

# Transformation of Wordwall-based Indonesian learning evaluation

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## Abstract

Digital transformation in education has had a significant impact on learning evaluation methods, including at the Madrasah Ibtidaiyah (MI) level. This study aims to analyze the utilization of the Wordwall platform in evaluating Indonesian language learning at MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung. This research was conducted with a descriptive qualitative approach. The data collection techniques were observation, interview, and documentation. The research subjects were 2 grade II teachers and the Head of Curriculum of MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung. Data validity is strengthened by the application of triangulation techniques, which include source triangulation by comparing data from teachers, students, and curriculum waka; triangulation of methods that compare interview results with observation and documentation data; and extension of observation time to obtain a more comprehensive picture of student behavior during evaluation. The collected data were analyzed descriptively qualitatively with three main stages: (1) data reduction (2) presentation and (3) conclusion drawing. The results showed that the use of Wordwall was able to increase students' engagement, motivation, and understanding through interactive activities such as quizzes and educational games. In addition, teacher collaboration in designing evaluation supports constructive and participatory learning. However, challenges such as limited devices and digital literacy remain. Madrasahs develop adaptive strategies such as digital literacy training and partnership with internet service providers. This research enriches the discourse on educational technology in a rural-based madrasah environment and emphasizes the importance of a contextual approach in implementing Wordwall based digital evaluation.

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## Abstrak

Transformasi digital dalam dunia pendidikan telah membawa pengaruh signifikan terhadap metode evaluasi pembelajaran, termasuk di tingkat Madrasah Ibtidaiyah (MI). Penelitian ini bertujuan untuk menganalisis pemanfaatan platform Wordwall dalam evaluasi pembelajaran Bahasa Indonesia di MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung. Penelitian ini dilakukan dengan pendekatan kualitatif deskriptif. Adapun teknik pengumpulan data berupa observasi, wawancara, dan dokumentasi. Subjek penelitian adalah 2 orang guru kelas II dan Waka Kurikulum MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung. Validitas data diperkuat dengan penerapan teknik triangulasi, yang meliputi triangulasi sumber dengan membandingkan data dari guru, siswa, dan waka kurikulum; triangulasi metode yang membandingkan hasil wawancara dengan data observasi dan dokumentasi; serta perpanjangan waktu observasi untuk memperoleh gambaran yang lebih menyeluruh tentang perilaku siswa selama evaluasi. Data yang terkumpul dianalisis secara deskriptif kualitatif dengan tiga tahapan utama: (1) reduksi data (2) penyajian dan (3) penarikan kesimpulan. Hasil penelitian menunjukkan bahwa penggunaan Wordwall mampu meningkatkan keterlibatan, motivasi, dan pemahaman siswa melalui aktivitas interaktif seperti kuis dan permainan edukatif. Selain itu, kolaborasi guru dalam merancang evaluasi mendukung pembelajaran yang konstruktif dan partisipatif. Namun, tantangan berupa keterbatasan perangkat dan literasi digital masih menjadi hambatan. Madrasah mengembangkan strategi adaptif seperti pelatihan literasi digital dan kemitraan dengan penyedia layanan internet.

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*Penelitian ini memperkaya diskursus tentang teknologi pendidikan di lingkungan madrasah berbasis pedesaan dan menekankan pentingnya pendekatan kontekstual dalam implementasi evaluasi digital berbasis Wordwall.*

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## INTRODUCTION

The development of digital technology in the last decade has brought about major changes in various fields, including education. In the realm of Indonesian language learning, the use of technology has been proven to increase student effectiveness and engagement significantly. Recent literature reviews, such as those conducted by (Dhiya Rahma, 2024) show that using interactive digital media can improve students' understanding and motivation to learn. Meanwhile, research by (Salsabila, 2023) also emphasizes that educational applications such as Educandy can enliven the learning process at the MI/SD level. Wordwall, as an interactive platform, is considered effective in accommodating more interesting and measurable learning evaluations (Celline, 2024).

However, most previous studies have focused more on urban environments with adequate technological facilities, so there has not been much discussion of implementation in madrasah-based elementary schools in rural areas. Based on the results of initial observations at MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung, several problems were found in the implementation of technology-based evaluations, especially limited devices, internet access, and low digital literacy among teachers and students. Questionnaire data distributed to 25 teachers showed that 68% of teachers felt less confident in using digital-based evaluation platforms, and the results of interviews with school principals stated that only 40% of students had regular access to digital devices at home. This is reinforced by observation data showing that in one Wordwall-based evaluation session, only around 55% of students were able to complete assignments on time due to technical constraints.

