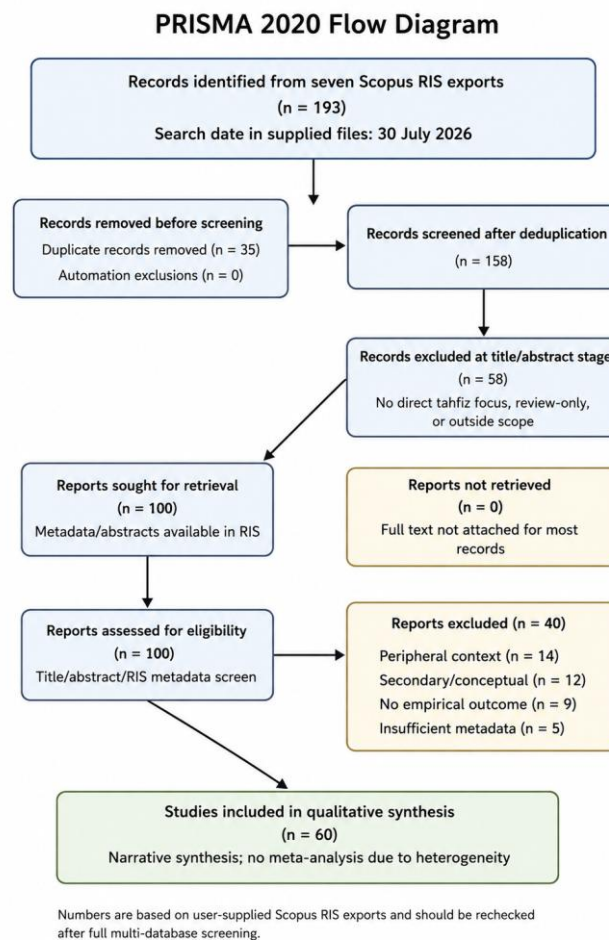


Figure 1. PRISMA 2020 flow diagram detailing the screening and selection process of the literature.

Figure 1 shows that 193 exported records were reduced to 60 included studies after deduplication, screening, and eligibility assessment. Figure 1 also makes transparent that the review is strongest as a Scopus-based synthesis and should be re-run in additional databases before a final indexed submission

III. RESULT AND DISCUSSION

The included literature was heterogeneous but organised around four coherent evidence domains. As shown in Figure 2 and Table 2, digital and artificial-intelligence-supported memorisation formed the largest domain, followed by pedagogical, linguistic, and revision methods, curriculum and institutional pathways, and cognitive, affective, and well-being outcomes. Figure 2 and Table 2 together show why meta-analysis was not appropriate: the evidence base combined design studies, usability studies, qualitative case studies, predictive modelling, surveys, and small comparative studies.

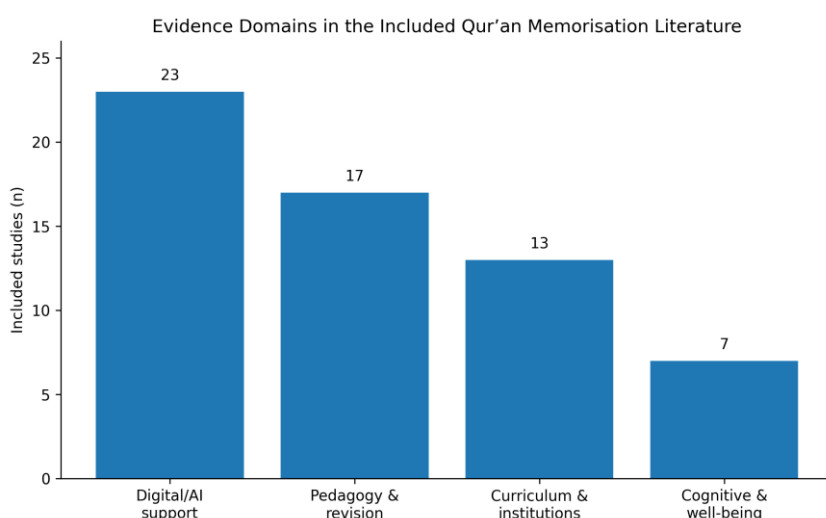


Figure 2. Evidence-domain map of the 60 included Qur'an memorisation studies.

