

## The Principal's Role in Encouraging the Use of Quizizz as Interactive Media at SD Negeri 1 Wonosari

Istinganah<sup>1</sup>, Jumintono<sup>2</sup>, Saryanto<sup>3</sup>

<sup>1,2,3</sup> Universitas Sarjanawiyata Tamansiswa (UST), Indonesia

\* Correspondence e-mail; [iisazfarashi@gmail.com](mailto:iisazfarashi@gmail.com)

### Article history

Submitted: 2026/03/11;    Revised: 2026/04/21;    Accepted: 2026/06/09

### Abstract

The rapid development of digital technology has transformed educational practices worldwide, requiring schools to adapt learning processes that are more interactive, engaging, and responsive to students' diverse needs. This study aims to analyze the causes of reading difficulties among slow learner students, describe the implementation of the Interactive Digital Learning strategy, and examine its effectiveness in improving reading skills at SD Negeri 1 Wonosari. The research employed a qualitative descriptive approach involving observation, interviews, and documentation to collect data regarding the learning experiences of a fourth-grade slow learner student. The findings revealed that reading difficulties were influenced by cognitive limitations, low learning motivation, limited self-confidence, and environmental factors affecting literacy development. To address these challenges, teachers implemented an Interactive Digital Learning strategy utilizing digital media such as PowerPoint, Canva, and educational videos to create engaging and student-centered learning experiences. The implementation process included planning, classroom application, observation, and evaluation to ensure that learning activities met students' needs. The results demonstrated that Interactive Digital Learning significantly enhanced students' motivation, participation, confidence, reading fluency, and reading comprehension. The effectiveness of the strategy can be explained through Constructivist Theory, Sociocultural Theory, Multimedia Learning Theory, Self-Determination Theory, and Social Cognitive Theory, which emphasize the importance of active engagement, technological support, and meaningful learning experiences.

### Keywords

Digital Learning Media, Interactive Digital Learning, Reading Comprehension, Reading Difficulties, Slow Learner.



© 2026 by the authors. This is an open access publication under the terms and conditions of the Creative Commons Attribution 4.0 International (CC BY SA) license, <https://creativecommons.org/licenses/by-sa/4.0/>.

## INTRODUCTION

learning practices in elementary schools. The use of technology-based learning media is no longer viewed as a complement, but rather as a necessity to create a more

active, engaging learning process that aligns with the characteristics of 21st-century learners. Elementary school students generally tend to learn through visual, interactive, and fun activities, so teachers need to provide media that can stimulate their participation, curiosity, and motivation to learn. In this context, interactive learning media such as Quizizz is a relevant alternative because it combines elements of evaluation, games, direct feedback, and a healthy competitive atmosphere in learning. The presence of Quizizz provides teachers with the opportunity to package material and evaluation in a more varied way, so that learning is not solely lecture-centered but also focuses on active student involvement. However, the successful use of digital media in elementary schools depends not only on teacher skills but also on the leadership support of the principal as a policy director, innovation facilitator, and driver of a technology-adaptive school culture (Kadarsih et al., 2020; Muslim, 2021).

The principal holds a strategic position in determining the direction of developing the quality of learning in schools. As an educational leader, the principal is not only responsible for institutional administration and management but also plays a role in encouraging the creation of learning innovations that are responsive to current developments. In the elementary school context, the principal is a central figure influencing teachers' understanding of the importance of digital transformation, utilizing learning technology, and building school readiness to face the challenges of modern education. The principal's progressive leadership can be reflected in the development of a technology-based school vision, support for the use of digital media, provision of supporting facilities, and strengthening teacher competencies through training and academic supervision. Thus, the principal acts not only as a supervisor of learning implementation but also as an agent of change, creating a school ecosystem that supports technology-based learning innovation. This role becomes increasingly important as schools strive to integrate media like Quizizz into their learning, ensuring that it becomes part of a sustainable pedagogical practice rather than a passing fad (Angga & Iskandar, 2022; Kadarsih et al., 2020).

