

Implementation Strategies of Digital-Based Supervision to Improve The Quality of Education

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Abstract: This study investigates the implementation strategies of digital-based supervision to improve the quality of education at SMP Negeri 2 Bireuen, Aceh Province, using a qualitative research approach. Data were collected through in-depth interviews, observations, and document analysis related to the implementation of digital supervision in schools. The findings indicate that the application of digital-based supervision has positively impacted the quality of education at SMP Negeri 2 Bireuen. The use of technology in supervision has enabled education supervisors to gather data more quickly and accurately, facilitate more timely feedback to teachers, and enhance transparency and accountability in the evaluation process. This has encouraged teachers to innovate in their teaching approaches, contributing to improved student learning outcomes. The implications of this study suggest that the implementation of digital-based supervision can serve as an effective model for other schools in efforts to enhance education quality. However, adequate training and education for educators and supervisors are necessary to maximize the benefits of this supervisory technology. Additionally, attention must be paid to data security and privacy aspects to ensure safe and ethical use. Thus, the implementation strategies of digital-based supervision have the potential to serve as a tool for improving education quality in the future.

Keywords: Educational Supervision, Digital Supervision, Education Quality

INTRODUCTION

Education is one of the essential aspects of a country's development. High-quality education can positively impact the growth of individuals and society as a whole (Manasikana, 2018). Education at SMP Negeri 2 Bireuen, Aceh Province, exhibits unique dynamics due to its location in a region known for cultural diversity and a strong commitment to education. Lhokseumawe City, a former vital industrial area, retains societal characteristics heavily influenced by Acehnese cultural heritage and strong Islamic values. This creates distinct challenges in integrating modern technology with local wisdom.

SMP Negeri 2 Bireuen stands out as a leading school with great potential for implementing digital-based supervision. This school is recognized not only for its academic achievements but also for its efforts to bridge local traditions with modern educational innovations. Located in the heart of

Lhokseumawe, the school represents the dynamic education landscape of a developing region, though it still faces technological infrastructure challenges and the need for educator training in digital technology utilization.

To achieve optimal educational quality, it is necessary to supervise and evaluate the learning processes conducted by teachers. Educational supervision is one method used to enhance education quality (Wahib, 2021). Supervision is carried out by supervisors tasked with overseeing and providing feedback to teachers. In the digital era, digital-based supervision or e-supervision has become an efficient and effective alternative (Muslimin, 2023). E-supervision allows supervisors to monitor and provide feedback online.

By utilizing digital technology, supervision can be conducted more flexibly and cover a broader range of teachers. Additionally, e-supervision enables supervisors to track teachers' progress in real-time and provide precise guidance. It also facilitates collaboration between supervisors and teachers (Asmarani, 2021). Through digital platforms, supervisors can offer advice and recommendations to teachers, share relevant resources, and provide learning materials. This enhances the quality of the teaching process and enriches teachers' teaching experiences.

During the COVID-19 pandemic, the implementation of digital-based supervision became even more critical (Azhar, 2021). With physical restrictions and distance learning in place, digital-based supervision emerged as a solution to monitor and improve learning quality. Teachers received online feedback and made necessary adjustments accordingly.

The advent of technology in the Smart Society 5.0 era has brought significant changes to various aspects of life, including education. This concept emphasizes leveraging modern technology with humans as the primary component in controlling technological advancements. Educational technology revolution is marked by the digitization and automation of processes with cyber-physical and manufacturing collaboration (Hamidah, 2019).

School principals play a pivotal role in developing and enhancing educational quality at the school level (Latifah, 2022). They are responsible for ensuring the smooth implementation of educational activities and teaching-learning processes. As developers of education and teaching at schools, principals are tasked with fulfilling responsibilities as outlined in the National Education Ministerial Regulation No. 13 of 2007 on school principal standards, including competence in supervision (Rafid, 2019).

