

The Role of Academic Supervision in Enhancing Teachers' Pedagogical Competence: A Case Study of South Aceh

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ARTICLE INFO

Keywords: Academic Supervision, Pedagogical Competence, Teacher Development, Rural Education, Supervision Challenges

Received : 01 December 2024

Revised : 20 December 2024

Accepted: 21 January 2025

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ABSTRACT

This study investigates the role of academic supervision in enhancing teachers' pedagogical competence in South Aceh, focusing on the supervision practices of school principals and their impact on teacher development. Using a qualitative case study approach, data were collected through interviews, observations, and document analysis from six participants, including school principals, vice principals, and senior teachers. The findings reveal that effective academic supervision contributes to significant improvements in teaching practices, particularly when feedback and follow-up mechanisms are well-structured. Key themes emerging from the data include supervision planning, pedagogical improvement, challenges in supervision, and follow-up practices. However, the study also highlights several challenges, including time constraints, lack of resources, and insufficient training for principals, which hinder the effectiveness of supervision. Additionally, technological limitations in rural schools exacerbate these challenges. Despite these barriers, participants emphasized the importance of continuous supervision and personalized feedback in driving teacher improvement. This research contributes to the understanding of academic supervision in resource-limited settings, offering practical recommendations for improving the supervision process. These include enhanced training for school leaders, better resource allocation, and the integration of technology into the supervision process. Future research should explore long-term impacts of supervision on teaching outcomes and strategies for overcoming the identified challenges in broader educational contexts.

INTRODUCTION

In the evolving landscape of education, the role of teachers has become increasingly pivotal in shaping the academic success and holistic development of students (Darling-Hammond, 2017). Central to this role is the professional competence of teachers, which directly influences the quality of education provided. Pedagogical competence, in particular, plays a crucial role in fostering effective learning environments and enhancing students' academic performance (Shulman, 1987). The emphasis on improving teachers' pedagogical abilities has led to a growing interest in understanding how school leaders, specifically principals, can contribute to this process through academic supervision (Glickman et al., 2017). Academic supervision serves as a structured mechanism by which school leaders guide, support, and enhance the instructional practices of teachers, thereby fostering continuous professional development (Sergiovanni & Starratt, 2007).

Despite the widespread acknowledgment of the importance of academic supervision, its implementation remains inconsistent across various educational contexts, particularly in regions with diverse socio-economic and educational challenges (Zepeda, 2016). In Aceh Selatan, Indonesia, the performance of teachers, particularly in key areas such as numeracy, has seen a decline, raising concerns about the effectiveness of existing pedagogical practices and the support systems available to teachers. The 2023 educational report indicated a significant drop in numeracy scores in secondary schools within the region, signaling an urgent need for intervention to improve teaching quality and student outcomes (Ministry of Education and Culture, Indonesia, 2023). This decline highlights a potential gap in the professional competence of teachers and underscores the need for more robust supervisory practices from school leaders.

While many studies have examined the general effectiveness of academic supervision (e.g., Marzano et al., 2011), there is a noticeable gap in understanding how academic supervision specifically influences the development of pedagogical competence among teachers in rural or under-resourced educational settings. The unique challenges faced by teachers in such environments, including limited access to professional development resources and insufficient infrastructure, call for a more focused investigation (Azano & Stewart, 2016). Moreover, the role of school principals as supervisors is often underexplored, despite their critical function in overseeing and supporting instructional improvement (Hallinger & Wang, 2015). This study aims to fill this gap by investigating the implementation of academic supervision by school principals in South Aceh and its impact on the pedagogical competence of teachers.

The objective of this research is to provide an in-depth analysis of how principals conduct academic supervision and to what extent these practices contribute to enhancing teachers' pedagogical competence. The study seeks to explore key elements of supervision, including planning, execution, follow-up, and the identification of barriers to effective supervision (Glickman et al., 2017). By employing a qualitative case study approach (Yin, 2018), the research will gather data through interviews, observations, and documentation to gain insights into the practical aspects of supervision and its outcomes.

This research not only contributes to the theoretical understanding of academic supervision but also provides practical recommendations for improving educational leadership practices in similar contexts. Enhancing the capacity of school leaders to conduct meaningful supervision could lead to significant improvements in teaching quality, ultimately benefiting students (Robinson et al., 2008). The findings from this study are expected to have broad implications for educational policy and leadership development, particularly in regions facing challenges in teacher competence and student performance.