Quizizz, as an interactive learning platform, offers various advantages that support elementary school student engagement in the learning process. With its game-based quiz features, leaderboards, time management, engaging visuals, and instant feedback, Quizizz creates a more lively and competitive learning environment. For elementary school students, gamified learning like this can increase interest, attention, and motivation to participate in learning activities. Furthermore, Quizizz also helps teachers conduct learning evaluations quickly, practically, and documented, allowing for more efficient monitoring of student learning outcomes. Several studies have

shown that the use of Quizizz in elementary schools contributes to increased learning interest, learning outcomes, student engagement, and the quality of interactions during learning. This demonstrates that Quizizz functions not only as an evaluation tool but also as an interactive learning medium that can enhance students' learning experiences. Therefore, the use of Quizizz in elementary schools deserves to be seen as part of an innovative strategy to improve the quality of learning, making it more adaptive, participatory, and enjoyable (Nasution & Nasution, 2020; Listyoningrum et al., 2024; Sunaryati et al., 2024).

Although Quizizz has great potential as an interactive learning medium, its implementation in elementary schools is not always optimal without strong institutional support. In many cases, teachers face obstacles such as limited digital literacy, a lack of training in the use of technology-based media, inadequate school facilities, and the lack of a consistent culture of learning innovation. This is where the role of the principal becomes crucial. Principals need to develop policies that support the use of learning technology, allocate resources for devices and internet connections, and provide teachers with space to experiment with digital learning models. Furthermore, principals also need to carry out academic supervision functions that not only assess learning administration but also foster teachers' ability to design effective interactive media-based learning. Principal support can be realized through internal workshops, teacher learning communities, mentoring in the use of digital platforms, and appreciation for learning innovations. Thus, the use of Quizizz is not merely an individual teacher initiative but a collective movement within the school culture led by the principal (Muslim, 2021; Angga & Iskandar, 2022).

At SD Negeri 1 Wonosari, efforts to encourage the use of Quizizz as an interactive medium are important to study because they illustrate the relationship between principal leadership and learning innovation at the elementary school level. Elementary schools, as the foundation of formal education, require a learning approach that adapts to technological developments and student characteristics. In this situation, the principal is required not only to ensure the implementation of learning but also to foster a healthy digital culture within the school environment. The principal's encouragement can be seen in how school policies are directed to support the use of interactive media, how teachers are motivated and facilitated to develop Quizizz-based learning, and how digital learning support facilities are gradually provided. Furthermore, the study of the principal's role in encouraging the use of Quizizz is also relevant to demonstrate that the success of learning innovation does not solely rely on teachers, but requires visionary, adaptive, and collaborative

leadership. By examining these roles, this research is expected to provide an overview of the principal's strategy in encouraging interactive learning transformation, as well as serve as a reflection for other elementary schools in developing the use of digital media in a more targeted and sustainable manner (Kadarsih et al., 2020; Rizkullah et al., 2025; Ummah BK et al., 2025)..

## **METHODS**

This study uses a qualitative approach with a descriptive research type to understand in depth the role of the principal in encouraging the use of Quizizz as an interactive media at SD Negeri 1 Wonosari. This approach was chosen because the study focuses on revealing the phenomena, strategies, and forms of support from the principal for teachers in the use of digital learning media in elementary schools. The research subjects included the principal, class teachers, and related parties involved in the Quizizz-based learning process. Data collection techniques were carried out through observation, in-depth interviews, and documentation to obtain comprehensive data regarding school policies, learning implementation, as well as obstacles and efforts made in utilizing Quizizz. The data obtained were then analyzed using the interactive analysis model of Miles, Huberman, and Saldaña which includes data condensation, data presentation, and drawing conclusions. Data validity was maintained through triangulation of sources and techniques so that the research results have a good level of credibility and are able to objectively describe the role of the principal in supporting digital learning innovation in elementary schools.