Table 2. Evidence-Domain Summary of Included Studies.

Evidence Domain	No. of Studies	Main Contribution to the Synthesis	Key Limitation
Digital and AI-supported memorisation	23	Mobile tools, AI feedback, speech verification, gamification, and analytics increasingly support individualised practice.	Mostly design, development, exploratory, or short-term usability studies.
Pedagogical, linguistic, and revision methods	17	Meaning, Arabic schemata, murāja'ah, tasmi', and teacher correction remain core mechanisms.	Limited longitudinal retention measures and few controlled comparisons.
Curriculum, institutions, and learner pathways	13	School climate, integrated curricula, and programme design shape memorisation conditions.	Often context-specific and not always linked to measurable retention outcomes.
Cognitive, affective, and well-being outcomes	7	Memory specificity, emotion, health, and spatial learning conditions broaden the outcome framework.	Small samples and variable instruments limit causal inference.

Table 2 clarifies that the literature is not a single intervention field. Table 2 also supports the central argument that Qur'an memorisation should be studied as a layered learning ecology rather than as repetition alone.

The cognitive evidence is important because it prevents overclaiming. Black et al. tested 10 Hafiz, 12 background-matched Muslim controls, and 10 non-Muslim participants, finding strong Qur'anic expertise but no broad advantage on standardised verbal or visuospatial

learning tasks (Black et al., 2020). Figure 3 illustrates this domain-specific expertise: Hafiz performed strongly on Qur'anic tasks, yet the broader interpretation is not that memorising the Qur'an automatically increases all memory capacity.

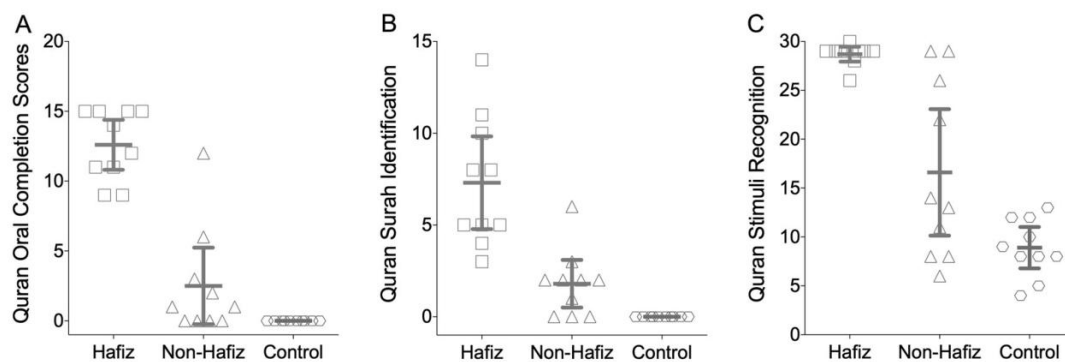


Figure 3. *Qur'anic knowledge measures comparing Hafiz, non-Hafiz Muslim controls, and non-Muslim controls. Reproduced from Black et al. (2020).*

Figure 3 should therefore be read alongside the study's negative generalisation finding: memorisation expertise was powerful within the practised Qur'anic domain but did not transfer broadly to new verbal or visuospatial learning. This finding strengthens the review's caution against promotional claims about cognitive benefits.

The pedagogical evidence indicates that comprehension and Arabic schemata can support memorisation, but the effect is not uniform across studies. Hussin et al. linked Arabic language schemata with Qur'anic understanding and memorisation achievement, while Rijan et al. found that students perceived comprehension as influential but regression showed only a weak relationship with memorisation performance (Hussin et al., 2021).

