

Human Resource Management for Qur'anic Literacy in Digital Primary Education

Maskin

Universitas Islam Negeri Raden Fatah Palembang, Indonesia
maskin834@gmail.com

Ahmad Zainuri

Universitas Islam Negeri Raden Fatah Palembang, Indonesia
ahmadzainuri_uin@radenfatah.ac.id

Fitri Oviyanti

Universitas Islam Negeri Raden Fatah Palembang, Indonesia
fitrioviyanti_uin@radenfatah.ac.id

Saipul Annur

Universitas Islam Negeri Raden Fatah Palembang, Indonesia
saipulannur_uin@radenfatah.ac.id

Abstract : This study examines the strategic role of Human Resource Management (HRM) in enhancing Qur'anic literacy in digital-age primary education. Despite widespread digital access, students' Qur'anic reading proficiency remains limited, indicating a gap between technological availability and instructional practices. This research employs a qualitative case study design, involving a principal, teachers, and parents through observation, interviews, and document analysis. The findings reveal that HRM functions as a central mechanism linking digital resources and learning outcomes through planning, implementation, and evaluation. However, the absence of structured training, institutional policies, and digital assessment systems limits sustainability. The present research proposes an integrative HRM–digital learning framework, positioning HRM as a mediating system connecting teacher competence, digital infrastructure, and learning outcomes. The findings contribute theoretically to Islamic education management and offer practical implications for policy and school leadership.

Keywords: *Human Resource Management, Qur'anic Literacy, Digital Pedagogy, Primary School Education, Islamic Education.*

Introduction

The continuous evolution of digital technology and artificial intelligence has fundamentally transformed educational systems, requiring institutions to realign not

only instructional practices but also managerial strategies to accommodate digital-age learners and emerging intelligent learning environments (Selwyn, 2022), (A. Holmes & Tuomi, 2024), (Zawacki-Richter et al., 2024). In primary education, this transformation extends beyond general literacy to encompass the development of spiritual competencies, particularly Qur'anic literacy, which plays a crucial role in shaping students' moral and ethical character (Huda et al., 2020).

However, instructional practices in Qur'anic reading remain largely traditional, relying on repetitive and teacher-centered approaches that are increasingly misaligned with students' interactive and technology-oriented learning preferences (Hasanah et al., 2023). This mismatch raises critical concerns regarding the effectiveness and relevance of existing pedagogical and managerial frameworks in religious education.

Despite the widespread penetration of digital technology in Indonesia, the level of Qur'anic literacy among primary school students remains relatively low. Recent national data indicate that approximately 46% of students have not achieved minimum standards in Qur'anic reading proficiency, particularly in fluency and application of tajwid rules (Indonesia, 2023). At the same time, Indonesia has over 185 million internet users, with an average daily usage exceeding seven hours, predominantly through mobile devices (DataReportal, 2024). This condition highlights a critical gap between high levels of digital engagement and the limited pedagogical utilization of technology in religious learning contexts. Previous research suggests that integrating digital media enhances student engagement and learning outcomes in Islamic education contexts, particularly through interactive applications and multimedia tools (Wahyuni & Huda, 2022), (Al-Zahrani, 2022). However, these studies largely focus on instructional practices at the classroom level and do not sufficiently address how such innovations are supported by institutional management systems.

From a managerial perspective, human resource management (HRM) provides a strategic framework for optimizing educational outcomes through systematic planning, implementation, and evaluation of human capital (Dessler, 2020). In the context of Qur'anic education, HRM involves enhancing teacher competencies, integrating technology-enhanced learning tools, and developing structured instructional programs

aligned with students' needs (Azhari, 2024). Nevertheless, the absence of comprehensive HRM strategies often leads to fragmented implementation, where available technological resources are underutilized and teaching practices remain static. This indicates that improving Qur'anic literacy is not solely a pedagogical issue but also a managerial challenge that requires a systemic and strategic approach.

Empirical evidence from public primary schools further underscores this issue. Observations reveal that many students are unable to recognize hijaiyah letters or read the Qur'an fluently, while instructional practices are largely limited to repetitive reading exercises without the support of interactive media. In addition, existing digital facilities, such as computer laboratories, are rarely utilized to support Qur'anic learning due to the absence of structured policies and teacher training programs. The lack of institutional commitment and continuous professional development for teachers further weakens the effectiveness of learning programs. These conditions suggest that the problem extends beyond instructional limitations to include weaknesses in planning, implementation, and evaluation within the HRM system.

