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Microlearning for Teaching Faraid, Balaghah, and Qawaid Fiqhiyyah: A Qualitative Study on Instructional Time Constraints

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ABSTRACT

This study aims to examine the effectiveness of implementing the microlearning model in the teaching of religious disciplines within pesantren and madrasah environments. The background of this research lies in the challenges of traditional learning, which are constrained by limited time, the complexity of subject matter, and the need for new approaches that are relevant to the digital context. This study employs a qualitative approach, with data collected through observation, interviews, and document analysis. The results reveal five main findings: (1) limitations in instructional time and material complexity can be addressed through content segmentation; (2) students and teachers respond positively to the microlearning model due to its flexibility and contextual relevance;(3) segmented learning materials are proven to significantly enhance students' comprehension; (4) the role of teachers has shifted from being the sole source of knowledge to becoming facilitators of digital learning;and (5) microlearning has strategic potential as a technology-based learning approach that aligns with pesantren values. These findings indicate that microlearning not only addresses technical learning needs but also strengthens the role of pesantren in providing adaptive and competitive religious education. This study recommends the development of an integrated and sustainable microlearning-based learning system.

Introduction

The decline in the effectiveness of teaching religious disciplines such as Faraid, Balaghah, and Qawaid Fiqhiyyah has become a tangible social phenomenon resulting from traditional approaches that are excessively lengthy within limited timeframes. In the context of modern Islamic education, microlearning and mobile learning methods have been identified as potential solutions, as exemplified by studies showing that Islamic mobile applications enhance student engagement and learning outcomes, including in Qur'an memorization and Hadith comprehension (Rozi et al., 2025), while microlearning strengthens long-term retention and learning motivation, particularly among Generation Z learners (Chardonnens, 2025). Based on this evidence, the integration of microlearning approaches into the teaching of religious disciplines is highly important as a response to limited instructional time, as well as a strategy for revitalizing Islamic religious education to ensure its continued relevance and effectiveness (Saepudin, 2019).

Several studies have highlighted the role of microlearning and technological integration in Islamic education (Alias & Razak, 2025). Found that microlearning enhances students' learning abilities and motivation, while in a rapid review, concluded that microlearning is effective for Generation Z in improving engagement, self-directed learning, and long-term retention (Wibaselppa et al., 2025) noted that microlearning strengthens teachers' digital competencies and improves academic performance, whereas discussed curriculum innovation in the digital era of Islamic education, including the integration of technology aligned with Islamic values. Meanwhile, highlighted policy challenges and technology adoption in Islamic education, such as the need for infrastructure and teacher training. All these studies demonstrate the positive impact of technological integration; however, no research has specifically examined the application of microlearning for teaching religious disciplines such as Faraid, Balaghah, and Qawaid Fiqhiyyah within the context of limited instructional time (Consoli et al., 2025).

Based on previous literature reviews, it is evident that the integration of technology in Islamic education, particularly through microlearning approaches, has been widely examined in general contexts (Syukri & Rosyad, 2025). However, no studies have specifically applied microlearning to the teaching of classical religious disciplines such as Faraid, Balaghah, and Qawaid Fiqhiyyah, which are characterized by abstract and complex content (Black & Tomlinson, 2025). Therefore, this article aims to develop a conceptual understanding of the implementation of the microlearning model in teaching Islamic religious disciplines within formal education settings. This study focuses on how such strategies can address time constraints, enhance learning effectiveness, and restore students' interest in branches of Islamic knowledge that have tended to be neglected (Chardonnens, 2025). Accordingly, this study fills an existing research gap and contributes to the development of adaptive, contextual, and relevant Islamic education teaching methods in response to contemporary needs.