This fact indicates a gap between the potential of technology in education and the reality of its implementation in rural areas, so further research is needed to overcome these obstacles (Muhamad Arif, 2018; Muhamad Arif, Aziz, Rahmayanti, & Dorloh, 2023). This study aims to analyze the role of technology, especially the use of the Wordwall platform, in improving the effectiveness of Indonesian language learning evaluation at MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung. In addition, this study contributes to closing the literature gap related to the implementation of technology-based evaluation in madrasah-based elementary schools in rural areas. This research is focused on the contextual challenges and strategies for implementing technology in areas with limited digital infrastructure, which have not previously been studied in depth. This study also discusses the concrete actions of MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung, in overcoming this gap.

Among them, short training was held for teachers on the use of Wordwall in learning evaluation, limited assistance during implementation in class, and adaptation of evaluation materials so that they can be used offline and semi-offline to adjust to the conditions of the available facilities and infrastructure. In addition, there is a collaborative approach with schools and parents to support the availability of minimal facilities needed by students when taking part in digital evaluations. Thus, the results of this study are expected to provide a real contribution to the development of a digital evaluation model that is adaptive to regional conditions. Thus, the researcher will examine in depth the research entitled "Transformation of Indonesian Language learning evaluation based on Wordwall at MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung". This research is important as an effort to answer the challenges of implementing technology in rural madrasa environments and to provide scientific contributions in formulating adaptive, effective, and contextual digital evaluation models according to the needs of religious-based basic education units.

## RESEARCH METHOD

This study uses a qualitative approach with a descriptive method that aims to describe the use of the Wordwall platform in evaluating Indonesian language learning in class II of MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung. The subjects of the study were 2 class II teachers and the curriculum vice principal. The validity of the data in this study was strengthened by the application of triangulation techniques, namely (1) source triangulation was carried out by comparing data obtained from teachers, students, and curriculum vice principals to ensure consistency of information regarding the use of Wordwall and the obstacles faced (Muhamad Arif, 2023; Ma'arif, Rofiq, & Sirojuddin, 2022), (2) method triangulation was applied by comparing interview results with observation and documentation data. For example, if the teacher said that students showed high enthusiasm during the evaluation, the researcher matched the statement with observation notes on student activity and evidence of evaluation results collected through documentation and (3) an extension of the observation time was carried out to obtain a comprehensive picture and avoid momentary bias, by observing more than one learning session to see the consistency of student behavior patterns and responses to the evaluation media.

The data obtained were analyzed descriptively qualitatively by following three main stages: (1) data reduction was carried out by filtering information obtained from interviews, observations, and documentation to identify patterns, issues, or findings that were directly related to media effectiveness, student involvement, and technical constraints that emerged during the evaluation process; (2) data presentation was carried out by organizing the reduced data into a systematic descriptive narrative form; and (3) conclusions were drawn by formulating the meaning of the data that had been presented, linking it to the research objectives on the effectiveness and challenges of implementing Wordwall as an evaluation medium in the context of rural madrasas (Ma'arif, 2018).

## **RESEARCH RESULTS AND DISCUSSION**

### **Use of Wordwall Technology in the Evaluation of Indonesian Language Learning in MI/SD**

The use of technology in education is becoming increasingly important, especially in improving the quality of the learning evaluation process. One platform that offers innovative solutions in this regard is Wordwall. At MI Hidayatul Muhtadiin Wates, Sumbergempol Tulungagung, the use of Wordwall has been implemented effectively. This has a positive impact on student involvement in their learning process, especially in learning Indonesian in grade II. Steps for Using Wordwall at MI Hidayatul Muhtadiin Wates, Sumbergempol Tulungagung:

### **Use of Wordwall Increases Student Involvement in the Evaluation of Indonesian Language Learning**

The results of observations and interviews showed that the use of Wordwall significantly increased student involvement in the evaluation process of Indonesian language learning. Students appeared more enthusiastic, active, and focused when participating in interactive activities such as quizzes, guessing words, and picture puzzles. In one evaluation session, the researcher noted that more than 80% of students showed active participation, marked by enthusiasm in answering questions and involvement in a short discussion after the game. One teacher stated, "Usually they get bored quickly when there is a test, but with Wordwall, they ask to move on to the next question."