School principals, as academic supervisors, are obligated to assist teachers in becoming professional educators to improve the teaching-learning process quality. Principals also act as educational consultants who consistently support teachers in enhancing education quality. Effective supervision conducted by principals aims to improve the quality of teaching-learning processes and outcomes, ensuring the achievement of educational goals.

Effective supervision involves observing, assessing, and guiding teachers to perform their duties and functions optimally (Tonta, 2019). Purwanto states that supervision entails all assistance from

school leaders aimed at developing teachers' leadership and other school personnel to achieve educational objectives (Apdila, 2021). Continuous supervisory programs are implemented using various approaches, models, and techniques to achieve professional educational staff.

Challenges in education supervision highlight the need for dynamic approaches aligned with educational advancements. These challenges influence societal expectations of schools and affect the quality of superior human resources. School leaders must ensure that all activities, including lesson preparation, instructional media creation, and teaching aids utilization, are well-coordinated.

The current supervisory model often relies on individual class visits, with principals observing teaching activities. However, this method may overlook specific aspects during supervision, necessitating alternative solutions. Collaborative supervision techniques based on digital technology, such as video recordings and online supervisory instruments, offer innovative models for improving teachers' basic teaching skills.

By fostering collaboration among principals and senior teachers and leveraging digital tools, schools can address technical and non-technical challenges, enhancing the learning process. Digital-based collaborative supervision, as an academic supervisory model, has the potential to improve teacher competencies and motivation, ultimately advancing education quality and meeting the needs of a dynamic educational environment.

METHOD

This research was conducted at SMP Negeri 2 Bireuen, located at Jl. Tun Abdul Jalil No.1, Hagu Selatan, Banda Sakti District, Lhokseumawe City, Aceh Province. This study employs a qualitative approach with a descriptive method. Straus and Corbin (Cresswell & Fisher, 1998) define qualitative research as a type of research that generates findings that cannot be achieved through statistical measures or other forms of quantification or measurement. This type of research can be used to study social life, history, behavior, and other related aspects.

The data collection technique used in this study is One-on-One interviews. According to John Creswell (Mushkani & Ono, 2021), One-on-One interviews involve a data collection process where the researcher asks questions to one participant at a time and records their responses. The individuals interviewed in this study include the school principal, vice principal, and several subject teachers. To test the validity of the data, the researcher applied triangulation. Triangulation is a technique for verifying the validity of data by using something external to the data for comparison or as a reference, as explained by Moleong (Asna et al., 2021). The triangulation methods used in this study include source triangulation and technique triangulation (Moon, 2019). Both are aimed at testing the validity of data related to leadership styles, where data collection and validation involve both subordinates and superiors, as well as checking the consistency between interview and observation results throughout the study.

RESULTS AND DISCUSSION

RESULTS

The results of this study show that the implementation of digital-based supervision at SMP Negeri 2 Bireuen has had a significant positive impact on efforts to improve the quality of education. Based on interviews with the school principal (KS01), teachers (GR02, GR03), and education supervisors (PG01), it was found that good communication among all parties is one of the main supporting factors for the success of digital academic supervision. KS01 explained, "We strive to ensure that everyone has space to discuss and provide input." This was supported by GR02, who stated, "Through this supervision, we not only receive evaluations, but also concrete solutions." Technology-based interaction allows supervision to take place more flexibly and in real time, enabling teachers to receive feedback immediately and improve their performance more quickly.

Observations at the school showed that digital supervision facilitates more structured dialogue. In one supervision session, the supervisor (PG01) used a dialogic approach by listening to the teachers' aspirations, providing empathetic feedback, and agreeing on corrective steps. This created a collaborative atmosphere that supported the improvement of teachers' competencies. GR03 added, "I feel supported in developing, especially when I receive specific input on how to manage the classroom and make learning more engaging." Classroom observations revealed that teachers participating in digital supervision demonstrated higher creativity in preparing teaching materials, such as using IT-based media and interactive teaching methods.