This study is grounded in the argument that a microlearning approach offers an effective pedagogical solution for teaching complex subfields of Islamic religious sciences within limited instructional time, as conventional learning models often fail to reconcile the breadth of content with time constraints, leading learners to struggle with understanding, memorization, and conceptual integration across disciplines such as Faroidl, Balaghah, and Qawaid Fiqhiyah (Monib et al., 2025). By emphasizing content segmentation, interactivity, and need-based learning, microlearning is expected to significantly enhance learning outcomes. Accordingly, this study examines the extent to which the implementation of microlearning can improve students' conceptual comprehension, active engagement, and learning motivation in these fields, through an analysis of the model's relevance, its limited application in instructional settings, and students' responses to a learning approach that is shorter, more focused, and more contextual.

Method

This study employed a qualitative research design to examine the implementation of the microlearning approach in teaching Islamic religious subdisciplines—namely Faraid, Balaghah, and Qawaid Fiqhiyyah—within pesantren and madrasah contexts (Makateng & Mokala, 2025). This approach was selected to capture in-depth insights into instructional practices, participant experiences, and contextual dynamics in learning environments characterized by limited instructional time and complex subject matter (Sari et al., 2021).

The research was conducted in pesantren and madrasah at the secondary education level (tsanawiyah and aliyah), where classical Islamic subdisciplines are formally taught. Participants included Islamic Religious Education teachers (ustadz) and students (santri) directly involved in the learning process (Perdani et al., 2025). Teachers were selected as key informants due to

their instructional roles, while students provided perspectives on learning experiences and responses to the microlearning approach (Suyatno, 2023).

Data were collected through classroom observations, semi-structured interviews, and document analysis. Observations focused on instructional processes, teacher– student interactions, and the application of microlearning-based content segmentation. Interviews explored teachers' experiences and students' learning responses, while document analysis examined instructional materials and relevant policy documents to assess alignment with the microlearning implementation (Taut & Rakoczy, 2024).

Table 1. Data Sources and Analytical Focus

No.	Data Collection Technique	Data Source / Participants	Focus of Data	Output
1	Classroom Observation	Teachers (*ustadz*) and students (*santri*)	Teaching–learning processes, instructional time allocation, content segmentation, teacher–student interaction, and use of microlearning media	Field notes and observational records
2	Semi-Structured Interviews	Islamic Religious Education teachers (*ustadz*)	Teaching experiences, perceptions of microlearning effectiveness, challenges in teaching Fan Ilmu, and role transformation	Interview transcripts
3	Semi-Structured Interviews	Students (*santri*)	Learning experiences, motivation, understanding of materials, and responses to microlearning-based instruction	Interview transcripts
4	Document Analysis	Syllabi, lesson plans, learning modules, and policy documents	Alignment between curriculum objectives, instructional content, and microlearning implementation	Document analysis notes

Data were analyzed using thematic analysis involving coding, categorization, and interpretation. Interview transcripts, observation notes, and documents were systematically examined to identify recurring themes related to instructional duration, content segmentation, teacher role transformation, and student engagement within microlearning-based instruction.

To ensure data trustworthiness, triangulation of data sources and methods was employed. Information obtained from observations, interviews, and document analysis was cross-checked, as were perspectives from teachers and students, to enhance credibility and consistency of the findings.

Result and Discussion

This study aims to explore the effectiveness of the microlearning approach in teaching Islamic religious subdisciplines, particularly Faroidl, Balaghah, and Qawaid Fiqhiyah, which have long faced challenges related to limited instructional time and delivery methods. Based on findings from observations, interviews, and document analysis, five key aspects were identified that illustrate the dynamics and potential of implementing this model within Islamic educational settings. First, limited instructional duration combined with the complexity of the subject matter constitutes a major challenge in the learning process. Second, the responses of ustadz and santri to the microlearning model reveal varying perceptions and levels of adaptation. Third, content segmentation has been shown to enhance understanding of core concepts that are technical and

conceptually deep. Fourth, the role of the ustadz undergoes a transformation, functioning not only as an instructor but also as a facilitator and designer of technology-based learning. Fifth, the microlearning model demonstrates potential as a strategic solution for addressing time constraints while revitalizing interest in Islamic subdisciplines within pesantren and madrasah contexts.