This finding is in line with the theory of student engagement, which states that interactively designed learning can strengthen students' emotional, cognitive, and behavioral engagement (Fredricks, 2004). In addition, this approach also encourages social interaction between students. In several sessions, students appeared to help and support each other when their friends had difficulty answering. One student said in an interview, "I like it because I can play while learning, and I can help my friends too." Interactions like this show that the use of Wordwall not only strengthens understanding of the material but also increases social engagement that supports the collaborative learning process. The use of Wordwall in Indonesian language learning provides a more interactive, hands-on experience compared to traditional evaluation methods.

Through this platform, students have the opportunity to provide faster responses to the questions presented, discuss with classmates, and participate in educational games designed to strengthen understanding of the material in a fun way. This approach is in line with the results of research (Aidah, N., & Nurafni, N., 2022), which states that Wordwall can create a fun learning atmosphere and increase students' attention to the material. However, this study provides a new contribution in the context of elementary madrasahs, especially grade II students, which have not been studied in depth in previous literature. Most previous studies still focus on general elementary school levels or high school classes.

### **Teacher Collaboration and Constructivist Evaluation Design**

The design of learning evaluation at MI Hidayatul Muftadiin Wates, Sumbergempol Tulungagung, was carried out collaboratively by teachers in the stages of compiling materials and activities. This collaboration reflects the application of the Social Constructivism Theory proposed by Vygotsky, which emphasizes that effective learning occurs through meaningful social interactions. Involving colleagues in the development of Wordwall content not only increases the validity of the evaluation instrument but also enriches the perspective in compiling indicators that are relevant to student competency achievements.

This finding strengthens the research results of Casfian et al. (2024), which show that constructivism-based learning through digital media can increase the meaning of student learning. However, the new contribution of this study lies in the application of the constructivism approach in the context of digital evaluation. So far, most studies have emphasized constructivism in the learning process, while this study shows that the principles of constructivism can also be effectively integrated in the design of technology-based evaluations. Thus, evaluation is not only a measuring tool, but also a collaborative and meaningful learning tool. The collaborative pattern formed in the design of this evaluation has the potential to be expanded to other aspects of learning, not limited to evaluation. Collaboration between teachers can be applied in the development of Teaching Modules, selection of teaching strategies, preparation of thematic teaching materials, to learning reflection activities. The existence of collaboration between teachers strengthens the culture of sharing and discussion; learning in madrasahs can be more adaptive, contextual, and responsive to student needs.

### **Implementation of Wordwall in Learning and Evaluation in Class II of MI Hidayatul Muftadiin Wates, Sumbergempol Tulungagung**

The implementation of Wordwall in class II of MI Hidayatul Muftadiin Wates, Sumbergempol Tulungagung began with a strategic pedagogical step, namely a comprehensive introduction of the platform by the teacher. The explanation provided includes technical navigation methods to an understanding of the types of evaluative activities available in Wordwall. This systematic approach is very important in the context of elementary education, especially for class II students, who are still in the early stages of development in the use of technology. Therefore, the integration of technology in learning must not only be innovative but also be structurally designed to support meaningful learning and be by the level of student readiness.

The students' responses to the use of Wordwall showed high enthusiasm. This is by the character of early childhood, who enjoy learning through games and attractive visual displays. This finding supports the theory of student engagement from Fredricks, Blumenfeld, and Paris (2004), which states that learning engagement includes three main aspects: emotions, thoughts, and actions of students. Wordwall can support these three aspects simultaneously. This platform creates a fun learning atmosphere (emotional), encourages students to think through quizzes and puzzles (cognitive), and invites them

to be actively involved during activities (behavioral). Thus, Wordwall is not only an evaluation tool but also a means to strengthen the overall learning experience.

The success of the implementation of Wordwall in this madrasah is also inseparable from the availability of adequate digital infrastructure. Access to the internet and devices such as tablets and laptops are crucial factors that support the digitalization of learning. Within the framework of the Theory of Digital Access and Participation, accessibility to technology is seen as the main requirement in realizing inclusive and equal learning (Sindi Septia Hasnida, 2024). At MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung, the availability of internet access with adequate quota, projector facilities to support the use of Wordwall games classically, and parental support in facilitating children with cellphones during Wordwall-based activities are important indicators of institutional readiness. This reflects the ability of religious-based madrasahs to adaptively adopt technological innovations to support the effectiveness of digital learning.