In addition, digital supervision also plays a crucial role in the professional development of teachers. KS01 emphasized that this academic supervision acts as a "mirror" for teachers to evaluate their own performance. GR02 stated, "This supervision encourages me to keep learning and trying new strategies." This supervision not only provides constructive criticism but also offers additional training that helps teachers implement more innovative teaching skills. Direct observation in the teachers' meeting room showed that consistent implementation of digital supervision fostered a collaborative learning environment, where teachers could share best practices and new ideas.

However, this study also found obstacles in the implementation of digital supervision. Time constraints became one of the challenges faced by the school principal and supervisors in scheduling supervision optimally. GR03 explained, "Sometimes, the limited time forces the supervision to be postponed or done quickly." Additionally, limited technological infrastructure posed a challenge on several occasions. GR02 added, "There are times when internet connectivity is unstable, so the digital supervision process is hindered." Nonetheless, the principal and supervisors have made efforts to overcome these obstacles through more flexible rescheduling and investment in equipment and connectivity.

The success of the digital-based supervision implementation at SMP Negeri 2 Bireuen is evident from several indicators. GR03 mentioned, "We have seen a major change in how teachers innovate in the classroom, both in the use of technology and teaching strategies." The supervisor (PG01) also noted

an increase in teachers' confidence in facing the challenges of modern teaching. Classroom observations showed that students were more engaged in learning, particularly with the application of more interactive and technology-based methods. This impact was further reinforced by real-time evaluations conducted through digital platforms, allowing for more accurate and targeted monitoring.

This study shows that the strategy of implementing digital-based supervision is capable of improving the quality of learning through the professional development of teachers, enhanced collaboration, and the optimization of technology. Strong leadership support and collective efforts to overcome operational obstacles are key to success in creating a more adaptive and innovative educational environment. KS01 concluded, "With digital supervision, we not only monitor but also empower teachers to continue developing and giving their best to the students."

DISCUSSION

Based on the research and data analysis conducted by the researcher at SMP Negeri 2 Bireuen, it can be explained that there are several activities carried out by the principal and supervisor at SMP Negeri 2 Bireuen in implementing a digital-based supervision strategy to improve the quality of education, including:

Need Assessment

Needs assessment is a way to determine whether there is a gap between reality and what is desired or to determine the feasibility of a situation, while needs are interpreted as the difference between the actual condition and the desired or expected condition (Sahnan, 2017). Thus, it can be understood that needs analysis is an activity to search, find, list, and record data needs in a supervisory activity in a school. Good academic supervision by the principal will result in teacher competency in facilitating good learning.

Furthermore, well-implemented learning will impact student achievement. Thus, student success in learning greatly depends on the teacher's ability to facilitate learning and the principal's competence in carrying out academic supervision. Based on interview results, the principal has reflected on the supervision carried out thus far, stating that the principal implements academic supervision tasks by applying direct individual supervision approaches, by visiting teachers who are on duty, observing their performance, and conducting assessments.

This individual supervision approach is not very effective in improving teacher competency in carrying out their duties, especially concerning their professional competence (Simbolon, 2018). Empirical studies conducted by the researcher on teachers at SMP Negeri 2 Bireuen indicate that teacher professional competence is still low, particularly in the area of developing teaching materials creatively.

The reflection on these findings indicates that factors causing low teacher competence are suspected to be due to internal and external factors. Internal factors that are suspected to affect teacher professional competence include: 1. Teachers do not understand teaching models and techniques for

developing teaching materials. 2. Teachers do not conduct material analysis before developing teaching materials. 3. Teacher motivation to perform professional duties has not been optimal. External factors suspected to contribute to low teacher professional competence are the supervision carried out by the principal, which is more evaluative in nature.