1. **Limited Instructional Time, Students' Responses, and the Role of Content Segmentation**

   The findings indicate that limited instructional time remains a central challenge in teaching classical Islamic religious subdisciplines such as Faraid, Balaghah, and Qawaid Fiqhiyyah. Observations and interviews reveal a clear imbalance between the complexity of the material and the time allocated for instruction, resulting in superficial understanding when conventional teaching methods are applied (Diabat, 2025). This condition reinforces previous studies emphasizing that dense religious content requires adaptive instructional strategies to remain effective within restricted timeframes (Kabashi et al., 2025).

   Students' responses to the implementation of microlearning demonstrate a generally positive shift in engagement and comprehension. The segmentation of learning content into short, focused units enables students to grasp abstract concepts more gradually and reduces cognitive overload. As one student noted, segmented materials made complex concepts easier to understand step by step. This finding aligns with studies showing that microlearning improves conceptual clarity, motivation, and retention, particularly among learners accustomed to concise and visual information formats (Syukri & Rosyad, 2025). From an instructional perspective, content segmentation allows teachers to prioritize core concepts and adjust the pace of learning according to students' needs. Thematic analysis indicates that segmented instruction not only improves students' understanding but also facilitates formative assessment during the learning process. These results support earlier research suggesting that microlearning-based segmentation enhances learning effectiveness without diminishing the depth of religious knowledge (Rozi et al., 2025).

2. **Transformation of Teachers' Roles in Microlearning-Based Instruction**

   The implementation of microlearning also contributes to a notable transformation in teachers' roles within Islamic educational settings. Rather than functioning solely as transmitters of knowledge, teachers increasingly act as facilitators and designers of learning experiences. Interview data show that teachers use instructional time more effectively for discussion, clarification, and reflection, while core materials are delivered through short learning segments prepared in advance. One teacher explained that this approach enabled more interactive classroom engagement compared to conventional lecturing.

   This transformation is consistent with broader discussions on technology-enhanced learning, which emphasize the shift toward learner-centered pedagogy and the facilitative role of teachers (Tsipa-Booi & Ntlabathi, 2026). Importantly, the findings suggest that microlearning does not undermine the authority of teachers within pesantren traditions; instead, it reinforces their pedagogical role by enabling more meaningful interaction and guidance. This balance between technological innovation and traditional pedagogical values is crucial for sustaining the identity of Islamic education (Kabashi et al., 2025). Furthermore, teachers reported increased flexibility in adapting instructional strategies to students' learning characteristics. This flexibility supports previous studies indicating that microlearning enhances teachers' digital competencies and instructional effectiveness while maintaining alignment with educational values (Ahmad, 2021).

3. **Microlearning as a Strategic Solution for Revitalizing Islamic Religious Education**

   The findings of this study demonstrate that microlearning holds strategic potential as a pedagogical solution for revitalizing the teaching of Islamic religious subdisciplines in

pesantren and madrasah. By addressing limitations in instructional time and material complexity, microlearning enables more efficient use of learning sessions while preserving the scholarly substance of classical Islamic sciences. This supports arguments that pedagogical revitalization should be adaptive, contextual, and responsive to contemporary educational challenges (Monib et al., 2025).

Students' increased motivation and teachers' positive perceptions indicate that microlearning contributes to a more engaging and participatory learning environment. These outcomes resonate with studies highlighting the effectiveness of short, focused learning units in enhancing engagement and long-term retention (Indriyani et al., 2019). At the same time, the approach remains compatible with pesantren values, as it complements—rather than replaces— traditional learning practices.

Overall, microlearning functions not merely as a technical innovation but as a context-sensitive instructional strategy that bridges classical Islamic scholarship and contemporary learning needs. Its strategic value lies in its capacity to revitalize religious education without compromising its intellectual and spiritual foundations, thereby ensuring the continued relevance of Islamic education in the digital era (Latifah, Hamadanah, 2025).

