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THE ROLE OF TEACHERS IN INTEGRATING DIGITAL TAJWID APPLICATIONS IN AL-QUR'AN READING LEARNING IN ISLAMIC BOARDING SCHOOLS

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ABSTRACTS

The ability to read the Qur'an correctly in accordance with tajwid rules is a fundamental competence in Islamic education and has traditionally been taught in Islamic boarding schools through methods such as *talaqqi* and *musyāfahah*. However, contemporary Qur'anic learning faces challenges related to technological developments, changing student characteristics, and the practical limitations of classical learning methods. This study aims to examine teachers' strategies in integrating a digital tajwid learning application, Learn Quran Tajwid, as a supporting medium in Qur'an reading instruction within a pesantren context. This research employed a qualitative field study with a descriptive approach conducted at Darul Haq Muaro Jambi Islamic Boarding School from October 2025 to January 2026. Data were collected through observations, interviews, and documentation involving tahsin/tahfiz teachers and MTs-level students, particularly Grade VII students. The data were analyzed through the stages of data reduction, categorization, data presentation, and conclusion drawing. The findings show that the application contributes positively to improving students' Qur'an reading proficiency, particularly in reading fluency, accuracy of *makhārijul ḥurūf*, and understanding of tajwid rules. Nevertheless, the effectiveness of the application depends largely on teachers' roles in guiding, managing, and integrating digital media with traditional learning methods. Several challenges were identified, including limited facilities, uneven digital literacy among teachers, and student discipline in using technology. The study concludes that digital tajwid applications such as Learn Quran Tajwid can function effectively as complementary learning tools when supported by teacher-centered strategies, systematic planning, and institutional support without undermining the traditional values of pesantren education.

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A. INTRODUCTION

The ability to read the Qur'an correctly and fluently in accordance with the rules of tajwid is a basic competency in Islamic education (Marfuah et al., 2025). Reading the Qur'an is not only understood as a technical skill, but also as a form of worship that requires accurate pronunciation, discipline, and continuous guidance (Najiyah et al., 2025). In the tradition of Islamic education, especially in Islamic boarding schools, the Qur'an has long been taught through classical methods such as talaqqi and musyāfahah, where students read directly in front of their teachers and receive immediate corrections (Satar et al., 2025). This method is considered effective in maintaining the authenticity of the recitation of the Qur'an while building a spiritual relationship between the teacher and the students.

However, Al-Qur'an learning in the contemporary era faces various new challenges along with technological developments and changes in student characteristics (M. Khasanah, 2024). Students today live in a digital environment that is saturated with technology, so they tend to be accustomed to visual, interactive, and flexible learning media (Globalisasi & Irawan, n.d.). This condition has created a gap between traditional learning approaches and the learning styles of the current generation. In addition, the application of classical methods often faces practical limitations, such as limited learning time, large numbers of students, and limited opportunities for students to practice independently and intensively (Al-Qur'an & Putri, n.d.). As a result, many students still experience difficulties in applying tajwid rules, such as errors in the pronunciation of letters, the length of recitation (madd), and other recitation rules.

In line with these conditions, the use of digital technology has begun to be introduced in Islamic education as a learning support medium. One form of innovation that has developed is the use of digital tajwid applications that provide visual materials, audio recordings of professional qāri' recitations, interactive exercises, and self-evaluation features (Muid et al., 2024). Several studies show that the use of digital media can increase learning motivation and provide more flexible learning opportunities for students. (N. Khasanah, 2025) In the context of Al-Qur'an learning, digital tajwid applications allow students to repeat the material, listen to examples of correct recitation, and practice independently outside of formal learning hours.