LITERATURE REVIEW

Academic supervision has long been recognized as a crucial component of educational leadership, aimed at improving the quality of teaching and learning within schools. According to Glickman et al. (2021), academic supervision involves a series of activities designed to help teachers improve their instructional skills and achieve educational goals. Supervision, particularly academic supervision, focuses on providing guidance, support, and professional development to enhance teaching practices. This framework is grounded in the belief that effective supervision fosters continuous improvement in teachers' pedagogical methods, leading to better student outcomes. The role of school principals as supervisors is thus integral in driving school-wide instructional quality.

Pedagogical competence is another fundamental concept closely linked to academic supervision. Defined as the ability to manage the learning process effectively, pedagogical competence encompasses various aspects, including lesson planning, classroom management, and the ability to use educational technologies and assessment strategies to foster learning (Bahri, 2018). The Indonesian Ministry of Education, through the *Permendiknas* (2007), has emphasized that teachers must develop competencies in four core areas: pedagogical, professional, social, and personal domains. Pedagogical competence, in particular, directly affects how teachers engage with students, design instructional activities, and assess learning outcomes. It has been argued that the development of these competencies cannot be left to individual initiative alone but requires institutional support through structured supervision and professional development programs (Sergiovanni, 2022).

The relationship between academic supervision and the improvement of teachers' pedagogical competence has been the subject of numerous studies. For example, Hasan (2022) found that effective supervision practices, which include observation, feedback, and follow-up, significantly enhance teachers' instructional capabilities. The study highlighted that when principals adopt a cooperative and humanistic approach to supervision, teachers feel more supported and are more likely to implement feedback into their teaching practices. Similarly, Marhawati (2020) revealed that academic supervision in elementary schools, when implemented systematically, leads to improved teacher performance, especially when combined with professional development initiatives such as workshops and peer coaching.

However, challenges in the implementation of academic supervision have been noted, particularly in under-resourced educational contexts. Nabila (2021)

found that during the COVID-19 pandemic, the role of principals as supervisors became even more critical, as teachers struggled to adapt to new teaching modalities such as online learning. This study highlighted the limitations in teachers' technological competence and the lack of training provided to support their transition to virtual instruction. Furthermore, Nabila's research suggested that many school principals themselves lacked adequate training in conducting effective supervision, which further hampered the overall improvement of teaching practices. These findings underline the need for ongoing training for both school leaders and teachers to adapt to changing educational landscapes.

In the context of rural or less-developed regions, such as South Aceh, the challenges related to academic supervision are more pronounced. According to the 2023 Educational Report, the decline in numeracy performance in South Aceh's secondary schools is a reflection of inadequate pedagogical practices, which may be attributed to insufficient academic supervision (Raporpendidikan.kemendikbud.go.id, 2023). This suggests a gap in the implementation of supervision practices that can directly support teachers in improving their pedagogical methods. Moreover, Arifin (2022) found that in some regions, school principals are often overwhelmed by administrative duties, leaving them with limited time and resources to engage in meaningful supervision activities. This often results in a superficial approach to supervision, which fails to provide teachers with the necessary feedback and support to improve their teaching practices.

Previous studies have also highlighted the importance of follow-up actions after supervisory sessions. Daresh (2022) emphasized that supervision should not end with feedback alone but must include concrete follow-up actions, such as additional training sessions, collaborative planning, and the provision of resources to address the identified weaknesses. This ensures that the improvements suggested during supervision are actually implemented in the classroom, leading to long-term enhancements in teaching quality. Moreover, the study by Isbianti (2021) noted that follow-up activities such as reflective discussions, peer mentoring, and professional learning communities are essential in ensuring the sustainability of the improvements initiated by academic supervision.

Despite the documented benefits of academic supervision, several studies have pointed to the need for better infrastructure and resources to support supervision in schools. For instance, Hasan (2022) identified the lack of time, insufficient resources, and inadequate training for both teachers and supervisors as major barriers to effective supervision in many Indonesian schools. These constraints are particularly pronounced in rural areas, where schools often struggle with limited funding and access to professional development opportunities. The role of school leaders in overcoming these challenges is critical, as they must prioritize supervision and professional development despite these limitations.

METHODOLOGY

This section outlines the research design, participants, data collection methods, and analysis procedures used in this study on the impact of academic supervision on improving teachers' pedagogical competence in South Aceh. A qualitative case study approach was employed to gain in-depth insights into the practices and perceptions of school principals and teachers regarding academic supervision.