The development of the Multicultural Islamic Religious Education (PAI) curriculum at Kadiri Islamic University is a constructive contribution to the endeavour to foster harmony and diversity among students. The integration of multicultural values in the teaching of Islamic Religious Education enables students to gain a deeper understanding of and respect for the diverse beliefs and cultures that exist within the student body. This results in the creation of a more inclusive and harmonious environment, which facilitates enhanced interaction between students from disparate backgrounds. Consequently, a multicultural PAI curriculum not only facilitates the attainment of academic objectives, but also fortifies social cohesion and fraternity, and equips students with the capacity to engage in a heterogeneous society with a tolerant and open disposition.

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Discussion

1. Fundamental Problem: Limited Instructional Time vs. Material Complexity

One of the primary findings of this study reveals a fundamental tension between limited instructional time and the complexity of subject matter in teaching classical Islamic disciplines, such as *Faroidl*, *Balaghah*, and *Qawaid Fiqhiyyah* (Kamali, 2023). Within the context of pesantren education, traditional instructional methods such as *sorogan* and *bandongan* (bandolan) have long served as the main approaches for knowledge transmission. These methods possess significant strengths in preserving depth of understanding and the authenticity of scholarly transmission (*sanad*) (Mulholland & Wallace, 2023). However, in practice, they face considerable challenges when confronted with the time constraints characteristic of modern educational systems.

The relatively limited duration of instructional time, combined with a dense

curriculum, results in suboptimal internalization of complex subject matter. The findings of this study indicate that prior to the implementation of microlearning, the majority of students were unable to achieve the expected learning outcomes to a satisfactory level. This suggests that traditional instructional approaches, while epistemologically valuable, are not entirely sufficient to meet the demands for efficiency and effectiveness in contemporary educational contexts (Tasarib et al., 2025).

From a theoretical perspective, this condition can be explained through the lens of cognitive load theory, wherein the delivery of dense and complex material within a limited timeframe has the potential to overload students' cognitive capacity. As a consequence, understanding tends to become superficial and lacks systematic structure. Therefore, an instructional approach is required that can manage the complexity of the material without diminishing its essential scholarly substance.

In this regard, microlearning emerges as a strategic response to this problem. This approach enables complex material to be divided into smaller, more focused units, making it more accessible within limited instructional time. It is important to emphasize that, within the context of this study, microlearning is not intended to simplify or reduce the essence of the subject matter, but rather to restructure its delivery in a manner that is more adaptive to students' learning conditions. In doing so, the integrity of the knowledge is preserved, while both accessibility and instructional effectiveness are enhanced (El-Haggar et al., 2023).

In other words, the issue of limited instructional time and material complexity is not merely a technical concern, but also necessitates contextually grounded pedagogical innovation. In this case, microlearning functions as a bridge between the rich traditions of pesantren-based learning and the demands for efficiency in modern education, thereby enabling more optimal learning outcomes without compromising the depth of knowledge.

2. The Effectiveness of Microlearning through Content Segmentation

The findings of this study indicate that the effectiveness of microlearning in teaching Islamic disciplines is closely associated with the implementation of content segmentation, namely the division of learning materials into smaller, focused units. In the context of teaching *kitab turats* (classical Islamic texts), this approach serves as a key distinction from traditional methods, which tend to present material in its entirety within a single instructional session (Ayob & Hamada, 2024).

In practice, microlearning-based instruction no longer requires students to comprehend the entire content of a text simultaneously. Instead, the material is organized and delivered gradually through specific segments. Each segment is designed to contain a single core concept that can be understood independently before progressing to the next part. This approach has proven effective in assisting students in comprehending conceptually complex materials, such as those found in *Faroidl*, *Balaghah*, and *Qawaid Fiqhiyyah*.

Compared to conventional instructional approaches that tend to cover a large volume of material in a single session, the segmentation approach demonstrates a higher level of effectiveness in supporting student understanding (Chan & Colloton, 2024). This is primarily because students are no longer burdened by the accumulation of multiple concepts at once, allowing the process of knowledge internalization to occur more gradually and in greater depth. Consequently, learning becomes not only more efficient in terms of time but also more meaningful in terms of comprehension (Marougkas et al., 2023).