However, the integration of digital tajwid applications in Al-Qur'an learning is still a matter of debate among academics and Islamic education practitioners. Some argue that excessive use of digital media has the potential to reduce direct interaction between teachers and students, which has been a hallmark of Islamic education (Hinayah, 2024). In addition, there are concerns that technology-based learning can reduce the spiritual and moral dimensions of reading the Qur'an if it is not accompanied by adequate guidance (Muslim, 2024). On the other hand, a more progressive view emphasizes that technology should be positioned as a learning tool, not as a substitute for the role of teachers, so that it can strengthen the learning process if used appropriately (Erlia, 2021)

The debate shows that the success of utilizing digital technology in Al-Qur'an learning is not solely determined by the sophistication of the application, but rather depends heavily on the role of teachers in designing, managing, and directing its use. Teachers play a central role as facilitators, mentors, and guardians of Islamic values in the learning process (Umar, 2024). In the context of Islamic boarding schools, which

have strong scientific and religious traditions, the role of teachers becomes even more important in bridging traditional learning methods and digital innovations.

Previous studies in the field of Al-Qur'an education have mostly focused on the effectiveness of learning methods or the influence of digital media use on student learning outcomes (al Rumaisa et al., 2025; Nursyamsiyah, 2023). Although these studies have made significant contributions, they tend to focus on outcomes and have not yet explored in depth the pedagogical processes involving the role of teachers. On the other hand, studies on the role of teachers in Islamic education are generally still general in nature and have not specifically examined teachers' strategies in integrating digital media into Qur'anic learning (Azman et al., 2025). This indicates a research gap regarding teachers' strategies, challenges, and adaptive practices in combining traditional pesantren methods with digital technology.

The context of Islamic boarding schools in Indonesia also has its own characteristics in the application of technology-based learning. Limited facilities and infrastructure, variations in teachers' digital literacy skills, and differences in students' attitudes towards the use of technology pose real challenges. Some Islamic boarding schools have begun to embrace digital innovation as part of educational development, while others remain cautious due to concerns about discipline and the authenticity of Al-Qur'an learning (Lundeto et al., 2021). This situation shows that the integration of technology in Al-Qur'an learning in Islamic boarding schools is contextual and greatly influenced by institutional policies and teacher initiatives.

Based on this background, this study examines the strategies of Islamic boarding school teachers in utilizing digital tajwid applications as a medium to support Al-Qur'an reading learning. This study does not focus on measuring the effectiveness of the application quantitatively, but rather on the pedagogical practices of teachers in integrating digital technology into Al-Qur'an learning. This approach stems from the view that meaningful educational innovation is determined more by teachers' strategies and roles in the learning process than by the adoption of technology alone. This study aims to describe the forms of integration of digital tajwid applications in learning, identify the obstacles faced by teachers, and reveal the strategies used to overcome obstacles and optimize supporting factors. Thus, this study is expected to contribute theoretically to the development of studies on technology integration in Islamic education, as well as practically as a reference for teachers and pesantren administrators in designing adaptive Al-Qur'an learning that keeps pace with technological developments without neglecting traditional pesantren values.

B. METHOD

This research employed a qualitative field study with a descriptive qualitative approach. The purpose of this approach was to explore and describe in depth the implementation of digital media in learning tajwid, particularly through the Learn Quran Tajwid application, in improving students' understanding and practice of Qur'anic recitation. The study was conducted from October 2025 to January 2026 at Darul Haq Islamic Boarding School, Muaro Jambi. This pesantren was chosen as the research site because it actively implements Qur'anic learning programs such as tahsin and tahfiz, especially for students at the MTs (Madrasah Tsanawiyah) level, who are in the stage of strengthening their Qur'anic reading skills. In addition, the pesantren

allows the controlled use of digital learning media, which supports the integration of educational applications in Qur'anic learning activities.

The participants in this study consisted of tahsin/tahfiz teachers and MTs students, particularly those in Grade VII. Grade VII students were selected because they are generally in the early stage of intensive Qur'an reading improvement and tajwid mastery. The participants were selected using purposive sampling, a technique commonly used in qualitative research to select individuals who are considered capable of providing relevant information related to the research topic. The criteria for selecting participants included: (1) students who actively participated in tahsin or tahfiz learning sessions, (2) students who had experience using or being introduced to digital tajwid learning media such as the Learn Quran Tajwid application, and (3) teachers who were directly involved in guiding students' Qur'anic recitation learning.