Research Design

This study utilized a qualitative research design, specifically a case study approach, to explore the role of academic supervision in improving teachers' pedagogical competence. Qualitative research is well-suited for studies aiming to understand complex social processes, such as the supervisory relationships between school leaders and teachers (Creswell, 2018). The case study approach was chosen to allow an in-depth exploration of the phenomenon within its real-life context, focusing on three senior high schools in South Aceh: SMA Negeri 1 Labuhanhaji Barat, SMA Negeri 1 Labuhanhaji, and SMA Negeri Unggul Darussalam.

Participants

The participants in this study were selected through purposive sampling, ensuring that only individuals with direct involvement in or experience with academic supervision were included. The study involved six key participants: two school principals, two vice principals responsible for curriculum, and two senior teachers. These individuals were selected because they play central roles in either conducting or receiving academic supervision and could provide valuable insights into its implementation and impact. All participants had been involved in academic supervision programs for at least two years, which ensured they had substantial experience to draw upon during interviews and discussions.

Data Collection Methods

Data were collected using three main techniques: interviews, observations, and document analysis. These methods were chosen to capture both the subjective experiences of participants and objective evidence of supervisory practices.

1. Interviews: Semi-structured interviews were conducted with all participants to gather detailed, nuanced information about their experiences with academic supervision. Interview questions were designed to explore the planning, execution, and follow-up stages of supervision, as well as the perceived impact on teachers' pedagogical competence. Each interview lasted approximately 60 to 90 minutes and was audio-recorded with the participants' consent.
2. Observations: Non-participant observations were conducted during academic supervision sessions at the selected schools. The researcher observed how principals and vice principals conducted supervision, focusing on their interactions with teachers, the feedback provided, and any collaborative elements. These observations provided first-hand data

on the dynamics of supervision in practice and helped validate the information gathered through interviews.

3. Document Analysis: Relevant documents, including supervision reports, teachers' lesson plans, and follow-up action plans, were analyzed to gain additional insights into the structure and effectiveness of academic supervision. These documents provided objective data on the content and outcomes of supervision, supplementing the qualitative data from interviews and observations.

Data Analysis

The data collected from interviews, observations, and documents were analyzed using thematic analysis. Thematic analysis was chosen because it allows for the identification of patterns and themes within qualitative data, providing a systematic way to interpret complex information (Braun & Clarke, 2006). The analysis followed these steps:

1. Familiarization: The researcher transcribed all interview recordings verbatim and reviewed the transcripts, observation notes, and documents multiple times to become familiar with the data.
2. Coding: Initial coding was performed by identifying key phrases, concepts, and ideas related to academic supervision, such as planning, teacher development, challenges in supervision, and follow-up actions. Codes were assigned to these pieces of data to facilitate organization.
3. Theme Development: After coding, similar codes were grouped into categories and further refined into overarching themes. Themes such as "supervision planning," "pedagogical improvement," "challenges in supervision," and "follow-up practices" emerged from the data.
4. Reviewing Themes: The identified themes were reviewed against the data to ensure they accurately reflected the participants' experiences and the research objectives. Any discrepancies were addressed by revisiting the data and refining the themes.
5. Defining Themes: Finally, each theme was defined in terms of its contribution to the overall understanding of how academic supervision impacts teachers' pedagogical competence. The relationships between themes were also explored to provide a cohesive narrative for the research findings.

Trustworthiness

To ensure the trustworthiness of the findings, several strategies were employed, including triangulation, member checking, and thick description. Triangulation was achieved by using multiple data sources (interviews, observations, and document analysis) to corroborate the findings. Member checking involved sharing the preliminary findings with the participants to verify the accuracy of the interpretations. Thick description was used to provide detailed, context-rich accounts of the supervisory processes, allowing readers to assess the transferability of the findings to other settings.

Ethical Considerations

Ethical approval for the study was obtained from the relevant university ethics committee. All participants were provided with an informed consent form explaining the purpose of the research, their rights, and the confidentiality of their responses. Participation was voluntary, and participants were informed of their right to withdraw from the study at any time without any consequences. Data confidentiality was maintained throughout the study, with pseudonyms used to protect the identities of the participants and schools.

RESEARCH RESULT

This section presents the findings of the study based on the data collected from interviews, observations, and document analysis. The data analysis revealed several themes related to the role of academic supervision in improving teachers' pedagogical competence. Key themes included supervision planning, pedagogical improvement, challenges in supervision, and follow-up practices. Additionally, challenges faced by school principals and teachers in implementing effective supervision were identified and analyzed.