From a theoretical perspective, these findings are consistent with the concept of chunking within cognitive load theory, which posits that information is more easily processed when presented in smaller, structured units. In this regard, content segmentation functions as a pedagogical mechanism to reduce students' cognitive load without diminishing the substance of the material being learned.

Furthermore, this approach provides greater flexibility for educators in managing the instructional process. Teachers are able to determine the prioritization of content, adjust the pace of delivery according to students' abilities, and conduct more focused evaluations within each learning segment. Therefore, microlearning through content segmentation not only enhances students' understanding but also strengthens the overall effectiveness of instructional strategies.

In other words, the effectiveness of microlearning in this study does not merely lie in the use of technology, but rather in the strategy of content segmentation, which serves to bridge the complexity of scholarly material with the limitations of instructional time, without compromising the depth of the knowledge conveyed.

3. Students' and Teachers' Responses to Microlearning: Between Increased Engagement and the Adaptation Process

The implementation of microlearning in teaching Islamic disciplines has elicited generally positive responses from both students (*santri*) and teachers (*ustadz*), although with varying levels of adaptation. From the students' perspective, increased engagement is evident in their enthusiasm during learning activities, improved ease in understanding the material, and more active participation in discussions. This pattern indicates that the microlearning approach aligns with contemporary learning characteristics, where students are more accustomed to concise, focused, and progressively delivered information (Monib et al., 2024).

Microlearning provides a flexible and less cognitively demanding learning experience, allowing students to engage with the material without the pressure of mastering multiple complex concepts simultaneously (Wahidin, 2023). The delivery of content through smaller segments enables a gradual construction of understanding, which contributes to greater confidence in participating in the learning process. In contrast, conventional instructional approaches often result in passive learning behavior due to the difficulty of following dense and conceptually complex material.

Variation in responses is particularly noticeable among teachers. Immediate adaptation to the microlearning approach is not uniformly observed, largely due to the transition from traditional instructional practices to more technology-oriented and learner-centered approaches . Some teachers regard microlearning as an effective innovation that enhances instructional quality, while others remain in an adjustment phase, especially in relation to technological competence and the design of segmented instructional materials (Sugrah, 2023).

These variations reflect that the implementation of microlearning extends beyond a mere methodological shift and represents a broader pedagogical transition within the pesantren context. The movement from a teacher-centered to a learner-centered paradigm requires preparedness from both students and educators (Genot, 2021). Microlearning, therefore, should be understood not solely as a technical innovation, but as part of a transformation in learning culture that necessitates time, adaptation, and institutional support.

Positive student responses, combined with ongoing adaptive processes among teachers, indicate the strong potential of microlearning to improve instructional quality. Successful implementation, however, remains contingent upon the readiness of educational actors to engage with these changes. Continuous efforts in the form of professional development, mentoring, and the strengthening of digital literacy among teachers are essential to ensure that this transformation is both effective and sustainable.

4. Microlearning as a Strategic Solution

Microlearning in the teaching of Islamic disciplines not only reshapes the mode of content delivery but also drives a significant transformation in the role of the *ustadz*. The *ustadz* is no longer positioned solely as the primary source of knowledge within a teacher-centered paradigm, but increasingly assumes the role of a facilitator within a more adaptive and context-sensitive learner-centered approach.

Traditional instructional practices in pesantren typically position the *ustadz* as the direct transmitter of knowledge through methods such as *sorogan* and *bandongan*, where scholarly authority is highly centralized. The adoption of microlearning restructures this dynamic by organizing core materials into segmented learning units that can be accessed and studied more independently by students (*santri*). Classroom interaction is consequently reoriented, with face-to-face sessions no longer dominated by content delivery but instead utilized for more interactive activities, including discussion, clarification, and conceptual deepening.