Although a growing body of research has explored digital literacy and Qur'anic learning, a significant gap remains in understanding how human resource management can be systematically leveraged to enhance Qur'anic literacy in primary education. Most existing studies emphasize either technological innovation or pedagogical strategies, without addressing how these elements are integrated within a comprehensive managerial framework. This gap indicates the need for a more holistic approach that aligns human resources, digital infrastructure, and institutional policies to achieve sustainable educational outcomes. However, no prior studies have explicitly positioned HRM as a mediating system integrating digital pedagogy and Qur'anic literacy outcomes at the primary education level.

This study responds to an underexplored dimension in current scholarship by examining how Human Resource Management (HRM) can be systematically integrated into digital-based Qur'anic literacy development in primary education. While existing studies have primarily focused on instructional strategies or technological tools, they have not sufficiently explored the role of managerial practices as a structural mechanism

that aligns teacher competence, digital infrastructure, and learning outcomes. It further contributes by conceptualizing HRM as a mediating and integrative system that connects planning, implementation, and evaluation processes with technology-enhanced learning. Furthermore, it proposes a context-specific integrative framework that demonstrates how strategically aligned HRM practices can enhance the effectiveness and sustainability of Qur'anic literacy programs. This contribution not only advances the theoretical discourse of Islamic education management but also provides practical insights for policy and institutional development.

Research Methods

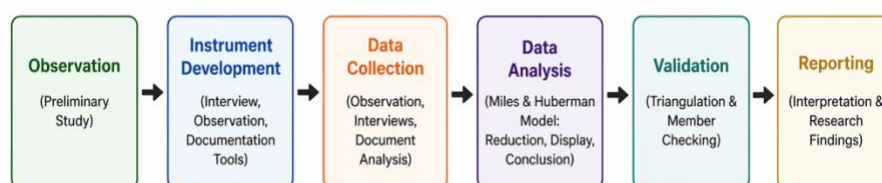
The study adopted a qualitative case study design to explore how human resource management (HRM) practices contribute to enhancing Qur'anic literacy in primary education within a digital learning environment. A qualitative approach was selected to enable an in-depth exploration of social and educational phenomena by capturing participants' experiences, institutional dynamics, and contextual realities in natural settings (Creswell, 2023), (Yin, 2018).

The research was conducted at SD Negeri 232 Palembang, South Sumatra, Indonesia, a public primary school that has initiated the integration of digital tools into Qur'anic learning. The site was purposively selected due to its relevance in representing schools undergoing a transition toward digital-based learning while still facing challenges related to teacher digital competence, infrastructure utilization, and managerial effectiveness. The study was carried out over a six-month period, from July to December 2025, covering stages from preliminary observation to final reporting.

a. Research Procedure

The research procedure was conducted systematically through several stages to ensure methodological rigor, as illustrated in Figure 1.

Figure 1. Research Procedure Flow



First, preliminary observations were carried out to identify key issues related to students' Qur'anic literacy and the use of technology-enhanced learning media. Second, research instruments were developed based on theoretical frameworks of HRM and digital learning, including interview guidelines, observation sheets, and document analysis formats. Third, data collection was conducted through classroom observations, semi-structured interviews, and document analysis. Fourth, the collected data were analyzed using an interactive analysis model consisting of data reduction, data display, and conclusion drawing. Finally, data validation was conducted through triangulation and member checking to ensure credibility and trustworthiness.

b. Data Collection

Data were collected using multiple techniques to ensure depth and credibility. Classroom observations were carried out to examine the implementation of Qur'anic learning activities, particularly focusing on the use of digital media, student engagement, and instructional strategies applied by teachers. Semi-structured interviews were conducted with key informants to explore managerial practices, instructional challenges, and perceived learning outcomes. In addition, document analysis was undertaken to review lesson plans, school policies, and documentation of technology-enhanced learning activities, providing contextual support for observed practices (Patton, 2015), (Miles et al., 2023).

c. Participants

Participants were selected using a purposive sampling strategy to ensure their direct involvement in Qur'anic learning and school management processes. The informants consisted of one school principal, two Islamic education teachers, and two parents, representing both institutional and external perspectives. This composition allowed the study to capture a comprehensive understanding of HRM practices and their impact on students' Qur'anic literacy development.

d. Research Instruments

Research instruments were developed based on established theoretical frameworks, particularly HRM principles and the diffusion of innovation theory, to ensure alignment with the research objectives. The instruments included interview

guides, observation sheets, and document analysis formats. The use of multiple instruments facilitated methodological triangulation and strengthened the credibility of the data (Yin, 2018).