Ideally, supervision should be carried out collegially, without lecturing, in a partnership and mentoring manner, and conducted through open and flexible discussions and brainstorming to help teachers reflect on their performance in carrying out professional duties (Solehudin, 2020). One approach that emphasizes partnership or cooperation between the principal as an academic supervisor and the teacher as the supervised individual, which is more mentoring through open and flexible discussions and brainstorming, with clear objectives to help teachers develop into professionals through reflective activities, is the collaborative supervision approach.

Priority Identification

Identification comes from the word "identify," meaning to research or categorize, and identification implies the activity of searching, finding, listing, and recording unknown data regarding the program's target, which will serve as the basis for program planning. Data from the identification of the principal's supervision implementation shows that the monitoring and evaluation process has not been going well as expected. This is evident from the principal's supervision, which has not been effective. The source of supervision issues lies in the limited understanding of supervisory activities, both by the supervisor and the teachers being supervised (Wulogening, 2020).

Educational supervision is an essential process in maintaining and improving the quality of education at various levels, from schools to national levels (Purnomo, 2021). In this context, there are several priorities that need to be identified and emphasized to ensure the effectiveness of educational supervision.

Establishing Standards and Evaluation Criteria: An initial step in educational supervision is to establish clear and evidence-based standards and evaluation criteria. The main priority is ensuring that these standards reflect student needs, current educational developments, and global demands. These standards should measure academic achievement, social skills development, and other relevant aspects of education. With solid standards, educational supervision can focus on achieving educational goals that align with societal and national needs.

Improving Teacher Competency: A primary priority in educational supervision is ensuring that teachers possess adequate competencies to provide quality education. Supervision should focus on the professional development of teachers through training, guidance, and performance monitoring. This includes assessment and constructive feedback to help teachers continuously improve their teaching quality. Skilled and competent teachers are valuable assets in achieving educational goals.

Utilizing Technology and Innovation: Technological advancements have changed how education is delivered and monitored. Educational supervision must identify priorities in leveraging technology

and innovation to improve the efficiency and effectiveness of the education process. The use of digital platforms, data analytics, and technology-based learning tools can assist in monitoring and evaluating school, teacher, and student performance. This also allows for more inclusive and sustainable access to education.

Focus on Educational Equity and Justice: Justice in education is a critical priority. Educational supervision must ensure that quality education is available and accessible to all students, regardless of their social, economic, or cultural backgrounds. This includes monitoring practices that may potentially discriminate or limit access to education. Supervision should ensure that schools in more marginalized or high-risk areas receive special attention to promote equity in education.

To achieve better educational goals, identifying priorities in educational supervision is a crucial first step. By focusing on standards, teacher competencies, technology, and educational equity, supervision can become a powerful tool to improve the quality and accessibility of education worldwide.

Goal and Target Setting

Academic supervision aims to provide assistance in the form of coaching, guidance, and direction from the principal to the teachers in an effort to improve the quality of service and student achievement so that they can advance and excel (Susanti, 2022). With the improvement of teacher performance, the goal of academic supervision has been achieved. The goal of learning supervision is inseparable from the goal of educational supervision, which is to improve the quality of education. Regarding the goals of educational supervision, educational supervision in general aims to control and assess all components related to education (Adiyono, 2023). Thus, if this supervision is carried out well, the performance of all education components will improve, and the role and responsibility of the teacher as an educational worker will also increase.

Academic supervision focuses on the supervisor's observation of issues in academic activities, namely various things that take place in the learning environment when students are engaged in the learning process (Rasmita, 2019). The targets of academic supervision are as follows: a) Planning learning activities and/or guidance; b) Implementing learning activities/guidance; c) Assessing the learning/guidance process and results; d) Using assessment results to improve learning/guidance services; e) Providing timely, regular, and continuous feedback to students; f) Serving students who face learning difficulties; g) Providing tutoring to students; h) Creating a pleasant learning environment; i) Developing and utilizing learning aids and media; j) Utilizing learning resources; l) Developing effective and useful learning/guidance interactions (methods, strategies, techniques, models, and approaches); m) Conducting practical research for the improvement of learning; and n) Developing innovations in learning.