Such changes reposition the *ustadz* as a facilitator who guides the process of knowledge construction among students. Within a constructivist pedagogical framework, effective learning occurs when students actively build their own understanding through interaction with learning materials and their environment (Arega & Hunde, 2025). Microlearning supports this process by providing a structured learning pathway that enables gradual comprehension, while the *ustadz* directs, reinforces, and contextualizes students' developing understanding.

Expanded expectations also require the *ustadz* to function as an instructional designer, responsible for structuring learning experiences in ways that are coherent, engaging, and responsive to students' needs. This role involves the ability to design segmented content, determine the sequence of material presentation, and utilize technology-based learning media effectively. Pedagogical competence, therefore, extends beyond mastery of subject matter to include the capacity for innovative instructional design (Arega & Hunde, 2025).

This transformation does not diminish the authority of the *ustadz* within the pesantren tradition; rather, it reinforces the role in a more substantive manner. The *ustadz* remains the central reference for scholarly understanding, while adopting a more dialogic and participatory approach. Such a condition demonstrates that microlearning can be integrated harmoniously with established pedagogical values without compromising the intellectual identity of Islamic education (Zahorodnia & Chumak, 2023).

The transformation of the *ustadz* role in the context of microlearning reflects a broader shift in learning paradigms, from teacher-centered to learner-centered approaches. This shift enhances instructional effectiveness and creates opportunities for more meaningful interaction between *ustadz* and *santri*, resulting in a learning process that is more dynamic, reflective, and responsive to contemporary educational demands.

Conclusion

Microlearning has demonstrated strong potential as an effective pedagogical approach for teaching complex Islamic disciplines within limited instructional time. By restructuring content into smaller, focused segments, this approach enables students to engage with material more gradually, reducing cognitive overload while maintaining conceptual depth. As a result, learning becomes more efficient, accessible, and meaningful, particularly for subjects such as *Faraid*, *Balaghah*, and *Qawaid Fiqhiyyah* that are traditionally perceived as difficult and abstract.

The findings also highlight a significant shift in the learning process, where students become more active and engaged, while teachers adopt more adaptive roles as facilitators and instructional designers. Content segmentation plays a central role in this transformation, allowing teachers to prioritize essential concepts, adjust instructional pace, and create more interactive learning environments. Although the transition requires adaptation—especially in terms of technological readiness and pedagogical design—the overall response indicates a positive direction toward more student-centered learning.

In a broader sense, microlearning serves not merely as a technical innovation but as a strategic solution that bridges the gap between traditional Islamic educational practices and contemporary learning demands. It preserves the intellectual integrity of classical Islamic knowledge while enhancing its delivery through more flexible and context-sensitive methods. Consequently, this approach contributes to the revitalization of Islamic education, ensuring its continued relevance, effectiveness, and sustainability in the modern era.

References

Ahmad, F. (2021). Pendidikan Inklusif Berbasis Kearifan Lokal dalam Praktik Sosial di Pesantren Zainul Hasan Genggong Probolinggo Jawa Timur. *Proceedings Ancoms 1St Annual Conference For Muslim Scholars*, *2*(110), 715–725. https://doi.org/https://doi.org/10.15330/msuc.2023.28.92-97

Alias, N. F., & Razak, R. A. (2025). Revolutionizing learning in the digital age: A systematic literature review of microlearning strategies. *Interactive Learning Environments*, *33*(1), 1–21. https://doi.org/https://doi.org/10.1002/rev3.70040

Arega, N. T., & Hunde, T. S. (2025). Constructivist instructional approaches: A systematic review of evaluation-based evidence for effectiveness. *Review of Education*, *13*(1), e70040. https://doi.org/https://doi.org/10.1002/rev3.70040

Ayob, H. H., & Hamada, T. I. (2024). Teaching mathematics in an EFL context at higher education; before, during and after the COVID-19 pandemic: a comparative study. *Journal of Applied Research in Higher Education*, *16*(5), 2262–2272. https://doi.org/https://doi.org/10.1108/JARHE-05-2023-0186