Data in this research were collected through several techniques, namely observation, interviews, and documentation. First, observations were conducted to examine the learning process of tajwid and Qur'anic recitation in the classroom and pesantren environment. The observation focused on how teachers guided students in reading the Qur'an, how students interacted with learning materials, and how the Learn Quran Tajwid application was utilized as a supporting learning medium. Observations also paid attention to students' responses, engagement, and difficulties when practicing tajwid rules.

Second, semi-structured interviews were conducted with tahsin/tahfiz teachers and selected students. The interview guide included several themes such as: (1) teachers' perspectives on the importance of tajwid mastery, (2) students' experiences in learning Qur'anic recitation, (3) perceptions regarding the effectiveness of the Learn Quran Tajwid application, and (4) challenges encountered in integrating digital media into Qur'anic learning. The semi-structured format allowed the researcher to explore participants' experiences more deeply while maintaining focus on the research objectives.

Third, documentation was used to complement the observation and interview data. The documents collected included learning schedules, teaching materials, students' Qur'an learning records, and other relevant institutional documents related to tahsin and tahfiz activities. Documentation also included screenshots or learning materials from the Learn Quran Tajwid application used during the learning process. To ensure the trustworthiness of the research findings, several strategies were employed. First, data triangulation was conducted by comparing data obtained from observations, interviews, and documentation. Second, member checking was carried out by confirming several findings and interpretations with the participants to ensure the accuracy of the data. Third, peer debriefing was conducted by discussing the research process and preliminary findings with colleagues or academic supervisors to obtain feedback and minimize researcher bias. Finally, an audit trail was maintained by documenting the research procedures and data analysis process systematically.

Ethical considerations were also taken into account in this research. Prior to conducting the study, the researcher obtained formal permission from the management of Darul Haq Islamic Boarding School. All participants were informed about the purpose of the research, and their participation was voluntary. Informed consent was obtained from participants, and confidentiality was maintained by anonymizing participants' identities in the research report.

The data analysis process followed several stages. First, data collection, where all data from observations, interviews, and documentation were gathered and organized. Second, data reduction, which involved selecting, focusing, and simplifying the data that were relevant to the research objectives. Third, coding, where important statements or information were labeled with specific codes to facilitate interpretation. Fourth, categorization, where related codes were grouped into broader categories. Finally, these categories were developed into themes that described the implementation and effectiveness of the Learn Quran Tajwid application in supporting tajwid learning among MTs students at Darul Haq Islamic Boarding School. The analysis process concluded with drawing conclusions that reflect the overall findings of the research.

C. RESULT AND DISCUSSION

The Utilization of Digital Tajweed Applications by Teachers in Learning to Read the Quran

The use of digital *tajweed applications* in learning to read the Qur'an at the Darul Haq Muaro Jambi Islamic Boarding School is a form of pedagogical innovation carried out by teachers in response to the development of educational technology. This innovation shows the teacher's awareness of the importance of adapting learning strategies to the characteristics of today's students, without eliminating the essence of learning the Qur'an which emphasizes the accuracy of reading, manners, and the blessing of knowledge. In this context, digital technology is positioned as a medium to support learning, not as a substitute for traditional Islamic boarding school methods that have been applied for a long time (Posangi, 2021).

Teachers use the digital *tajweed application* as an auxiliary medium to clarify tajweed material, improve students' understanding of the rules of reading the Qur'an, and help students improve the quality of reading independently and in a guided manner. This application was chosen because it is able to present learning materials visually and auditory, thus bridging the gap between tajweed theory and the practice of reading the Qur'an. Through the visualization of makhārijul ḥurūf, the marking of the color of the reading law, and audio examples of readings, students get a more concrete and systematic learning experience than learning that is only oral.