Supervision Implementation Strategy

Various efforts are made by the principal to improve the quality of learning. The principal strives to multiply efforts, maximize activities, including making decisions, formulating goals, making policies, arranging programs, and using resources to ensure the success of educational quality improvement. His ability and skills in determining to whom professional supervision in the form of supervision should be given make the assistance smooth and effective. Professional assistance must be provided as soon as possible to teachers who need supervision.

Supervision strategies that need to be considered are: a) Flexible policies that are made collectively through deliberation; b) A clear organizational structure with detailed task descriptions and responsibilities; c) Placing school personnel according to their competencies and capable of training and fostering the professionalism of each school personnel; d) Providing rewards for those who perform well to motivate performance; and e) Making the best use of feedback data/information as material for improvements. The principal's supervision competence can be seen from how to plan supervision programs, implement supervision for teachers using the correct approaches and techniques, and follow up on supervision results to improve teacher performance.

The principal plays a very important role in visionary leadership because he is the key player. According to Sagala, the principal's concept as a supervisor shows improvement in teaching at the school he leads. This improvement is evident after the supervisor intervenes by providing assistance to overcome teachers' difficulties in teaching (Sumarto, 2016). Therefore, the principal needs to understand learning programs and strategies so that they can assist teachers facing difficulties, such as in preparing their teaching programs and strategies. The principal plays a crucial role in facilitating the teaching and learning activities (KBM). Their role is not just about mastering leadership theories, but more than that, a principal must be able to implement their skills in applying these theories in practice.

Therefore, a principal should possess comprehensive educational knowledge. The principal's primary role as an educational leader is to create a teaching-learning situation where teachers can teach, and students can learn effectively. Lazwardi (2016) stated that principals have dual responsibilities: to carry out school administration, creating a good teaching-learning situation, and supervising to help teachers improve their teaching duties and guide the growth of students. Principals must be able to create a good teaching-learning situation (Sirojuddin, 2021). This means they must manage the "school plant," school-specific services, and educational facilities to ensure that teachers and students experience a satisfying work environment; manage teaching staff and students; develop a curriculum that meets children's needs; and manage educational records. All of this is expected so that they can advance the teaching programs at their schools.

Literally, strategy means a method or technique. In terms of etymology, strategy refers to a prepared way to achieve something desired. When related to an organization, strategy in etymology refers to a series of actions prepared by the organization to achieve optimal performance in reaching the organization's vision and objectives. Strategy is a set of work plans developed by the leader to achieve

the goals of the organization they lead. Strategy is the allocation of various actions and resources needed by the organization to achieve established goals and objectives.

From this definition, there are five key terms that cannot be separated from strategy and organization: first, strategy is used to achieve goals and objectives. The most important reason why an organization needs a strategy in applying all of its actions is to achieve the vision and objectives set. Strategy is a comprehensive concept about the actions needed for the success of an organization.

CONCLUSIONS AND SUGGESTIONS

CONCLUSION

This research shows that the implementation of digital-based supervision at SMP Negeri 2 Bireuen plays an important role in improving the quality of education through strengthening communication, developing teacher professionalism, and providing responsive leadership support. Digital-based supervision enables a more flexible and real-time evaluation process, provides specific feedback, and creates a collaborative work environment among teachers, principals, and supervisors. Digital technology also plays a role in opening up space for learning innovations and enhancing teacher skills. Despite challenges such as limited time and technology infrastructure, strategic efforts such as rescheduling and investing in technological devices have proven effective in overcoming these obstacles. These findings imply that digital-based supervision can be a relevant and adaptive strategy to support modern education, especially in regions with diverse educational dynamics such as Lhokseumawe. Therefore, this approach is worthy of becoming a model for the development of supervision systems in other schools that are focused on improving education quality.