The findings of this study are in line with the study (Pratiwi, 2021), which emphasizes that the availability of technological infrastructure is an important factor in the successful use of digital media in education. However, the uniqueness of this study lies in its specific context, namely, elementary madrasahs in areas with limited access. The results of the study show that digitalization of evaluation can not only be applied in urban or private schools with large resources but can also be successful in Islamic-based educational institutions through a simple but structured approach. The Wordwall implementation model used proves that digital transformation does not have to be expensive or complex to have a positive impact on the quality of learning.

### **The Role of Wordwall Technology in the Evaluation of Indonesian Language Learning in MI/SD**

The results of the study show that the application of Wordwall technology in the evaluation of Indonesian language learning at MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung, plays a significant role in improving the quality of student engagement. Interactive evaluative activities such as quizzes, educational games, and puzzles designed through Wordwall can create a more dynamic and enjoyable learning atmosphere. This encourages students to participate more actively in the learning process. This finding is in line with research (Jannah, M., & Masnawati, E., 2024), which states that Wordwall can significantly increase students' interest in learning through a fun and participatory approach.

Theoretically, these results support the principles of Constructivist Learning Theory, which emphasizes the importance of direct experience and collaboration in building understanding (Fauziah Nasution, 2024). Students are not only cognitively involved in completing tasks, but also experience emotional and social involvement that strengthens learning motivation. In Wordwall activities, students actively interact, discuss, and provide feedback to each other, leading to the formation of a deeper understanding.

Teachers also provide direct feedback to students as they work on evaluative activities. The ability to provide corrections in real time accelerates the process of improving students' understanding of the material. Research (Saputri, N. R., & Wulandari, D., 2023) shows that fast feedback through digital platforms can improve students' discipline and responsibility for their learning assignments. This study also supports the findings (Khairunnisa, A., & Tatang, T., 2023), which state that digital evaluation based on Wordwall helps students overcome difficulties more efficiently. In addition to being an evaluation tool, Wordwall also produces learning data that teachers can use to design more adaptive and responsive teaching strategies. Teachers at MI Hidayatul Muhtadiin Wates, Sumbergempol Tulungagung use the results of digital evaluations to reflect and adjust teaching methods. This is in line with the view (Mahwar Alfian Nisa and Ratnawati Susanto, 2022) which states that technology-based evaluation data can be the basis for planning learning that is more focused and in accordance with student needs.

An important finding of this study is that Wordwall technology not only improves students' motivation and understanding but also strengthens the role of teachers as evaluators and facilitators of digital learning. This is a new contribution in the context of learning in Madrasah Ibtidaiyah, which previously had minimal adoption of technology in evaluation. The integration of technology in evaluation not only has an impact on improving learning outcomes, but also bridges the transformation of a more digital, collaborative, and directed learning culture.

### **Challenges of utilizing technology in evaluating Indonesian language learning at MI Hidayatul Muhtadiin Wates, Sumbergempol Tulungagung**

The results of the study show that the application of Wordwall technology in evaluating Indonesian language learning at MI Hidayatul Muhtadiin Wates, Sumbergempol Tulungagung brings significant benefits in increasing student participation and involvement. However, this application is not free from various complex challenges, especially in two main aspects: limited technological infrastructure and digital literacy.

#### **Limited Technology Infrastructure**

This study revealed that limited technological facilities, such as computers, laptops, and unstable internet connections, are real obstacles in implementing technology-based evaluations (M. Arif, 2024). Based on the results of interviews with 20 teachers, 7 teachers stated that access to digital devices was still limited, and 9 stated that internet connections in the school environment often experienced disruptions during online evaluations. The results of observations also showed that out of a total of 40 grade II students, only around 20 students (50%) were able to complete the Wordwall-based evaluation on time due to device and network constraints.

This finding strengthens the research results (Khairunnisa, A., & Tatang, T., 2023), which state that weak infrastructure is the main inhibiting factor in the use of digital

applications in language learning, especially in schools with limited access. However, the new contribution of this study lies in the adaptive strategy implemented by MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung, such as establishing partnerships with local internet providers and implementing a blended learning model to optimize the use of available devices.