In learning practice, the use of applications is carried out in several stages. The teacher provides an introduction and learning objectives, then uses the application to introduce tajweed materials such as makhraj letters, the nature of hijaiyah letters, and the laws of reading, including *idghām*, *ikhfā'*, *iqḷāb*, and various types of *madd*. The presentation of material through the application helps students understand abstract tajweed concepts more easily, especially for beginner students who still have difficulty distinguishing letters from adjacent makhraj.

The use of digital *tajweed applications* also has an impact on the variety of learning methods. Learning is no longer completely teacher-centered, but actively involves students through observing the application display, listening to audio readings, and discussing the material learned. This condition makes learning more interactive, increases students' interest in learning, and reduces boredom in learning to read the Qur'an.

In addition to being a medium for delivering material, *the digital tajweed application* is used as a source of examples of correct Qur'an recitation through professional audio qāri'. Students are asked to imitate the reading gradually, both

classically and individually, then the teacher provides direct corrections through *the talaqqi and musyāfahah methods*. The combination of reading examples from the application and direct corrections from the teacher allows students to obtain more comprehensive learning. The application functions to provide consistent reading standards, while teachers ensure the accuracy of the readings technically and according to the rules of tajweed.

The digital *tajweed application* is also used in practice activities and initial evaluation of learning through interactive practice features. Teachers use the results of the exercise to determine the level of understanding of students and determine the follow-up of learning, both in the form of providing follow-up materials and additional guidance. In addition, the application encourages students to study independently outside of formal learning hours, thereby fostering an attitude of responsibility and independence in improving the quality of Qur'an reading.

Although it makes a positive contribution, the use of digital *tajweed applications* in Islamic boarding schools is still a supporting medium and has not been systematically integrated in learning planning. The use of the application is highly dependent on the teacher's initiative, so the intensity and pattern of use differ between classes. The absence of learning guidelines or written policies related to application integration also causes the use of technology to be inconsistent and not optimal.

Overall, these findings show that the digital *tajweed application* has the potential to support the improvement of students' Qur'an reading proficiency if integrated appropriately. However, the role of teachers remains a major determining factor in the success of learning. Teachers play the role of guides, directors, and evaluators who ensure that the use of technology is in line with the learning objectives and educational values of the Islamic boarding school. Therefore, *the digital tajweed application* needs to be seen as part of efforts to improve the quality of learning the Qur'an as a whole, not as the final goal of the learning process.

Teachers' Obstacles in Improving Santri's Qur'an Reading Skills through Digital Tajweed Applications

The results of the study show that the use of digital *tajweed applications* in learning to read the Qur'an at the Darul Haq Muaro Jambi Islamic Boarding School still faces a number of obstacles that affect the effectiveness of learning. These obstacles arise as a consequence of efforts to integrate digital technology into the pesantren environment which historically emphasizes face-to-face learning and direct interaction between teachers and students. In general, the obstacles faced by teachers include aspects of facilities and infrastructure, human resources, and the characteristics of students as users of digital technology.

One of the main obstacles is the limitations of digital devices. Not all students have personal devices to access the digital *tajwid application*, either due to diverse economic backgrounds and pesantren policies that limit the use of gadgets. This condition causes application-based learning to not be applied evenly. In practice, students must use the device alternately or in groups, so that access time is limited and the opportunity to practice optimally is reduced. As a result, the potential of the

application as a means of independent training outside of formal learning hours has also not been able to be utilized to the fullest.

Another significant obstacle is the limited access to the internet network. Digital *tajweed applications* generally require an internet connection to access the material, play audio readings, and run interactive exercises. Based on the results of observations, the quality of the internet network in the pesantren environment is not stable, so it often hinders the smooth learning process. Under certain conditions, teachers are forced to stop using applications and return to using conventional methods, which has an impact on disrupting the learning flow and declining student motivation (Suradji & Faridi, 2025).