SUGGESTIONS

Based on the findings of this study, several recommendations can be made. First, schools are advised to continue improving technological infrastructure such as digital devices and internet connectivity to optimally support digital-based supervision. Second, ongoing training for teachers and supervisors should focus on enhancing technological skills to maximize the potential of digital supervision. Third, local governments and policymakers are expected to develop policies that encourage the integration of digital supervision into the national education system, taking into account local contexts. Additionally, further research could be conducted to explore the impact of digital-based supervision on student learning outcomes and the sustainability of innovations in teaching and learning.

REFERENCES

- Sahnan, M. (2017). Urgensi perencanaan pendidikan di sekolah dasar. *Pelita Bangsa Pelestari Pancasila*, 12(2), 142-159.
- Manasikana, A., & Anggraeni, C. W. (2018). Pendidikan karakter dan mutu pendidikan indonesia. Seminar Nasional Pendidikan 2018.
- Wahib, A. (2021). Manajemen Evaluasi Program Supervisi Pendidikan Dalam Meningkatkan Mutu

- Pendidikan. *Auladuna: Jurnal Prodi Pendidikan Guru Madrasah Ibtidaiyah*, 3(1), 91-104.
- Lazwardi, D. (2016). Peran Kepala Sekolah Dalam Meningkatkan Profesionalisme Guru. *Al-Idarah: Jurnal Kependidikan Islam*, 6(2).
- Susanti, Y., Rahmawati, R., & Nuraini, I. A. (2022). Pelaksanaan Supervisi Akademik Kepala Madrasah Sebagai Upaya Peningkatan Kualitas Kinerja Guru di MAN 2 Ponorogo. *Jurnal Darussalam: Jurnal Pendidikan, Komunikasi dan Pemikiran Hukum Islam*, 14(1), 1-21.
- Hidayat, M. C., & Syam, A. R. (2020). Urgensitas perencanaan strategis dan pengelolaan sumber daya manusia madrasah era revolusi industri 4.0. *AL-ASASIYYA: Journal Of Basic Education*, 4(1), 1-13.
- Adiyono, A., Lesmana, A. R., Anggita, D., & Rahmani, R. (2023). Implementasi Supervisi Akademik dalam Meningkatkan Kualitas Pembelajaran di SMKN 4 Tanah Grogot. *Journal on Education*, 5(2), 3492-3499.
- Rasmita, D. (2019). Upaya Meningkatkan Kompetensi Guru Dalam Pelaksanaan Proses Pembelajaran Melalui Supervisi Akademik Di Sd Negeri 017 Pasir Emas. *Jurnal PAJAR (Pendidikan dan Pengajaran)*, 3(3), 560-569.
- Pramudito, J., Darmiyanti, A., & Saprialman, S. (2022). Kode Etik Komunikasi Kepala Sekolah Dalam Peningkatan Kinerja Guru di Satuan Pendidikan. *Jurnal Pendidikan dan Konseling (JPDK)*, 4(6), 12623-12629.
- Kusmiati, A., Sauri, S., & Helmawati, H. (2022). Manajemen supervisi kepala sekolah dalam meningkatkan profesionalisme guru. *Jurnal Pendidikan Indonesia*, 3(07), 672-682.
- Lumowa, F., Nayoan, H., & Pangemanan, S. E. (2021). Peran Pemerintah Daerah dalam Upaya Meningkatkan Kualitas Pendidikan Dasar pada Masa Pandemi di Desa Tondei I Kabupaten Minahasa Selatan. *GOVERNANCE*, 1(2).
- Apdila, M. N. (2021). Peran Kepala Madrasah Sebagai Supervisor dalam Peningkatan Kinerja Guru. *Chalim Journal of Teaching and Learning (CJoTL)*, 1(1), 73-84.