## **FINDINGS AND DISCUSSION**

### **The Principal's Strategy in Encouraging the Use of Quizizz as an Interactive Learning Medium**

Research results indicate that the principal's strategy in encouraging the use of Quizizz as an interactive learning medium at SD Negeri 1 Wonosari was implemented through strengthening a digital learning vision integrated with the school's programs. The principal did not view the use of Quizizz merely as an evaluation tool, but rather as part of an effort to transform learning to make it more active, engaging, and tailored to the needs of elementary school students. In practice, the principal directed teachers to begin integrating digital media into daily learning processes, particularly during apperception activities, practice exercises, formative evaluations, and material reinforcement. This policy direction demonstrates that the principal is exercising an instructional leadership role, influencing learning practices by establishing a clear academic orientation. Theoretically, instructional leadership positions the principal as an actor focused on the quality of learning, improving teacher professionalism,

and creating an innovative learning environment. This strategy is crucial because the use of Quizizz will not develop sustainably if it is not framed as part of the school's vision, not simply a personal initiative of teachers. Thus, research findings show that the initial success of Quizizz's use in schools was heavily influenced by the principal's ability to establish a direction for change, convey the urgency of digital innovation, and establish the use of interactive media as part of the school's academic culture (Saputra et al., 2021; Muslim, 2021).

The next strategy is evident in the principal's efforts to build teacher motivation and readiness to use Quizizz through a persuasive approach and professional coaching. Interviews revealed that the principal encouraged teachers to experiment with digital learning media, despite varying technological capabilities. This encouragement was realized through teacher meetings, informal discussions, and an emphasis that using Quizizz was not merely about keeping up with technological developments, but also about increasing student engagement in learning. These findings suggest that the principal's strategy was not merely administrative but also psychological and pedagogical, as the principal sought to foster teacher confidence that digital innovation could be implemented gradually. From the perspective of educational change theory, effective leadership requires not only policy but also the ability to mobilize teacher commitment so that change is accepted as a shared need. When the principal acts as a motivator, teachers tend to be more open to the use of new media and do not view technology as an additional burden. This aligns with the view that adaptive school leadership will improve teacher readiness for the digital learning transformation, especially if principals are able to position technology as a pedagogical tool, not merely an administrative requirement (Hizam et al., 2021; Bhuiyan et al., 2021).

In addition to providing motivation, principals also implement coaching strategies through academic supervision aimed at learning innovation. Research shows that supervision not only assesses the completeness of teaching materials but also pays attention to how teachers utilize interactive media such as Quizizz in learning activities. Principals encourage teachers to design more participatory learning, utilize digital quizzes to assess student understanding, and use Quizizz results as learning reflection materials. This strategy demonstrates that academic supervision functions as a development tool, not simply supervision. Theoretically, modern academic supervision emphasizes professional development that helps teachers improve the quality of learning through feedback, mentoring, and collaborative reflection. In the context of Quizizz utilization, academic supervision is a crucial tool for ensuring that the use of digital media goes beyond technical aspects and is truly integrated with learning objectives, student characteristics, and meaningful assessments. These findings confirm that school principals have a strategic role in bridging technological innovation with teachers' pedagogical practices through constructive and continuous supervision (Marhawati, 2020; Mustaqim et al., 2026).

Another strategy identified was creating a school climate that supported collaborative digital learning experiments. Principals provided space for teachers to share their experiences using Quizizz, whether in meeting forums, teacher workgroup discussions, or everyday

conversations at school. This approach ensured that Quizizz use was not an individual endeavor, but rather a collective experience that could be learned from together. From the perspective of learning organization theory, schools that encourage collaboration among teachers tend to be more successful in adopting innovations because knowledge is not confined to one individual but distributed throughout the school community. When principals facilitate the exchange of good practices, teachers receive concrete examples, social support, and a sense of security in trying new innovations. This is particularly important in elementary schools, as some teachers still need concrete models for utilizing learning technology. The results of this study demonstrate that principals' strategies for encouraging Quizizz use involve not only superior instruction but also the creation of a collaborative culture that makes digital innovations more easily accepted and practiced sustainably by teachers (Safitri et al., 2020; Subadri et al., 2025).