Table 1. Research Instruments and Data Collection.

No	Instrument Type	Data Source	Focus of Analysis	Technique
1	Interview Guide	Principal, teachers, parents	HRM practices, digital learning challenges	Semi-structured interview
2	Observation Sheet	Classroom activities	Student engagement, media usage	Participant observation
3	Documentation	School records	Lesson plans, policies, digital learning records	Document analysis

e. Data Analysis

Data were analyzed using the interactive model proposed by Miles, Huberman, and Saldaña, which consists of data reduction, data display, and conclusion drawing (Miles et al., 2023). In the data reduction phase, raw data from interviews, observations, and documents were systematically coded and categorized to identify key themes related to HRM practices, digital learning integration, and Qur'anic literacy development. The data were then organized and presented in a structured narrative form to reveal patterns and relationships. Finally, conclusions were drawn and continuously verified through cross-checking across multiple data sources to ensure consistency and validity.

f. Validity and Trustworthiness

To ensure the rigor of the study, several validation strategies were applied. Data validity was tested through methodological triangulation, source triangulation, and member checking to confirm the accuracy of interpretations. Credibility was strengthened by cross-verifying findings across different data sources. Transferability was supported by providing detailed contextual descriptions of the research setting. Dependability was maintained through systematic documentation of the research

process, while confirmability was ensured by grounding all interpretations in empirical data and minimizing researcher bias (Lincoln & Guba, 2021).

Results and Discussion

Results

The findings demonstrate that the improvement of Qur'anic literacy in primary education is closely associated with the effectiveness of human resource management (HRM), particularly in the integration of technology-enhanced learning practices. Data derived from classroom observations, semi-structured interviews, and document analysis reveal three interrelated dimensions: HRM planning, HRM implementation, and HRM evaluation.

At the planning stage, the institution has shown an initial awareness of the importance of integrating digital technology into Qur'anic learning. However, the planning process remains insufficiently structured. Although digital tools have been introduced, there is no comprehensive roadmap or systematically designed training program aimed at strengthening teachers' digital competencies. This limitation is reflected in the following statement:

“The use of digital media in Qur'anic learning has begun to be implemented; however, there is no specific program or scheduled training for teachers.” (P1)

In addition, teachers indicated that the use of digital applications is largely driven by individual initiative rather than institutional policy:

“We use Qur'anic learning applications based on personal initiative, not as part of a structured school policy.” (T1)

These findings indicate that HRM planning has not yet been strategically aligned with long-term objectives for sustainable digital-based Qur'anic literacy development.

At the implementation stage, the integration of digital media has contributed positively to student engagement. Classroom observations reveal that students demonstrate higher levels of participation and enthusiasm when interactive applications, audio-visual materials, and gamification elements are incorporated into learning activities. This is supported by the following statement:

“Students become more enthusiastic when learning through applications; they are more active compared to conventional reading methods.” (T2)

Despite these positive outcomes, the effectiveness of implementation varies depending on teachers’ levels of digital competence. Teachers with higher digital literacy are able to design more interactive and engaging learning environments, whereas others tend to rely on traditional instructional approaches due to limited technological skills.

At the evaluation stage, the findings reveal that assessment practices remain predominantly conventional. Qur’anic literacy is generally evaluated through oral reading tests that emphasize fluency and accuracy, without systematic integration of digital assessment tools. This condition is illustrated in the following statement:

“Assessment is still conducted using traditional methods, mainly through direct reading, without digital-based evaluation.” (T3)

Furthermore, there is no structured evaluation framework to measure the effectiveness of digital learning initiatives or to assess teachers’ performance in utilizing technology. As a result, feedback mechanisms for continuous improvement remain limited and insufficiently data-driven. To enhance analytical clarity, the findings were systematically categorized into thematic codes as shown in Table 2.

Table 2. Thematic Coding of Research Findings

Code	Theme	Description
T1	HRM Planning Gap	Absence of structured HR planning and digital training programs
T2	Teacher Digital Competence	Variation in teachers’ ability to utilize digital tools
T3	Student Engagement	Increased motivation through interactive learning media
T4	Infrastructure Utilization	Underutilization of existing digital facilities
T5	Evaluation Weakness	Lack of systematic digital assessment and monitoring

Based on these findings, a conceptual relationship is identified in which HRM planning influences implementation, which subsequently affects evaluation practices and ultimately contributes to Qur'anic literacy outcomes.

Figure 2. Conceptual Model of HRM-Based Qur'anic Literacy Enhancement



Moderating variables:

Teacher digital competence, digital infrastructure availability, and institutional policy support.