In addition to facilities and infrastructure factors, obstacles are also found in the aspect of teachers' ability to master digital technology. The level of digital literacy of teachers is still diverse. Some teachers are able to use the application creatively and combine it with *talaqqi* and *musyāfahah* methods, while others still use the application on a limited basis because they lack confidence and are worried about technical problems. The lack of structured training and mentoring related to the use of technology in learning the Qur'an also affects this condition, so application integration has not been consistent in learning planning.

The characteristics of students as technology users are also a challenge in itself. The use of gadgets in learning opens up opportunities for distractions, such as accessing applications outside of learning or other entertainment activities. This condition requires teachers to carry out more intensive supervision so that the use of technology remains in accordance with learning goals. In addition, not all students have good self-control skills in using technology, so coaching and habituation are needed so that technology can be used wisely and responsibly.

Overall, these various obstacles show that the integration of digital *tajweed applications* in learning to read the Qur'an in Islamic boarding schools is a complex process and requires readiness from various aspects. Constraints of facilities, limitations of teachers' digital literacy, and characteristics of students are interrelated and affect the effectiveness of learning. However, these obstacles do not negate the benefits of *digital tajweed applications*, but rather become important evaluation materials for teachers and pesantren to formulate strategic steps in developing learning the Qur'an that is adaptive to technology without overriding pesantren values.

The Impact of Application Use on Santri's Qur'an Reading Skills

The results of the study show that the use of digital *tajweed applications* has a positive impact on improving the reading proficiency of the Qur'an of students at the Darul Haq Muaro Jambi Islamic Boarding School. Based on the results of observations and interviews, students who actively use the application showed better development than students who rarely use it. This impact can be seen mainly in the aspects of fluent

reading, the accuracy of *makhārijul ḥurūf*, and the application of *tajweed* laws in reading the Qur'an.

The use of audio features in the application that presents professional qāri' readings helps students adjust the rhythm, tempo, and length of the reading. Through the habit of listening and imitating correct readings, students are gradually able to reduce errors and improve their fluency in reading the Qur'an. In addition, the visualization of the letter makhraj displayed in the application helps students understand how to pronounce the letters more precisely, especially in letters that have adjacent makhraj.

Another positive impact can be seen in the increase in students' understanding of reading laws, such as *mad*, *nun sukun*, and *mim sukun*. Interactive exercises accompanied by direct feedback allow students to recognize reading errors and make corrections independently before getting corrections from teachers. This helps students build a better understanding of the rules of *tajweed* while increasing confidence in reading the Qur'an.

However, the positive impact of using the digital *tajweed* application is not felt equally by all students. The improvement in Qur'an reading proficiency is more visible in students who have high learning motivation and receive intensive assistance from teachers (bin et al., 2024). Mentoring through *talaqqi* and *musyafahah methods* plays an important role in helping students apply the material learned from the application appropriately, especially in correcting pronunciation errors that cannot be fully detected by the application.

On the other hand, students who are less active or rarely use the application tend to show an insignificant increase. These findings show that the digital *tajweed* application cannot stand alone as a determinant of learning success, but rather functions as a supporting tool whose effectiveness is highly dependent on the motivation of students and the role of teachers in guiding the learning process.

Overall, the use of digital *tajweed* applications makes a positive contribution to improving students' Qur'an reading skills, especially in terms of fluency and accuracy of reading. However, optimizing its impact requires continuous teacher assistance and active involvement of students, so that the integration of technology and traditional learning methods of pesantren can run in harmony.

Teachers' Efforts to Overcome Supporting and Inhibiting Factors in the Use of Digital Tajweed Applications

In facing various obstacles to the use of digital *tajweed applications*, teachers at the Darul Haq Muaro Jambi Islamic Boarding School have made a number of strategic efforts that are adjusted to the conditions and characteristics of the pesantren environment. These efforts are not only oriented to the technical aspects of the use of technology, but also consider the pedagogical and spiritual values that are characteristic

of pesantren education, so that the use of technology does not shift the existing identity of Qur'an learning.