Overall, the research results indicate that the principal's strategy for encouraging the use of Quizizz at SD Negeri 1 Wonosari was implemented through four main steps: building a digital learning vision, motivating teachers to innovate, directing academic supervision of the use of interactive media, and creating a collaborative culture among teachers. This strategy emphasizes the principal's role as both an instructional leader and a change leader, not only setting school policies but also guiding learning transformation at the classroom level. Theoretical analysis shows that the use of Quizizz will be more effective when supported by visionary leadership, consistent professional development, and a school culture open to innovation. Therefore, the use of Quizizz as an interactive learning medium in elementary schools cannot be separated from the principal's ability to motivate teachers, organize the organizational environment, and incorporate technology into strategies to improve learning quality. These findings reinforce the view that digital transformation in elementary schools is not only a matter of application availability, but primarily a matter of leadership capable of translating technology into meaningful learning practices for students (Saputra et al., 2021; Marhawati, 2020; Hidayatullah & Haifaturrahmah, 2025).

### **Principal Support for Teachers in Using Quizizz at SD Negeri 1 Wonosari**

Research results show that the principal's support for teachers in using Quizizz at SD Negeri 1 Wonosari is demonstrated through the provision of policy space that legitimizes teachers' innovation in learning. The principal not only allows the use of Quizizz but also positions it as an alternative interactive learning medium that can be used for apperception activities, practice exercises, formative evaluations, and material reinforcement. This policy support is important because it signals that digital learning innovation is part of the school's quality improvement agenda, not simply an individual teacher experiment. From the perspective of instructional leadership theory, this type of support demonstrates that the principal is carrying out a learning director function by creating an organizational climate conducive to innovation in teaching methods and media. When the principal provides institutional recognition for the use of Quizizz, teachers become more confident in integrating

the platform into lesson planning and implementation. Thus, the principal's policy support serves as the initial foundation that enables teachers to move from conventional learning patterns to more interactive and responsive learning models that address developments in educational technology (Mediatati & Jati, 2022; Niswah, 2020).

The next form of support is evident in facilitating the improvement of teachers' competencies in utilizing digital media. Based on interviews, the principal provides teachers with opportunities to learn how to use Quizizz through internal discussions, sharing best practices among teachers, and providing simple technical guidance that emphasizes the application's pedagogical function. The principal also encourages teachers who have already mastered Quizizz to assist colleagues who are still experiencing difficulties. This pattern of support demonstrates that teacher competency development does not always have to take place through large-scale formal training but can be built through collegial learning within the school environment. Theoretically, this approach aligns with the concept of a professional learning community, which positions the school as a learning community for teachers, where knowledge and skills are developed through ongoing interaction, reflection, and collaboration. In the context of Quizizz utilization, principal support for improving teacher competency is crucial because using digital applications requires not only technical skills but also an understanding of how the media integrates with learning objectives, student characteristics, and appropriate assessment strategies. Therefore, principals' facilitation of teacher learning is crucial for the successful implementation of interactive media in elementary schools (Aminah, 2020; Kasmawati, 2020).

In addition to competency enhancement, research shows that principals also provide support in the form of academic supervision aimed at improving the quality of teacher learning practices. This support extends beyond encouraging students to use Quizizz, including monitoring how the media is used in the classroom, the extent to which students are actively engaged, and how teachers utilize digital quiz results for learning evaluations. Principals provide feedback to teachers to ensure that Quizizz's use is not merely a distraction or entertainment, but is integrated with clear learning indicators and evaluation objectives. In contemporary academic supervision theory, the primary function of supervision is to help teachers grow professionally through guidance, observation, feedback, and follow-up. These findings indicate that principals' support for teachers in using Quizizz is substantive, addressing pedagogical quality, not just administrative aspects. With development-oriented supervision, teachers have the opportunity to reflect on the strengths and weaknesses of their learning, allowing for continuous refinement of Quizizz's use to meet the needs of elementary school students (Posangi, 2020; Firdaus & Sutarsih, 2020).