Black, R. W., & Tomlinson, B. (2025). University students describe how they adopt AI for writing and research in a general education course. *Scientific Reports*, *15*(1), 8799. https://doi.org/https://doi.org/10.1002/art.43216

Chan, C. K. Y., & Colloton, T. (2024). Generative AI in Higher Education: The ChatGPT Effect. In *Generative AI in Higher Education: The ChatGPT Effect*. https://doi.org/10.4324/9781003459026

Chardonnens, S. (2025). Adapting educational practices for Generation Z: integrating metacognitive strategies and artificial intelligence. *Frontiers in Education*, *10*, 1504726.

Consoli, T., Schmitz, M.-L., Antonietti, C., Gonon, P., Cattaneo, A., & Petko, D. (2025).

Quality of technology integration matters: Positive associations with students' behavioral engagement and digital competencies for learning. *Education and Information Technologies*, *30*(6), 7719–7752.

Diabat, O. M. A. (2025). TEACHERS'INSTRUCTIONAL APPROACHES AND THEIR EFFECTIVENESS IN DELIVERING THE ISLAMIC EDUCATION CURRICULUM IN JORDAN. *Lex Localis*, *23*(S2), 178–199.

El-Haggar, N., Amouri, L., Alsumayt, A., Alghamedy, F. H., & Aljameel, S. S. (2023). The effectiveness and privacy preservation of IoT on ubiquitous learning: Modern learning paradigm to enhance higher education. *Applied Sciences*, *13*(15), 9003. https://doi.org/https://doi.org/10.3390/app13159003

Genot, E. J. (2021). Strategies of inquiry: The 'Sherlock Holmes sense of deduction' revisited. In *Synthese* (Vol. 195, Issue 5). https://doi.org/10.1007/s11229-017-1319-x

Indriyani, V., Zaim, M., Atmazaki, A., & Ramadhan, S. (2019). Literasi Baca Tulis Dan Inovasi Kurikulum Bahasa. *KEMBARA: Jurnal Keilmuan Bahasa, Sastra, Dan Pengajarannya*, *5*(1), 108. https://doi.org/10.22219/kembara.vol5.no1.108-118

Kabashi, N., Muhaxheri, M., Krasniqi, E., Murati, Y., & Latifi, F. (2025). Advancements in fiber-reinforced polymer (FRP) retrofitting techniques for seismic resilience of reinforced concrete structures. *Buildings*, *15*(4), 587.

Kamali, M. H. (2023). Classical and contemporary approaches to education: An Islamic perspective. *ICR Journal*, *2*(3), 447–467. https://doi.org/https://doi.org/10.52282/icr.v2i3.625

Latifah, Hamadanah, A. Q. (2025). PENDEKATAN DEEP LEARNING PADA KURIKULUM BERBASIS CINTA DI MADRASAH IBTIDAIYAH ASSALAM MARTAPURA. *JIPDIK: Jurnal Ilmu Pendidikan*, *2*(2), 37–47.

Makateng, D. S., & Mokala, N. T. (2025). Understanding qualitative research methodology: A systematic review. *E-Journal of Humanities Arts and Social Sciences*, *6*(3), 327–335.

Marougkas, A., Troussas, C., Krouska, A., & Sgouropoulou, C. (2023). Virtual reality in education: a review of learning theories, approaches and methodologies for the last decade. *Electronics*, *12*(13), 2832. https://doi.org/ttps://doi.org/10.3390/electronics12132832

Monib, W. K., Qazi, A., & Apong, R. A. (2025). Microlearning beyond boundaries: A systematic review and a novel framework for improving learning outcomes. *Heliyon*, *11*(2).