Figure 4 from Rijan et al. visualises this tension. It supports the revised argument that understanding may function as a retrieval aid and educational value, but it should not be presented as a single sufficient predictor of memorisation achievement (Rijan et al., 2025).

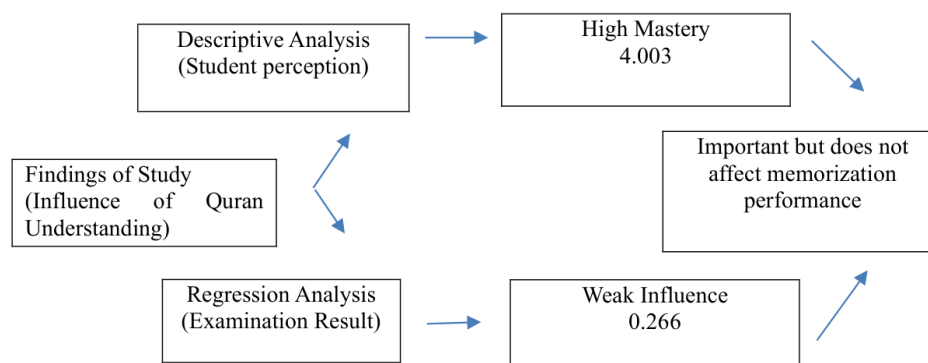


Figure 4. *Relationship between Qur'an understanding and memorisation performance. Reproduced from Rijan et al. (2025).*

Figure 4 is important because it narrows the claim: meaning-based learning deserves pedagogical attention, but future studies should test when, for whom, and through which mechanisms comprehension improves retention. Figure 4 also aligns with the reviewer's request to avoid overstating the role of comprehension.

Digital support was the largest evidence domain. Mobile tools such as EzHifz organise memorisation through learning-style interfaces, multimedia prompts, performance information, and tasmik assessment, while AI applications and analytics attempt to personalise revision and feedback (Mustafa et al., 2021). The EzHifz alpha test reported strong expert agreement, but the study remained an early development evaluation rather than a long-term retention trial.



Figure 5. VARK-based memorisation interface in the EzHifz application. Reproduced from Mustafa et al. (2021).

Figure 5 illustrates why digital tools should not be treated as a single category. Presentation tools, practice-scheduling tools, feedback systems, and teacher-assessment interfaces serve different pedagogical functions; Figure 5 is mainly a scaffold for multimodal practice and teacher-supported tasmik rather than a replacement for supervision.

Automated recitation verification represents a more technical trajectory. Rajagede and Hastuti proposed a Siamese LSTM model to verify whether a recited verse matched an expected verse without relying on full speech-to-text transcription, reporting a best F1-score of 77.35% with MFCC, delta features, and Manhattan LSTM (Rajagede & Hastuti, 2021).

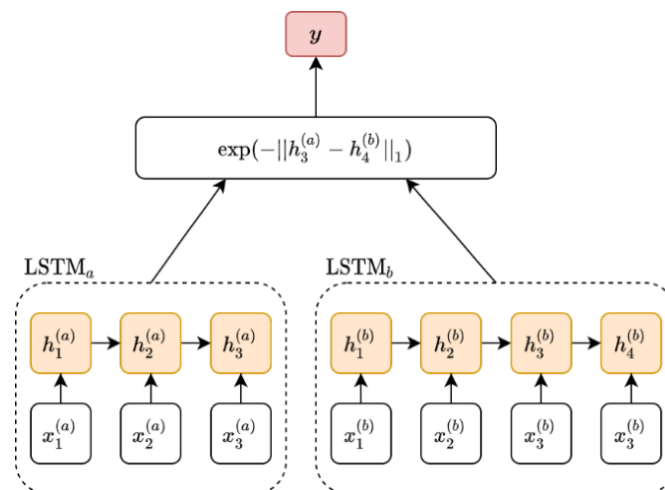


Figure 6. Manhattan LSTM architecture for recitation verification. Reproduced from Rajagede and Hastuti (2021).