Bentuk dukungan lain yang sangat menonjol adalah upaya kepala sekolah menyediakan A collaborative work environment ensures teachers feel comfortable when facing the challenges of using digital media. Research shows that principals encourage open communication between teachers regarding their experiences using Quizizz, from how to

create questions, manage quiz times, adjust difficulty levels to student abilities, and utilize scores for follow-up learning. This collaborative support is crucial because, in practice, not all teachers have the same level of digital literacy. When principals foster a culture of mutual support, technical and pedagogical barriers can be overcome more quickly through collective experience. From the perspective of school organizational culture theory, collaboration between teachers is crucial for accelerating innovation adoption, as change is more easily accepted when supported by trusting professional relationships. In the context of SD Negeri 1 Wonosari, the principal's support through strengthening a collaborative culture enabled the use of Quizizz to develop not just as an individual skill, but as shared knowledge that is continuously learned and refined by the school community. This also demonstrates that principal leadership serves as a bridge between technological innovation and the collective work of teachers in the school (Purnomo et al., 2025; Lidiawati & Fauzi, 2025).

Overall, the research results indicate that the principal's support for teachers in utilizing Quizizz at SD Negeri 1 Wonosari encompasses four main forms: policy support, facilitating competency improvement, constructive academic supervision, and creating a collaborative culture within the school environment. These four forms of support demonstrate that the principal plays a role not only as an administrative decision-maker but also as a facilitator of teacher learning and a driver of school innovation. Theoretical analysis confirms that the use of interactive media such as Quizizz will be more effective when teachers receive clear institutional support, continuous learning opportunities, professional feedback, and a work environment that encourages the exchange of experiences. Therefore, the principal's support is a crucial factor in ensuring that the use of Quizizz is not incidental but develops into part of a planned and sustainable learning strategy. These findings reinforce the view that digital learning transformation in elementary schools requires leadership that is not only visionary but also a real presence in assisting teachers in implementing learning innovations in the classroom (Mediatati & Jati, 2022; Aminah, 2020; Purnomo et al., 2025).

### **Obstacles and Principal Efforts in Optimizing the Use of Quizizz as an Interactive Media**

Research results indicate that one of the main obstacles to optimizing the use of Quizizz as an interactive media at SD Negeri 1 Wonosari is the unequal distribution of teachers' digital competencies. Although some teachers are already proficient in using Quizizz to create quizzes, display questions, and utilize evaluation results, many still require technical and pedagogical support. This obstacle is evident in teachers' hesitation when it comes to creating digital question banks, setting game modes, or adapting Quizizz to the learning objectives and characteristics of elementary school students. This situation indicates that digital transformation in schools is not always uniform, as teacher readiness is influenced by experience using technology, learning motivation, and a supportive work environment. Theoretically, this obstacle can be understood through the perspective of teacher digital literacy, which emphasizes that utilizing learning technology is not only about the ability to operate applications, but also the ability to select, adapt, and evaluate technology to align with learning needs. Therefore, when teachers' digital literacy has not developed evenly, the use of



Quizizz has the potential to limit itself to simple technical functions and not be fully utilized as an interactive learning tool that supports student engagement, formative assessment, and real-time learning feedback. These findings suggest that the primary challenge for school principals lies not simply in introducing the application, but rather in ensuring teachers' professional readiness to integrate Quizizz into meaningful learning practices (Kurniawan et al., 2021; Nurhafifah et al., 2025).

The next obstacle relates to the limited facilities and infrastructure supporting digital learning in schools. Research shows that Quizizz utilization is still influenced by device availability, internet network stability, and student access to devices when learning requires digital interaction. In some situations, teachers must adapt their strategies for using Quizizz because not all students have the same access or because the school's internet connection is not always stable. These infrastructure barriers demonstrate that the implementation of digital learning media at the elementary school level is highly dependent on the readiness of the school ecosystem, not just the readiness of individual teachers. In educational management theory, the success of learning innovation is influenced by the adequacy of organizational inputs, including resources, facilities, and technical support that enable the program to run consistently. If devices and networks are inadequate, media like Quizizz run the risk of being used incidentally and not integrated into learning routines. For school principals, this situation presents a managerial challenge because digital learning transformation must be accompanied by planning for facility procurement, resource management, and the selection of realistic implementation strategies tailored to school conditions. Therefore, infrastructure barriers cannot be viewed as merely technical issues, but rather as part of institutional challenges that need to be addressed through adaptive and solution-oriented school leadership (Lubis, 2022; Mustaqim et al., 2026).