Monib, W. K., Qazi, A., Apong, R. A., & Mahmud, M. M. (2024). Investigating learners'

perceptions of microlearning: Factors influencing learning outcomes. *IEEE Access*, *12*, 178251–178266. https://doi.org/10.1109/ACCESS.2024.3472113

Mulholland, J., & Wallace, J. (2023). Strength, sharing and service: Restorying and the legitimation of research texts. *British Educational Research Journal*, *29*(1), 5–23. https://doi.org/https://doi.org/10.1080/0141192032000057348

Perdani, A. S., Umar, G., Dewata, I., & Amar, S. (2025). Pembangunan Berkelanjutan di Pesisir Indonesia : Tantangan dan Solusi atas Ancaman Lingkungan. *Hakhara Akademia Indonesia*, *2*(1), 11–22.

Rozi, F., Bulqis, V. A., & Fachri, M. (2025). Integration of Religious Values to Reduce the Decline of Adolescent Ethics in High School. *ETDC: Indonesian Journal of Research and Educational Review*, *4*(4), 1090–1102.

Saepudin, J. (2019). Pendidikan Agama Islam Pada Sekolah Berbasis Pesantren: Studi Kasus Pada SMP Al Muttaqin Kota Tasikmalaya. *EDUKASI: Jurnal Penelitian Pendidikan Agama Dan Keagamaan*, *17*(2), 172–187. https://doi.org/10.32729/edukasi.v17i2.559

Sari, R. R., Febrini, D., & Walid, A. (2021). Tantangan guru PAI dalam Menghadapi era perubahan globalisasi teknologi industri 4.0 di SMA Negeri 01 Bengkulu Tengah. *GHAITSA : Islamic Education Journal*, *1*(2), 26–34. https://siducat.org/index.php/ghaitsa

Sugrah, N. U. (2023). Implementasi teori belajar konstruktivisme dalam pembelajaran sains. *Humanika*, *19*(2), 121–138. https://doi.org/10.21831/hum.v19i2.29274

Suyatno, W. (2023). Pendidikan Islam Dalam Sistem Pendidikan Nasional. *Cendekia: Jurnal Kependidikan Dan Kemasyarakatan*, *12*(1), 103. https://doi.org/10.21154/cendekia.v12i1.370

Syukri, M. D. A., & Rosyad, A. (2025). Integrating modern technology in islamic religious education: Challenges and opportunities for teachers. *The Journal of Academic Science*, *2*(4), 1148–1156.

Tasarib, A., Rosli, R., & Rambely, A. S. (2025). Impacts and challenges of mathematical modelling activities on students' learning development: A systematic literature review. *Eurasia Journal of Mathematics, Science and Technology Education*, *21*(5), em2641. https://doi.org/https://doi.org/10.29333/ejmste/16398

Taut, S., & Rakoczy, K. (2024). Observing instructional quality in the context of school evaluation. *Learning and Instruction*, *46*, 45–60. https://doi.org/https://doi.org/10.1024/j.learninstruc.2024.08.003

Tsipa-Booi, N., & Ntlabathi, S. (2026). Technology-Enhanced Learning Module As A Driver

Of Digital Transformation In Course Design. *INTERNATIONAL JOURNAL OF ADVANCES IN SIGNAL AND IMAGE SCIENCES*, 463–470.

Wahidin, U. (2023). Implementasi Literasi Media Dalam Proses Pembelajaran Pendidikan Agama Islam Dan Budi Pekerti. *Edukasi Islami : Jurnal Pendidikan Islam*, *7*(02), 229. https://doi.org/10.30868/ei.v7i2.284

Wibaselppa, A., Santosa, T. A., Batjo, S. N., Fauzi, R. U. A., Nugraha, A. R., Sinaga, H. D. E., & Wulandari, A. S. R. (2025). The role of employee engagement in increasing Millennial and Gen Z employee retention. *RIGGS: Journal of Artificial Intelligence and Digital Business*, *4*(2), 51–56.

Zahorodnia, T., & Chumak, M. (2023). PEDAGOGICAL HARMONY AND DYNAMICS OF APPLICATION OF FORMS, METHODS, AND MEANS OF TEACHING STUDENTS. *Mountain School of Ukrainian Carpaty*, *28*, 92–97. https://doi.org/https://doi.org/10.15330/msuc.2023.28.92-97