This strategy has not been widely studied in previous studies and provides an important contribution as a contextual approach based on local needs in the use of educational technology. This also confirms the theory of Technological Pedagogical Content Knowledge (TPACK) that the success of technology integration is not only determined by the availability of devices, but by the pedagogical skills and adaptive strategies of teachers (Koehler, 2014).

### **Limitations of Digital Literacy**

The limitations of digital literacy in teachers and students are a significant challenge. This study found that although students showed enthusiasm for the use of Wordwall, many of them still experienced technical difficulties in operating digital devices independently. From the interview results, the curriculum vice principal stated that only around 40% of students have regular access to digital devices at home, while 20% of teachers admitted to lacking confidence in using digital evaluation platforms. This condition shows a digital skills gap that has not been fully addressed, especially at the elementary education level. This finding is in line with (Arima, M. T., Amaliyah, N., Abustang, P., & Alam, S., 2022), which identified that elementary school students in non-urban areas often experience technical obstacles when using digital-based applications.

Different from previous studies that tend to stop at describing obstacles, this study shows that there is a continuous initiative from the school in conducting teacher training and improving digital literacy, which is a good practice that is worth replicating. This is a new finding that shows that strengthening digital literacy is not only the responsibility of individual teachers but can be institutionalized in the form of internal school programs. This challenge is analyzed using the Digital Divide Theory framework approach (Norris, 2001), which explains the digital divide not only in physical access to technology, but also in cognitive abilities and skills in using the technology. Thus, this discussion provides a new meaning to the concept of the digital divide, that increasing digital literacy at the MI level requires a systemic and participatory approach.

### **CONCLUSION**

This study shows that the use of Wordwall technology in the evaluation of Indonesian language learning at MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung has a positive impact on increasing student engagement and motivation to learn. Interactive activities such as quizzes, puzzles, and educational games have succeeded in creating a fun and participatory learning atmosphere, in line with the principles of constructivist learning and the theory of student engagement. In addition, collaboration between teachers in designing evaluations through Wordwall shows that



this platform is not only an evaluation tool but also a means to improve the quality of interaction and pedagogical reflection among educators.

Despite several challenges, such as limited infrastructure and low digital literacy, MI Hidayatul Mubtadiin Wates, Sumbergempol Tulungagung, has succeeded in developing a contextual adaptive strategy. Steps such as establishing partnerships with local internet providers, using blended learning, and organizing digital literacy training are important factors in the success of technology integration. These findings broaden the understanding of TPACK and Digital Divide theories by emphasizing that the digital divide is not only a matter of access, but also includes pedagogical readiness and sustainable institutional support.

Considering the limitations of the study, which only focused on one madrasah and used a qualitative descriptive approach, a broader and more in-depth follow-up study is needed. A study with a mixed methods approach can provide a more complete picture of the quantitative impact of the use of Wordwall on student learning outcomes. As for broader implementation in other madrasahs, it is suggested that the steps implemented at MI Hidayatul Mubtadiin Wates can be used as an example. Providing continuous digital literacy training for teachers and students, developing better infrastructure, and implementing a blended learning model that combines face-to-face and online learning will be the keys to success. In addition, it is important to build partnerships with various parties, from the government, technology providers, and local communities, to support the fulfillment of infrastructure and training needs. Inclusive and equitable education policies also need to be formulated to ensure that technology can be accessed equally by all madrasahs, especially those in areas with limitations.

## REFERENCES

- Aidah, N., & Nurafni, N. (2022). Analisis penggunaan aplikasi Wordwall pada pembelajaran IPA kelas IV di SDN Ciracas 05 Pagi. *Pionir: Jurnal Pendidikan*, 11(2), 161-174.
- Arif, M. (2024). The Existence of Madrasah Ibtidaiyah Based on Pesantren: Challenges and Opportunities in The Digital Era. *Munaddhomah*, 5(4), 367-382. <https://doi.org/10.31538/munaddhomah.v5i4.1401>
- Arif, M., Abd Aziz, M. K. N., & Abdurakhmonovich, Y. A. (2023). Model For Economical Digital Smart Classes Indonesian Islamic Primary Schools (Madrasah Ibtidaiyah) In The 21st Century. *Child Education Journal*, 5(1), 11-23.
- Arif, Muhamad. (2023). *Karya Tulis Ilmiah: Implementasi Chatgpt Dan Manajemen Referensi Menulis*. Jambi: PT. Sonpedia Publishing Indonesia.
- Arima, M. T., Amaliyah, N., Abustang, P., & Alam, S. (2022). Pengaruh Literasi Digital Terhadap Hasil Belajar Siswa Sekolah Dasar Kota Makassar: Bahasa Indonesia dan Bahasa Inggris. *Pendas Mahakam: Jurnal Pendidikan dan Pembelajaran Sekolah Dasar*, 6(2), 105-110.