One of the main efforts made by teachers is to optimize the use of pesantren facilities collectively, especially multimedia rooms. Teachers schedule learning to read the Qur'an based on digital *tajweed* applications by utilizing computers, projectors, and loudspeakers, so that all students can access the application at the same time without having to have a personal device. This strategy is considered effective in overcoming the limitations of digital devices while creating a more controlled and conducive learning atmosphere.

In addition, teachers strive to improve digital competence and literacy through internal training, independent learning, and discussions between fellow teachers. This competency improvement focuses not only on the technical ability to operate the application, but also on the pedagogical ability to integrate technology with learning objectives. Teachers adjust the use of applications to the level of ability of students and the material taught, so that their use is not uniform, but contextual according to learning needs.

Teachers also apply an integrative approach by combining the use of digital *tajweed applications* and traditional learning methods of Islamic boarding schools, such as *talaqqi* and *musyafahah*. The application is used as a supporting medium to provide examples of reading and independent exercises, while the reading correction process is still carried out directly by the teacher. This approach aims to maintain the authenticity of the transmission of Qur'an readings while selectively utilizing the advantages of digital technology.

To minimize potential distractions, teachers draw up rules for the use of gadgets during learning and conduct consistent supervision. Pendapat Kumar (2024) In addition, teachers provide guidance to students regarding the ethics of using technology through advice, examples, and integrating moral values in learning. Students are directed to view technology as a means of learning that must be used responsibly.

Overall, these efforts show that the success of the use of digital *tajweed* applications is highly dependent on the active role of teachers as facilitators, supervisors, and learning directors. Teachers not only play the role of technology users, but also as controllers so that technology is used effectively, contextually, and in harmony with the values of pesantren education in improving the quality of learning to read the Qur'an.

CONCLUSION

This study concludes that the use of digital *tajweed* applications in Qur'an learning at the Darul Haq Muaro Jambi Islamic Boarding School serves as an effective supporting medium when integrated through appropriate teacher strategies. The findings show that digital *tajweed* applications contribute positively to improving students' Qur'an reading skills, particularly in reading fluency, accuracy of *makhārijul*

hurūf, and understanding of *tajweed* rules. Nevertheless, the application does not function as an independent determinant of learning success, but rather complements traditional pesantren learning methods such as *talaqqi* and *musyāfahah*.

Furthermore, the study highlights that the effectiveness of digital application integration is strongly influenced by the central role of teachers in guiding, managing, and evaluating the learning process. Despite challenges related to facilities, digital literacy, and student discipline, teachers' adaptive strategies enable technology to be used in harmony with pesantren values. This research affirms that digital innovation in Qur'an learning should be teacher-centered and context-sensitive, supported by systematic planning and institutional support to ensure sustainable integration without undermining the traditional foundations of pesantren education.

REFERENCES

- al Rumaisa, A., Mudrikah, F., & Rakin, M. (2025). The Effectiveness of Gamification-Based Islamic Religious Education Learning Models on Digital Al-Qur'an Literacy. *Journal on Islamic Studies*, 2(1), 1–11.
- Al-Qur'an, R. M. P., & Putri, P. S. K. V. I. S. (n.d.). *JOURNAL OF SCIENTIFIC STUDIES AND MULTIDISCIPLINARY RESEARCH*.
- Azman, N. A., Hamzah, M. I., & Baharudin, H. (2025). Digital teaching strategies of Islamic education teachers: A case study in primary schools. *International Journal of Learning, Teaching and Educational Research*, 24(3), 562–585.
- bin Sahmat, M. S., & binti Zamri, F. A. (2024). Enhancing Al-Quran Reading Proficiency in Higher Education: The implementation of the Focused Mad & Idgham Technique. *Journal of Cognitive Sciences and Human Development*. Vol, 10, 1.
- Erlia, W. (2021). Roles of the teacher for increasing learning quality of students. *ETUDE: Journal of Educational Research*, 1(3), 77–86.
- Globalisasi, P. di P. P. E., & Irawan, I. (n.d.). Anugrah, A., & Amrullah, AMK (2022). Tipologi Manajemen Tradisional dan Modern dan Klasifikasinya dalam Manajemen Pendidikan Islam. *Journal of Islamic Education: The Teacher of Civilization*, 3 (1). Arifiah, DA (2021). Solusi Terhadap Problematika Pendidikan Dalam. *Tahta Media Group*, 3, 91.
- Hinayah, S. N. (2024). The Application of Tajweed Science in the Qur'an Learning Process at TPQ Ponpes Sa'adatul Ikhwan NW Rensing. *Journal of Scientific Studies and Multidisciplinary Research*, 1(2), 71–77.
- Khasanah, M. (2024). Tantangan penerapan teknologi digital dalam pendidikan Islam: Memanfaatkan inovasi untuk meningkatkan mutu pembelajaran. *Leader: Jurnal Manajemen Pendidikan Islam*, 2(2), 282–289.
- Khasanah, N. (2025). PERAN FASILITATOR GURU DALAM OTONOMI BELAJAR SISWA: IMPLIKASI PROYEK PEMBELAJARAN MANDIRI TERHADAP KARAKTER DALAM PENDIDIKAN ISLAM. *An Najah (Jurnal Pendidikan Islam Dan Sosial Keagamaan)*, 4(6), 345–355.