This relationship is further influenced by teacher digital competence, the availability of digital infrastructure, and institutional policy support, indicating that HRM functions as a central mechanism linking digital resources with learning outcomes.

Discussion

The results reveal that improving Qur'anic literacy in the digital era requires more than the mere adoption of technological tools; it necessitates a strategically aligned and comprehensive human resource management (HRM) framework. The absence of structured planning identified in this study reflects a gap between technological potential and institutional readiness, which is consistent with previous research emphasizing that successful digital transformation depends on organizational capacity, leadership, and strategic alignment (Bond et al., 2024), (OECD, 2024). This finding indicates that the primary barrier lies not in technological availability, but in the absence of structured managerial alignment and strategic HRM integration.

From an HRM perspective, effective planning plays a crucial role in aligning institutional goals with human resource capabilities. The lack of systematic training programs and long-term digital literacy strategies observed in this research suggests that

HRM practices have not yet functioned optimally as a driver of educational innovation. This finding supports the argument that HRM should function as a strategic and transformational mechanism that enables institutions to systematically adapt to digital change through continuous professional development and structured workforce planning (K. Holmes et al., 2022).

At the implementation level, the findings demonstrate that digital media contributes significantly to student engagement and participation. This result aligns with multimedia and digital learning perspectives, which posits that interactive and audio-visual learning environments enhance students' cognitive processing and motivation (Mayer, 2021), (Geng et al., 2019). Similar findings have been reported in previous studies, indicating that the integration of digital tools can improve both learning experiences and educational outcomes (van der Kleij, 2022), (Bond et al., 2021).

However, the variation in teacher competence identified in this study highlights a critical challenge in HRM, particularly in relation to professional development. Without structured and continuous training programs, the implementation of digital innovation tends to remain uneven and highly dependent on individual initiative rather than institutional systems. This reinforces the importance of capacity-building strategies as a core component of effective HRM in educational settings.

Furthermore, the persistence of conventional evaluation practices indicates that assessment systems have not yet adapted to the demands of digital learning environments. The absence of systematic digital assessment tools and performance monitoring mechanisms limits the effectiveness of feedback processes. Contemporary educational perspectives emphasize that evaluation should be comprehensive, encompassing not only student outcomes but also instructional processes and teacher performance (Mahvelati, 2021), (Ismayilova & Klassen, 2019).

In addition, the study underscores the importance of contextual and value-based adaptation in Qur'anic literacy development. The integration of digital technology must be aligned with pedagogical approaches and cultural-religious values to ensure meaningful learning experiences. Previous research has highlighted that technology

integration in Islamic education requires a balance between innovation and value-oriented instruction (Bozkurt, 2020), (Redecker, 2017), (Anderson & Dron, 2011).

Overall, the current research contributes to the existing body of knowledge by demonstrating that HRM functions as a central mechanism linking digital innovation with educational outcomes. While prior studies have largely focused on technological tools or instructional strategies, this research emphasizes that the effectiveness of such innovations is highly dependent on how human resources are strategically managed, developed, and aligned with institutional goals. The novelty of the present study lies in positioning HRM not merely as a supporting component, but as the core driver in enhancing Qur'anic literacy within digitally evolving primary education environments.

The current research reinforces its contribution by demonstrating that HRM functions not merely as a supporting component but as a central mediating system that links digital innovation with educational outcomes. The proposed framework provides a structured explanation of how managerial practices influence the effectiveness of technology-enhanced Qur'anic learning, offering a more integrative perspective compared to prior studies.

Conclusion

This study demonstrates that improving Qur'anic literacy in primary education cannot be achieved through technological integration alone, but requires a strategically aligned human resource management (HRM) framework. The findings confirm that the effectiveness of digital-based Qur'anic learning depends on the alignment between institutional management and technological implementation. In this context, HRM functions as a central mechanism that connects digital initiatives with measurable educational outcomes, ensuring structured, consistent, and sustainable utilization of technological resources.

The study highlights the importance of developing comprehensive HRM strategies, including structured teacher training programs, clear institutional policies, and continuous evaluation mechanisms. Strengthening teachers' digital competence and aligning it with pedagogical objectives are essential to ensure meaningful integration of technology in Qur'anic learning.

Despite its contributions, this paper is limited to a single institutional context and relies primarily on qualitative insights. Future research is recommended to adopt multi-site and mixed-method approaches to enhance generalizability and empirical robustness. Further exploration of emerging technologies, such as artificial intelligence and adaptive learning systems, may also provide new directions for innovation in Qur'anic education. This paper contributes by offering a novel integrative HRM–digital learning model applicable to Islamic primary education contexts.