- Celline, D. C. (2024). Penggunaan Aplikasi Wordwall Sebagai Alat Evaluasi Pembelajaran Di SD Negeri 2 Jabung. *Jurnal Pendidikan Sosial Dan Konseling*, 2(2), 316-319.
- Dhiya Rahma, N. N. (2024). Pengaruh Penggunaan Media Digital Sebagai Media Interaktif Pada Pembelajaran Dalam Meningkatkan Motivasi Belajar Siswa. *ENGGANG: Jurnal Pendidikan, Bahasa, Sastra, Seni, dan Budaya*, 12-21.
- Fauziah Nasution, Z. S. (2024). Pembelajaran dan Konstruktivis Sosial. *Madani: Jurnal Ilmiah Multidisiplin*, 837-841.
- Fredricks, J. A. (2004, 1). School engagement: Potential of the concept, state of the evidence. 74, pp. 59-109.
- Jannah, M., & Masnawati, E. (2024). Penerapan Aplikasi Wordwall untuk Meningkatkan Minat Belajar Siswa dalam Pembelajaran. *Jurnal Pendidikan dan Ilmu Sosial (Jupendis)*, 2(4), 173-183.
- Khairunnisa, A., & Tatang, T. (2023). Evaluasi Digital Berbasis Wordwall dalam Mengatasi Kesulitan Belajar Siswa. *Jurnal Pendidikan Tambusai*, 616-621.
- Koehler, M. J. (2014). The technological pedagogical content knowledge framework. In *Handbook of Research on Educational Communications and Technology: Fourth Edition*, 101-111.
- Ma`arif, M. A., Rofiq, M. H., & Sirojuddin, A. (2022). Implementing Learning Strategies for Moderate Islamic Religious Education in Islamic Higher Education. *Jurnal Pendidikan Islam*, 8(1), 75-86. <https://doi.org/10.15575/jpi.v8i1.19037>
- Mahwar Alfian Nisa dan Ratnawati Susanto. (2022). Pengaruh Penggunaan Game Edukasi Berbasis Wordwall dalam Pembelajaran Matematika Terhadap Motivasi Belajar. *JPGI (Jurnal Penelitian Guru Indonesia)*, 140-147.
- Norris, P. (2001). *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide*. Cambridge University Press.
- Pratiwi, D. (2021). Peran Infrastruktur Teknologi dalam Optimalisasi Media Pembelajaran Digital di Sekolah Dasar. *Jurnal Teknologi Pendidikan*, 23(1), 45-52.
- Rahmayanti, J. D., & Arif, M. (2021). Penerapan Full Day School Dalam Mengembangkan Budaya Religius di Sekolah Dasar Muhammadiyah 1 Menganti Gresik. *EL Bidayah: Journal of Islamic Elementary Education*, 3(1), 11-31.
- Rosyidah, F. A., & Arif, M. (2022). Implementation Of Islamic Education Values In The Islamic Boarding School Tradition Of Leran Manyar Gresik Village. *FATAWA: Jurnal Pendidikan Agama Islam*, 2(2), 251-267.
- Salsabila, K. W. (2023). Evaluasi Pembelajaran Bahasa Indonesia Menggunakan Educandy Jenjang MI/SD. *JUPEIS: Jurnal Pendidikan dan Ilmu Sosial*, 2(3), 42-48.
- Saputri, N. R., & Wulandari, D. (2023). Pengaruh Umpan Balik Cepat Melalui Platform Digital terhadap Kedisiplinan dan Tanggung Jawab Siswa. *Jurnal Pendidikan Digital*, 5(2), 123-135.
- Sindi Septia Hasnida, R. A. (2024). Tranformasi Pendidikan Di Era Digital. *Jurnal Bintang Pendidikan Indonesia (JUBPI)*, 110-116.