Figure 6 shows the movement from digital presentation toward verification and learner-specific feedback. However, Figure 6 also raises implementation risks: speech models may misclassify recitations, handle tajwid unevenly, or create overconfidence if learners treat automated feedback as equivalent to qualified teacher correction.

Revision is the hinge between memorising and retaining. Murāja‘ah-oriented studies show that students may memorise new portions while older portions weaken, making the scheduling and motivation of revision central to tahfiz quality (Ismail et al., 2024). Gamification attempts to address motivation and repetition by turning revision into structured feedback loops and social engagement (Ahmad et al., 2024).

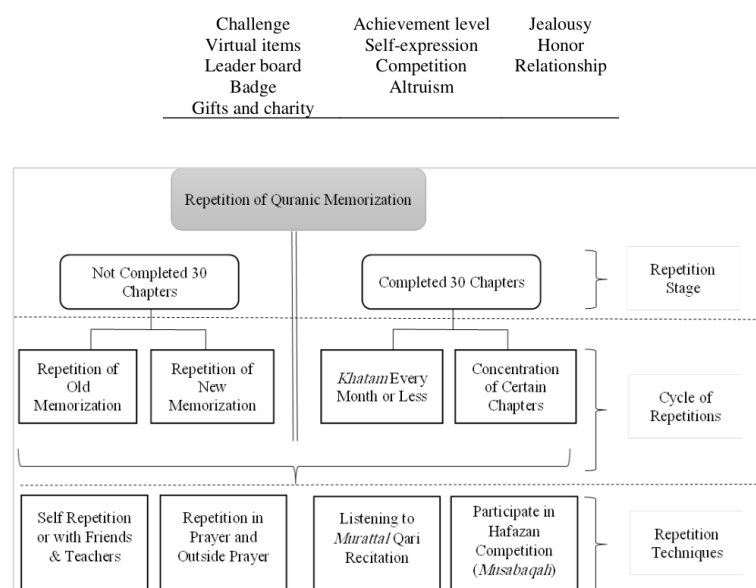


Figure 7. Qur'anic memorisation repetition framework used in gamification-based revision. Reproduced from Ahmad et al. (2024).

Figure 7 supports the review's claim that murāja'ah is not a peripheral activity but the organising structure of long-term retention. Figure 7 also explains why a technology or curriculum that accelerates new memorisation without protecting revision time may undermine durable memorisation quality.

Institutional studies show that memorisation is moderated by curriculum, time allocation, school climate, learner pathways, and family or community expectations. Plus Tahfiz programmes and integrated curricula suggest that memorisation can coexist with academic outcomes, but this coexistence requires deliberate scheduling, teacher support, and realistic workload design (Awang et al., 2025). The broader school-climate evidence similarly shows that institutional conditions influence learners' attitudes and engagement (Taata et al., 2021).