Selain kendala kompetensi dan infrastruktur, hasil penelitian juga menunjukkan adanya hambatan pada aspek budaya sekolah, khususnya dalam membangun konsistensi penggunaan media digital sebagai bagian dari praktik pembelajaran sehari-hari. Pemanfaatan Quizizz di sekolah dasar masih berpotensi dipahami sebagai inovasi tambahan, bukan sebagai komponen integral dari strategi pembelajaran. Pada kondisi tertentu, guru lebih nyaman kembali pada pola pembelajaran konvensional karena dianggap lebih familiar, lebih cepat dipersiapkan, atau lebih mudah dikendalikan dalam kelas. Hambatan budaya ini menunjukkan bahwa inovasi digital tidak cukup hanya didukung oleh fasilitas dan pelatihan, tetapi memerlukan perubahan pola pikir kolektif di lingkungan sekolah. Secara teoretis, budaya sekolah memengaruhi cara guru menerima, menafsirkan, dan menjalankan perubahan. Sekolah dengan budaya kolaboratif dan terbuka terhadap pembaruan cenderung lebih mudah mengadopsi media digital, sedangkan sekolah yang masih berorientasi pada rutinitas tradisional akan lebih lambat beradaptasi. Dalam konteks

ini, kepala sekolah menghadapi tantangan untuk menumbuhkan keyakinan bersama bahwa penggunaan Quizizz bukan sekadar variasi, melainkan bagian dari upaya meningkatkan mutu pembelajaran dan keterlibatan siswa. Temuan penelitian memperlihatkan bahwa hambatan budaya sekolah sering kali lebih kompleks daripada hambatan teknis karena berkaitan dengan kebiasaan, persepsi, dan tingkat penerimaan warga sekolah terhadap perubahan pembelajaran digital (Nurhafifah et al., 2025; Puspita et al., 2025).

To overcome these obstacles, the principal of SD Negeri 1 Wonosari implemented a number of strategic efforts aimed at strengthening teacher capacity and developing a school environment that supports digital learning. One prominent effort was providing teachers with gradual mentoring in using Quizizz, through informal discussions, sharing best practices, and providing simple technical guidance relevant to classroom needs. The principal also encouraged teachers with greater technological expertise to become learning partners for other teachers, eliminating the need for external training. These efforts demonstrate the principal's efforts to build more flexible and contextual internal learning mechanisms. From the perspective of teacher professional development theory, this strategy is effective because it allows teachers to learn from real-world experiences, receive direct support from colleagues, and apply new knowledge to their learning needs. Furthermore, the principal attempted to adapt Quizizz's use to school conditions by gradually utilizing available facilities, selectively scheduling digital media use, and conducting academic supervision to ensure that Quizizz's use remains aligned with learning objectives. With these steps, the principal not only reactively responded to obstacles but also laid the foundation for the sustainable growth of digital learning innovation in the elementary school environment (Sunaryati et al., 2024; Rizkullah et al., 2025).

Overall, the research results indicate that barriers to Quizizz utilization at SD Negeri 1 Wonosari encompass three main aspects: disparities in teacher digital competency, limited supporting facilities, and a lack of a strong school culture that is fully adaptive to digital learning innovation. To address these challenges, the principal took steps through mentoring teachers, strengthening collaboration between teachers, adapting media usage strategies to school conditions, and providing academic supervision that supports learning innovation. Theoretical analysis confirms that the successful use of Quizizz is not solely determined by the availability of the application but is strongly influenced by the principal's leadership in managing change, fostering teacher professionalism, and creating a school environment conducive to digital

transformation. Thus, the principal's role in addressing barriers to Quizizz use is multidimensional, encompassing managerial, pedagogical, and cultural functions. These findings show that optimizing interactive media in elementary schools requires leadership that is not only visionary but also capable of understanding real-world obstacles and transforming them into opportunities to strengthen the quality of technology-based learning (Kurniawan et al., 2021; Lubis, 2022; Mustaqim et al., 2026).