Emergence of Themes from Interview Data

From the interviews with school principals, vice principals, and senior teachers, four main themes emerged, each reflecting different aspects of the supervision process. The frequency of these themes is shown in Table 1:

Table 1. Frequency of Themes Emerging from Interview Data

Themes	Occurrences (No. of participants)	Percentage of Total (%)
Supervision Planning	4	25
Pedagogical Improvement	5	31.25
Challenges in Supervision	3	18.75
Follow-up Practices	5	31.25

The most frequently discussed themes were pedagogical improvement and follow-up practices, each mentioned by five participants (31.25%). Supervision planning was identified by four participants (25%), while challenges in supervision emerged in three interviews (18.75%). This distribution suggests that while most participants are focused on improving pedagogical practices, they also emphasize the importance of planning and follow-up in the supervision process.

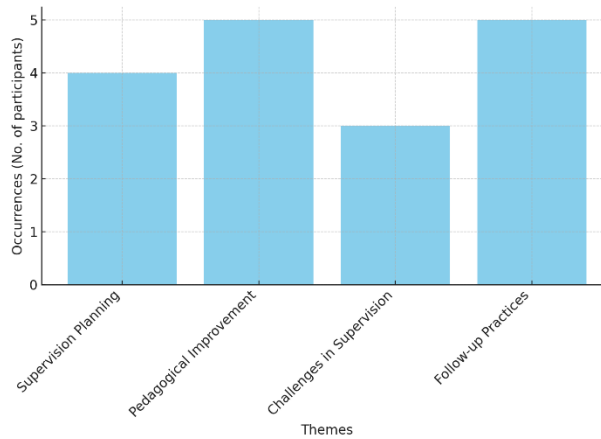


Figure 1. Frequency of Themes Emerging form Interview Process

Based on figure 1, presents the key themes discussed by participants during interviews regarding academic supervision. The themes are distributed based on the number of participants who mentioned them, providing insights into the areas most commonly highlighted during the study.

Pedagogical Improvement and Follow-up Practices were the most frequently discussed themes, with five participants each emphasizing these aspects. This suggests that the participants considered improving teaching methods and ensuring proper follow-up after supervision sessions as crucial components of effective academic supervision. These findings highlight the importance of continuous feedback and support in fostering teacher growth and enhancing pedagogical practices.

Supervision Planning, identified by four participants, underscores the need for structured and goal-oriented preparation in the supervision process. Although planning is critical for ensuring that supervision is focused and systematic, it was mentioned slightly less frequently than follow-up practices and pedagogical improvement. This could indicate that while supervision planning is recognized as important, it may not always be implemented consistently across schools.

Challenges in Supervision, mentioned by three participants, was the least frequently discussed theme. While this suggests that obstacles exist in the supervision process, such as time constraints or resource limitations, they may not be as universally experienced as the more positive aspects of supervision. The lower frequency could imply that some schools have found ways to mitigate these challenges, or that participants were more focused on the benefits of supervision.

In summary, the data indicates that participants place a strong emphasis on the practical outcomes of supervision, particularly the improvement of teaching practices and the importance of follow-up activities. Although challenges in supervision were noted, the overall focus on positive themes reflects the potential for academic supervision to significantly enhance pedagogical competence when well-structured and followed through.

Common Challenges in Supervision

Participants identified several challenges that hinder the effectiveness of academic supervision. The most prominent challenges are outlined in Table 2:

Table 2. Common Challenges Identified by Participants

Challenges	No. of Participants	Percentage of Total (%)
Time Constraints	4	50
Lack of Resources	3	37.5
Insufficient Training for Principals	3	37.5
Technological Limitations	2	25

The most frequently mentioned challenge was time constraints, with 50% of participants indicating that principals and teachers often lack sufficient time to conduct or participate in thorough supervision. Lack of resources and insufficient training for principals were also highlighted as significant barriers, each identified by 37.5% of participants. Finally, technological limitations were noted by 25% of the participants, particularly in relation to implementing digital tools in supervision.