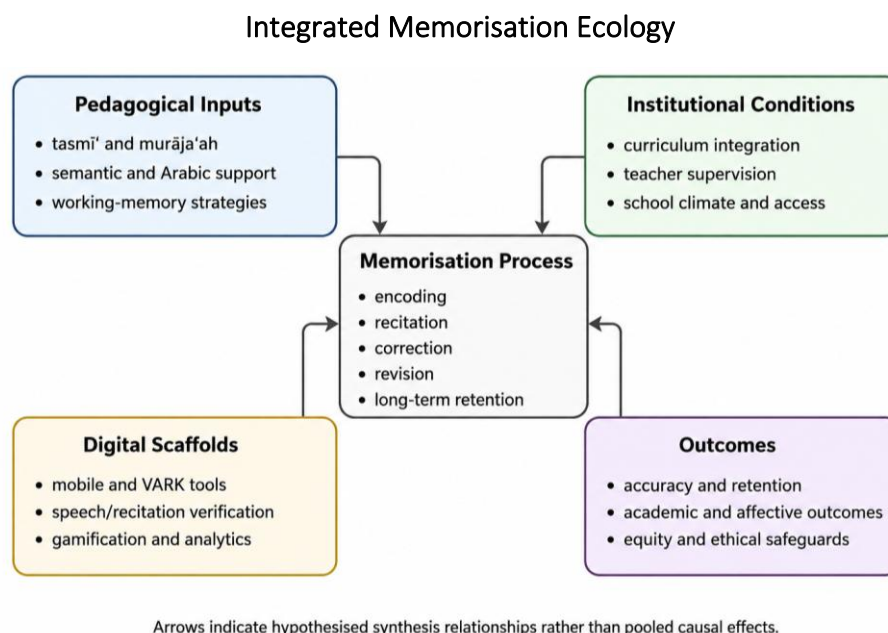


Figure 8. *Integrated memorisation ecology synthesising pedagogical inputs, digital scaffolds, institutional conditions, memorisation process, and outcomes.*

Figure 8 is the main conceptual contribution of the review. It integrates the patterns summarised in Table 2 and the mechanisms illustrated in Figures 3–7, but it should be interpreted as a theory-building synthesis rather than a statistically validated causal model.

Table 3. Five Cornerstone Studies Anchoring the Revised Synthesis.

Representative Study	Domain	Design/Focus	Specific Contribution
Black et al. (2020)	Cognitive outcome	Comparative cognitive testing	Shows Qur'anic memory expertise is domain-specific and does not clearly generalise to

			standard verbal or visuospatial learning.
Mustafa et al. (2021)	Digital tool	Design and alpha testing	Demonstrates a VARK-based mobile scaffold for memorisation, tasmik, and performance monitoring.
Rijan et al. (2025)	Meaning/comprehension	Survey and regression	Finds high perceived value of understanding but weak measured relationship with memorisation performance.
Rajagede and Hastuti (2021)	AI verification	Siamese LSTM modelling	Shows feasibility of speech-based recitation verification, with best F1-score of 77.35%.
Ahmad et al. (2024)	Revision/gamification	Design and development research	Develops a gamified murāja'ah teaching aid with high teacher and student usability scores.

Table 3 identifies the five studies used most heavily to deepen the discussion and to anchor the imported figures. Table 3 also demonstrates why the final synthesis distinguishes cognitive evidence, meaning-based pedagogy, mobile scaffolds, AI verification, and gamified revision rather than placing all innovations under one broad technology label.

The main theoretical implication is that Qur'an memorisation should be studied as a multi-layered learning ecology. Textual fidelity and oral accuracy are shaped by cognitive strategies, semantic cues, teacher-mediated correction, structured repetition, affective discipline, digital scaffolding, and institutional time design. This framing protects the religious specificity of tahfiz while allowing educational researchers to formulate measurable outcomes such as retention stability, error rate, revision burden, learner confidence, teacher feedback quality, and long-term maintenance.

The main methodological implication is that the field needs stronger designs. Many studies are descriptive, qualitative, design-based, or exploratory; these are valuable for mapping practice, but they cannot support broad causal claims. Future studies should adopt controlled comparisons where feasible, report baseline equivalence, define memorisation-quality metrics, document attrition, and conduct delayed retention follow-up. Future reviews should also re-run the search in Web of Science, ERIC, Google Scholar, regional Islamic education databases, and publisher repositories.

The ethical implication is that AI-supported Qur'an memorisation must complement rather than replace teacher supervision. Automated systems may support practice, scheduling, and preliminary feedback, but they also raise risks of incorrect recitation feedback, privacy exposure through children's voice data, overreliance on algorithmic correction, access inequality, and theological concerns about delegating sacred-text verification to machines. These risks should be included as core outcomes rather than treated as afterthoughts.