Acknowledgements

The authors would like to express their sincere gratitude to the principal, teachers, and parents of SD Negeri 232 Palembang for their cooperation and support throughout the research process. The authors also acknowledge all participants for their valuable contributions to this research.

Reference

Al-Zahrani, A. (2022). The role of digital learning in Islamic education: A systematic review. *Education and Information Technologies*, 27, 10245–10267. <https://doi.org/10.1007/s10639-022-11045-4>

Anderson, T., & Dron, J. (2011). Three generations of distance education pedagogy. *International Review of Research in Open and Distributed Learning*, 12(3), 80–97.

Azhari, M. (2024). Digital-based management of Qur'anic learning in primary education. *Jurnal Pendidikan Islam*, 9(1), 45–60.

Bond, M., Marín, V. I., Dolch, C., Bedenlier, S., & Zawacki-Richter, O. (2021). Digital transformation in education: A systematic review. *Education and Information Technologies*, 26, 1–38.

Bond, M., Marín, V. I., Dolch, C., Bedenlier, S., & Zawacki-Richter, O. (2024). Digital transformation in education: Trends and future directions. *Education and Information Technologies*, 29. <https://doi.org/10.1007/s10639-023-11900-5>

Bozkurt, A. (2020). A global outlook to the interruption of education due to COVID-19. *Asian Journal of Distance Education*, 15(1).

Creswell, J. W. (2023). *Research Design: Qualitative, Quantitative, and Mixed*

Methods Approaches. SAGE Publications.

DataReportal. (2024). *Digital 2024: Indonesia*.

Dessler, G. (2020). *Human Resource Management* (16th ed.). Pearson.

Geng, S., Law, K. M. Y., & Niu, B. (2019). Self-directed learning in digital environments. *International Journal of Educational Technology in Higher Education*, 16(1). <https://doi.org/10.1186/s41239-019-0155-0>

Hasanah, N., Supriyadi, S., & Nugroho, M. A. (2023). Digital media integration in Islamic education: Enhancing engagement and outcomes. *Education and Information Technologies*, 28, 2345–2360. <https://doi.org/10.1007/s10639-022-11234-1>

Holmes, A., & Tuomi, K. (2024). State of the art in AI and education: A systematic review. *Computers & Education*, 195. <https://doi.org/10.1016/j.compedu.2023.104699>

Holmes, K., Bialik, M., & Fadel, C. (2022). Artificial intelligence in education: Promise and implications. *Computers & Education*, 180. <https://doi.org/10.1016/j.compedu.2021.104437>

Huda, M., Ahmad, N., & Jasmi, K. A. (2020). Empowering Islamic education through digital literacy: Challenges and opportunities. *Education and Information Technologies*, 25(6), 5121–5138. <https://doi.org/10.1007/s10639-020-10123-5>

Indonesia, M. of R. A. R. of. (2023). *Qur'anic Literacy Index Report*.

Ismayilova, K., & Klassen, R. (2019). Teacher self-efficacy and job satisfaction. *International Journal of Educational Research*, 98, 55–66.

Lincoln, Y. S., & Guba, E. G. (2021). *Naturalistic Inquiry*. SAGE Publications.

Mahvelati, E. H. (2021). Learners' perceptions under digital feedback conditions. *Studies in Educational Evaluation*, 70.

Mayer, R. E. (2021). *Multimedia Learning* (2nd ed.). Cambridge University Press.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2023). *Qualitative Data Analysis: A Methods Sourcebook*. SAGE Publications.

OECD. (2024). *Digital Education Outlook 2024*. OECD Publishing.

Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods*. Sage.

Redecker, M. (2017). *European Framework for the Digital Competence of Educators (DigCompEdu)*. Publications Office of the European Union.

Selwyn, A. (2022). *Education and Technology: Key Issues and Debates* (3rd ed.). Bloomsbury Academic.

van der Kleij, F. M. (2022). Formative assessment in digital learning environments. *Teaching and Teacher Education*, 110. <https://doi.org/10.1016/j.tate.2021.103564>

Wahyuni, S., & Huda, M. (2022). Interactive multimedia in Qur'anic learning: Improving student motivation. *International Journal of Instruction*, 15(2), 345–360.

Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods* (6 (ed.)). Sage Publications.

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2024). Systematic review of artificial intelligence in education. *International Journal of Artificial Intelligence in Education*, 34(1), 1–31. <https://doi.org/10.1007/s40593-022-00320-7>