## CONCLUSION

Based on the research results, it can be concluded that the principal plays a very strategic role in encouraging the use of Quizizz as an interactive media at SD Negeri 1 Wonosari through instructional leadership, managerial leadership, and school culture development. This role is evident in the principal's strategy of developing a digital learning vision, motivating teachers to innovate, directing academic supervision on the use of interactive media, and creating a collaborative culture among teachers. Furthermore, the principal's support is also manifested through policies that provide space for learning innovation, facilitate teacher competency improvement, mentorship in the use of Quizizz, and strengthening the school environment that supports digital transformation. On the other hand, the use of Quizizz still faces several obstacles such as uneven distribution of teachers' digital competencies, limited internet facilities and networks, and the incomplete formation of a school culture that is adaptive to the use of digital media. To overcome these obstacles, the principal undertakes various efforts such as gradual coaching, academic supervision, strengthening collaboration among teachers, and adapting strategies for using Quizizz to school conditions. Thus, the success of utilizing Quizizz as an interactive learning media in elementary schools depends not only on the teachers' ability to use the application, but is also largely determined by the principal's leadership in driving, facilitating, and managing technology-based learning changes in a directed and sustainable manner...

## REFERENCES

- Aminah, S. (2020). Pengembangan kompetensi guru dalam pemanfaatan media pembelajaran digital di sekolah dasar. *Jurnal Pendidikan Dasar*, 11(2), 145–156.
- Angga, A., & Iskandar, S. (2022). Kepemimpinan kepala sekolah dalam meningkatkan mutu pembelajaran di sekolah dasar. *Jurnal Basicedu*, 6(3), 4027–4036.
- Bhuiyan, M. A., Rahman, M. M., & Islam, M. S. (2021). School leadership in digital learning transformation: Teachers' readiness and principal support. *International*

- Journal of Educational Management, 35(7), 1458–1472.
- Firdaus, M., & Sutarsih, C. (2020). Supervisi akademik kepala sekolah dalam meningkatkan kualitas pembelajaran guru sekolah dasar. *Jurnal Administrasi Pendidikan*, 27(2), 115–126.
- Hidayatullah, M., & Haifaturrahmah, H. (2025). Kepemimpinan kepala sekolah dalam mendorong inovasi pembelajaran berbasis teknologi di sekolah dasar. *Jurnal Cakrawala Pendas*, 11(1), 55–67.
- Hizam, N. A., Alias, N., & Mohamad, M. (2021). Principal leadership and teachers' readiness in digital transformation of education. *International Journal of Instruction*, 14(3), 907–924.
- Kadarsih, I., Marsidin, S., Sabandi, A., & Febriani, E. A. (2020). Peran dan tugas kepemimpinan kepala sekolah di sekolah dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 2(2), 194–201.
- Kasmawati. (2020). Komunitas belajar guru dalam penguatan kompetensi digital pembelajaran di sekolah dasar. *Jurnal Pendidikan Guru Sekolah Dasar*, 5(2), 88–97.
- Kurniawan, D., Fitriani, Y., & Wahyuni, S. (2021). Literasi digital guru sekolah dasar dalam pemanfaatan media pembelajaran berbasis aplikasi. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(2), 1456–1468.
- Lidiawati, K., & Fauzi, A. (2025). Budaya kolaboratif guru dalam mendukung inovasi pembelajaran digital di sekolah dasar. *Jurnal Pendidikan Dasar Nusantara*, 10(1), 33–45.
- Listyoningrum, R., Mulyani, S., & Fajriyah, K. (2024). Efektivitas Quizizz sebagai media pembelajaran interaktif untuk meningkatkan motivasi dan hasil belajar siswa sekolah dasar. *Jurnal Basicedu*, 8(1), 112–123.
- Lubis, M. A. (2022). Infrastruktur digital sekolah dan tantangan implementasi pembelajaran berbasis teknologi di sekolah dasar. *Jurnal Manajemen Pendidikan*, 14(2), 201–213.
- Marhawati, B. (2020). Supervisi akademik kepala sekolah dalam meningkatkan inovasi pembelajaran guru di sekolah dasar. *Jurnal Pendidikan Indonesia*, 9(3), 421–430.
- Mediatati, N., & Jati, H. (2022). Dukungan kepala sekolah terhadap inovasi pembelajaran guru sekolah dasar pada era digital. *Jurnal Basicedu*, 6(5), 8432–8441.
- Muslim, M. (2021). Kepemimpinan kepala sekolah dalam pengembangan