IV. CONCLUSION

This systematic review shows that contemporary Qur'an memorisation research has expanded from method description into a broader evidence base spanning pedagogy, comprehension, digital scaffolding, artificial intelligence, curriculum design, and learner well-being. The most defensible conclusion is that effective memorisation depends on the alignment of structured murāja'ah, semantic support, teacher-mediated correction, appropriate digital tools, and supportive institutional conditions. The evidence is not yet strong enough to identify one universally superior method or to justify broad claims about cognitive transfer. A more publication-ready research agenda should prioritise longitudinal retention outcomes, common measures of accuracy and stability, dual-reviewer full-text appraisal, ethical AI governance, and designs that respect tahfiz as both a devotional practice and a complex learning process.

V. ACKNOWLEDGEMENTS

-

VI. REFERENCES

- [1] Ahmad, A. M., Rahman, A. A., Saleh, M. H., & Daud, Z. (2024). Diversifying Quranic revision methods using gamification-based teaching material for tahfiz education. *International Journal of Evaluation and Research in Education*, 13(2), 987–996. <https://doi.org/10.11591/ijere.v13i2.26218>
- [2] Awang, A. Bin, Jalil, M. S. Bin, Satari, H. Bin, & Ahmad, M. H. S. Bin. (2025). The effectiveness of the Plus Tahfiz programme in strengthening Quran memorisation and its impact on students' academic performance. *Al-Bayan: Journal of Qur'an and Hadith Studies*, 23(3), 426–446.
- [3] Black, R., Mushtaq, F., Baddeley, A., & Kapur, N. (2020). Does learning the Qur'an improve memory capacity? Practical and theoretical implications. *Memory*, 28(8), 1014–1023.

- [4] Higgins, J. P. T., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page, M. J., & Welch, V. A. (2024). *Cochrane Handbook for Systematic Reviews of Interventions (Version 6.5)*. <https://www.cochrane.org/authors/handbooks-and-manuals/handbook/current>
- [5] Hussin, Z., Mustapha, N. F., Toklubok@Hajimaming, P., Alias, M., & Ismail, M. Z. li. (2021). Importance of Arabic Language Schemata in Al-Quran Understanding and Memorisation Achievement. *Malaysian Journal of Learning and Instruction*, 18(1), 265–287. <https://doi.org/10.32890/MJLI2021.18.1.11>
- [6] Ismail, F. Z., Yusof, N. H., Osman, A. F. A., Omar, N., Embong, R., & Kamaruddin, K. (2024). Integrated Murajaah Practice and prospective recital assessment model. *2024 IEEE 13th International Conference on Engineering Education (ICEED)*, 1–6.
- [7] Mustafa, N. M., Mohd Zaki, Z., Mohamad, K. A., Basri, M., & Ariffin, S. (2021). Development and Alpha Testing of EzHifz Application: Al-Quran Memorization Tool. *Advances in Human-Computer Interaction*, 2021(1), 5567001. <https://doi.org/https://doi.org/10.1155/2021/5567001>
- [8] Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., & Mulrow, C. D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*, 372, n71. <https://doi.org/10.1136/bmj.n71>
- [9] Rajagede, R. A., & Hastuti, R. P. (2021). Al-Quran recitation verification for memorization test using Siamese LSTM network. *Communications in Science and Technology*, 6(1), 35–40.
- [10] Rijan, M. H. M., Yakob, M. A., Hasan, A. R. A., Budin, A., Kadir, M. N., & Ningsih, E. I. (2025). The Influence of Quran Understanding on Tahfiz Students Memorization Performance. *Global Journal Al-Thaqafah*, 57–69.
- [11] Taat, M. S., Talip, R., & Mosin, M. (2021). The Influence of Curriculum and School Climate on the Academic Attitude of" Tahfiz" Students in Malaysia. *International Journal of Evaluation and Research in Education*, 10(3), 807–815.