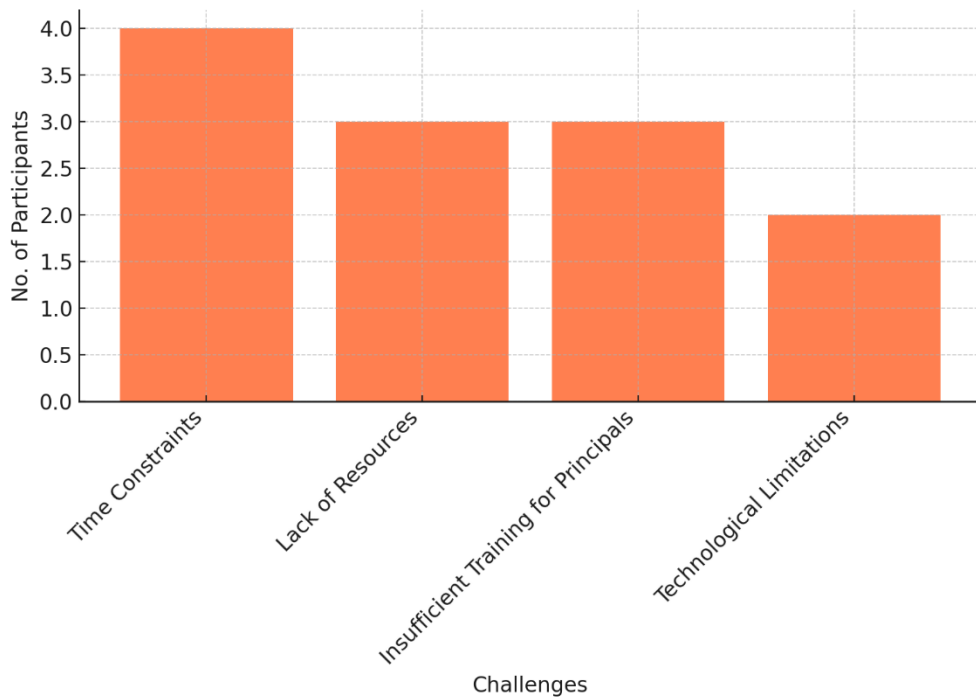


Figure 2. Common Challenges Identified By Participants

Based on figure 2, The chart highlights the main challenges in academic supervision as identified by participants. Time Constraints emerged as the most frequently cited challenge, with four participants (50%) indicating that limited time was a significant barrier to effective supervision. This suggests that principals and teachers are struggling to find sufficient time to engage in thorough supervision activities amidst their other responsibilities.

Lack of Resources was mentioned by three participants (37.5%), indicating that schools may be facing shortages in materials, financial support, or infrastructure necessary to carry out successful supervision. This lack of resources could hinder both the supervision process and the professional development of teachers.

Insufficient Training for Principals, also highlighted by three participants (37.5%), points to a need for further development in the skills and knowledge of school leaders regarding academic supervision. Without adequate training, principals may not be able to provide the high-quality supervision needed to improve teachers' pedagogical competence.

Lastly, Technological Limitations were mentioned by two participants (25%). This challenge likely relates to difficulties in integrating technology into the supervision process or in facilitating remote or digital-based supervision, which may be particularly relevant in under-resourced or rural schools.

In summary, the figure 2 indicates that time constraints and lack of resources are the most common challenges to effective academic supervision, with insufficient training and technological barriers also playing significant roles. These challenges suggest a need for better resource allocation, time management, and training to improve the supervision process in educational settings.

Supervision Planning and Execution

The data revealed that effective supervision requires comprehensive planning. Principals who involved teachers in the planning process and conducted regular supervisory meetings reported higher engagement from teachers in their professional development. However, some principals expressed concerns about balancing their managerial duties with supervisory tasks, leading to less frequent supervisory sessions.

Pedagogical Improvement

Teachers consistently reported improvements in their instructional strategies as a result of regular feedback from supervisors. The participants emphasized that detailed feedback and collaborative discussions during follow-up meetings were crucial in helping them refine their teaching methods. Teachers also expressed a desire for more personalized supervision that focused on their individual needs and areas for growth.

Follow-up Practices

Follow-up practices were identified as a critical component of academic supervision. Participants agreed that supervision should not end after the initial feedback but should include actionable follow-up plans. Schools that implemented structured follow-up processes, such as setting goals for improvement and organizing peer mentoring sessions, observed more sustained improvements in teaching practices.

DISCUSSION

The findings from this study provide valuable insights into the role of academic supervision in enhancing teachers' pedagogical competence in South Aceh. Key themes such as supervision planning, pedagogical improvement, challenges in supervision, and follow-up practices emerged as crucial components in the supervision process. This section discusses these findings in relation to existing literature, highlighting both consistencies and areas for further exploration.