- pembelajaran berbasis digital di sekolah dasar. *Jurnal Administrasi Pendidikan*, 28(1), 45–57.
- Mustaqim, A., Suryani, N., & Wibowo, U. B. (2026). Supervisi akademik dan optimalisasi pembelajaran digital di sekolah dasar. *Jurnal Pendidikan Dasar Indonesia*, 11(1), 1–14.
- Nasution, A. K. P., & Nasution, M. K. M. (2020). Penggunaan Quizizz sebagai media pembelajaran berbasis game dalam meningkatkan hasil belajar siswa. *Jurnal Pendidikan dan Pembelajaran Dasar*, 7(2), 95–104.
- Niswah, F. (2020). Kebijakan kepala sekolah dalam mendukung inovasi pembelajaran di sekolah dasar. *Jurnal Manajemen Pendidikan Islam*, 5(1), 67–78.
- Nurhafifah, S., Wibowo, A., & Lestari, D. (2025). Hambatan implementasi media pembelajaran digital di sekolah dasar: Tinjauan kompetensi guru dan budaya sekolah. *Jurnal Cakrawala Pendidikan Dasar*, 9(2), 144–156.
- Posangi, J. (2020). Supervisi akademik kepala sekolah sebagai strategi peningkatan profesionalisme guru sekolah dasar. *Jurnal Ilmu Pendidikan*, 26(1), 34–43.
- Purnomo, E., Sari, D. P., & Hidayat, T. (2025). Budaya kolaborasi guru dan transformasi digital pembelajaran di sekolah dasar. *Jurnal Pendidikan Dasar dan Pembelajaran*, 15(1), 73–86.
- Puspita, R., Ananda, F., & Siregar, N. (2025). Budaya sekolah dan resistensi terhadap inovasi pembelajaran digital pada jenjang sekolah dasar. *Jurnal Manajemen Pendidikan Dasar*, 3(1), 20–31.
- Rizkullah, M., Hasanah, U., & Putri, A. (2025). Kepemimpinan kepala sekolah dalam penguatan transformasi digital pembelajaran di sekolah dasar. *Jurnal Basicedu*, 9(1), 211–223.
- Safitri, L., Handayani, T., & Kurnia, A. (2020). Kolaborasi guru dalam meningkatkan inovasi pembelajaran di sekolah dasar. *Jurnal Pendidikan Dasar Indonesia*, 4(2), 99–108.
- Saputra, R., Wulandari, F., & Hadi, S. (2021). Kepemimpinan instruksional kepala sekolah dalam mendorong inovasi pembelajaran di sekolah dasar. *Jurnal Manajemen Pendidikan*, 13(3), 221–233.
- Subadri, S., Ningsih, W., & Maulana, A. (2025). Sekolah sebagai organisasi pembelajar dalam mendukung inovasi pembelajaran digital. *Jurnal Pendidikan dan Kebudayaan*, 30(1), 56–69.
- Sunaryati, T., Fadhilah, N., & Kusuma, R. (2024). Pemanfaatan Quizizz dalam meningkatkan keterlibatan siswa sekolah dasar pada pembelajaran interaktif.

Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini, 8(2), 987–999.

Ummah BK, N., Suyitno, S., & Haryati, T. (2025). Transformasi digital sekolah dasar melalui kepemimpinan kepala sekolah yang adaptif. *Jurnal Pendidikan Dasar*, 16(1), 41–53.