- Tonta, N., Siraj, A., & Yaumi, M. (2019). Pelaksanaan Supervisi Akademik Pengawas dalam Pembinaan Guru PAI pada Madrasah Aliyah Pondok Pesantren Nurul Falah. *Manajemen Pendidikan*, 14(1), 31-37.
- ASTUTI, A. (2019). Peran Kepala Sekolah Sebagai Supervisor Dalam Meningkatkan Mutu Pendidikan. *Adaara: Jurnal Manajemen Pendidikan Islam*, 5(1).
- Mardalena, M. (2019, March). Kepemimpinan Kepala Sekolah Dalam Menciptakan Sekolah Efektif. In *Prosiding Seminar Nasional Program Pascasarjana Universitas Pgris Palembang*.
- LATIFAH, N. (2022). Peran kepala sekolah dalam meningkatkan mutu pendidikan. *EDUCATOR: Jurnal Inovasi Tenaga Pendidik Dan Kependidikan*, 2(2), 175-183.
- Kartika, I., Firman, M., Margono, M., & Rohman, A. (2023). SCHOOL PRINCIPALS' RESPONSES AND CHALLENGES IN THE IMPLEMENTATION OF PERMENDIKBUDRISTEK NUMBER 40 OF 2021. *Indonesian Journal of Educational Development (IJED)*, 4(2), 230-237.
- Sirojuddin, A., Aprilianto, A., & Zahari, N. E. (2021). Peran Kepala Sekolah Sebagai Supervisor Pendidikan Dalam Meningkatkan Profesionalisme Guru. *Chalim Journal of Teaching and Learning (CJoTL)*, 1(2), 159-168.
- Hamidah, Q. R., Sejati, A. T. P., & Mujahidah, A. Z. (2019). The Development of Small and Medium Businesses (MSMEs) Based on Tecnology to Deal with The Industrial Revolution 4.0. In *Social, Humanities, and Educational Studies (SHEs): Conference Series* (Vol. 2, No. 1, pp. 345-349).
- Sumarto, S. (2016). Tugas profesional kepala madrasah sebagai supervisor dalam meningkatkan mutu pendidikan. *Ri'ayah: Jurnal Sosial dan Keagamaan*, 1(02), 168-187.
- Asmarani, A., Purwanti, S., & Latief, S. (2021). Pemanfaatan teknologi dalam pelaksanaan supervisi pembelajaran di SMP. *Edutainment*, 9(2), 83-91.
- Azhar, R. S., Nurman, J. W., & Azhar, R. P. (2021). Upaya Optimalisasi Mutu Pembelajaran Dengan Adaptasi Strategi Supervisi Akademik Ditengah Pandemi. *Jurnal Isema: Islamic Educational Management*, 6(2), 159-170.
- Simbolon, M. (2018). Penerapan Pendekatan Supervisi Kolaboratif untuk Meningkatkan Kompetensi Profesional Guru di SD Negeri 10 Lumban Suhisui Kecamatan Pangururan Kabupaten Samosir. *Informasi dan Teknologi Ilmiah (INTI)*, 6(1), 108-113.
- Purnomo, S. A., & Badriyah, Z. (2021). Tren Baru Perilaku Supervisi Pendidikan: Fenomena Pengawasan di Sekolah. *Jurnal Alasma: Media Informasi Dan Komunikasi Ilmiah*, 3(1), 96-107.

- Muslimin, I. (2023). Meningkatkan Profesionalisme Guru Dengan Model, Pendekatan dan Teknik Supervisi Pendidikan di Era Society 5.0. *An-Nahdliyah: Jurnal Manajemen Pendidikan Islam*, 2(1), 69-95.
- Wulogening, H. I., & Timan, A. (2020). Implementasi Total Quality Management (TQM) dalam sistem manajemen perencanaan kepala sekolah. *Jurnal Akuntabilitas Manajemen Pendidikan*, 8(2), 137-146.
- Solehudin, U. (2020). Supervisi Kolaboratif dapat Meningkatkan Kompetensi Profesional Guru. *Jurnal Ilmiah Pendidikan Profesi Guru*, 3(2), 364-374.