- Kumar, P. (2024). The role of ethics and moral values in teaching: A comprehensive examination. *Shodh Sari-An Int. Multidiscip. J*, 3(01), 99-112.
- Lundeto, A., Talibo, I., & Nento, S. (2021). Challenges and learning strategies of Islamic education in Islamic boarding schools in the industrial revolution era 4.0. *Al-Ishlah: Jurnal Pendidikan*, 13(3), 2231-2240.
- Marfuah, M., Aulia, D. N., Maidah, I. N., Khusna, A., Mailatussakinah, M., Salsabila, M., Guslaila, E. F., & Khoiri, A. (2025). Efektivitas Pembelajaran Ilmu Tajwid terhadap Kemampuan Membaca Al-Qur'an Siswa Kelas XII RPL 2 SMKN 1 Wonosobo. *Karakter: Jurnal Riset Ilmu Pendidikan Islam*, 2(3), 275-287.
- Muid, A., Arifin, B., & Karim, A. (2024). Peluang dan Tantangan Pendidikan Pesantren di Era Digital (Studi Kasus di Pondok Pesantren Al-Islah Bungah Gresik). *MODELING: Jurnal Program Studi PGMI*, 11(1), 512-530.
- Muslim, M. (2024). Internalizing Digital Technology in Islamic Education. *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme*, 6(3), 180-197.
- Najiyah, M. A., Najib, M., & Ahmad, N. F. (2025). Implementasi Metode Sorogan dalam Meningkatkan Kemampuan Membaca Al-Qur'an Siswa SMK Ihyaul Ulum Gresik. *Qomaruna: Journal of Multidisciplinary Studies*, 3(1), 120-130.
- Nursyamsiyah, S. (2023). Evaluation model of Islamic education learning in schools in the digital age. *International Journal of Social Learning (IJSLS)*, 3(2), 188-201.
- Posangi, S. S. (2021). Alternative approach techniques to support home islamic boarding schools using virtual learning technology. *Linguistics and Culture Review*.
- Satar, S., Judijanto, L., Haryono, P., Septikasari, D., Zamsir, Z., Pirmani, P., Wijaya, S. A., Djollong, A. F., & Gaspersz, V. (2025). *Metode dan Model Pembelajar Inovatif: Teori dan Praktik*. PT. Green Pustaka Indonesia.
- Suradji, M., & Faridi, F. (2025). Transformation Of Islamic Boarding School Education In The Digital Era: A Critical Analysis Of The Internalization Of Qur'anic Values. *Benchmarking*, 9(2), 429-435.
- Umar, S. (2024). The Role of Teachers in the Context of Multicultural Education to Promote Islamic Values. *Journal La Edusci*, 5(2), 89-96.