Supervision Planning and Its Importance

Supervision planning, identified by most participants as a vital component of effective academic supervision, aligns with the literature that underscores the importance of structured supervision in achieving educational goals (Glickman, Gordon, & Ross-Gordon, 2021). Effective planning ensures that the supervision process is organized, goal-oriented, and tailored to the needs of teachers, fostering a more systematic approach to professional development. However, the slightly lower frequency of mentions compared to follow-up practices and pedagogical improvement suggests that while planning is recognized as important, it may not always be implemented consistently. This finding echoes the work of Marhawati (2020), who noted that inconsistent planning can undermine the effectiveness of academic supervision, particularly in under-resourced schools.

Pedagogical Improvement as a Central Outcome

Pedagogical improvement emerged as the most frequently discussed theme, reflecting participants' emphasis on enhancing teaching practices through supervision. This finding is consistent with prior research, which suggests that academic supervision can significantly impact teachers' instructional methods, leading to improved student outcomes (Hasan, 2022). The participants in this study highlighted the value of feedback and collaborative discussions as critical components of their professional growth. Such practices are in line with Glickman's (2021) assertion that developmental supervision, which focuses on collaborative and supportive interactions, is key to improving teacher performance. The emphasis on personalized supervision aligns with Daresh (2022), who argued that individualized feedback is crucial for addressing specific pedagogical weaknesses.

Challenges in Supervision: Time and Resource Constraints

Despite the positive outcomes associated with academic supervision, this study identified several challenges that hinder its effectiveness. Time constraints were the most commonly mentioned challenge, with participants reporting difficulty in balancing supervision activities with other responsibilities. This finding is consistent with Arifin's (2022) study, which found that many school principals face significant time pressures that limit their ability to conduct thorough supervision. The lack of resources, identified by several participants, also poses a significant barrier. Schools often struggle with insufficient financial and material support, which limits the ability of supervisors to provide

meaningful feedback and follow-up. These findings align with those of Nabila (2021), who noted that resource limitations are a common challenge in the implementation of academic supervision, particularly in rural or under-resourced schools.

Insufficient Training for Principals

Another notable challenge was the insufficient training for principals in conducting effective supervision. Several participants indicated that while principals play a critical role in the supervision process, they often lack the necessary skills and knowledge to provide high-quality feedback and support to teachers. This is consistent with findings from Hasan (2022), who noted that many principals are inadequately trained in supervision, which affects their ability to guide teachers effectively. This suggests a need for more comprehensive training programs for school leaders, focusing on supervisory skills and strategies for supporting teacher development. Such training would help address the gap between the expectations placed on principals and their current supervisory capabilities.

The Importance of Follow-up Practices

Follow-up practices were also highlighted as essential for ensuring that the feedback provided during supervision is implemented effectively. Participants stressed that supervision should not be a one-time event but should include continuous support and monitoring to facilitate long-term improvement. This finding is supported by previous research, which emphasizes the importance of follow-up activities, such as post-observation conferences and goal-setting sessions, in ensuring that supervision leads to sustained improvements in teaching practices (Daresh, 2022). Without proper follow-up, the potential benefits of supervision may not be fully realized, as teachers may struggle to implement feedback without ongoing support.

Technological Limitations

Technological limitations were identified by some participants as a challenge, particularly in rural schools with limited access to modern tools and resources. This is consistent with findings by Nabila (2021), who noted that schools in remote areas often lack the infrastructure necessary to integrate technology into supervision processes. As education increasingly relies on digital tools, especially in the wake of the COVID-19 pandemic, schools must address these technological gaps to ensure that supervision can be carried out effectively, regardless of location.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study explored the role of academic supervision in improving teachers' pedagogical competence in South Aceh, focusing on key themes such as supervision planning, pedagogical improvement, challenges in supervision, and follow-up practices. The findings indicate that while academic supervision is

generally effective in fostering better teaching practices, it is hindered by several significant challenges.

Pedagogical improvement emerged as the most prominent outcome of academic supervision, with participants highlighting the importance of feedback and collaborative discussions in enhancing their instructional methods. However, effective supervision is often constrained by time limitations, lack of resources, and insufficient training for principals, which affect both the quality and frequency of supervision sessions. Despite these challenges, follow-up practices were recognized as essential in ensuring that supervision leads to sustained improvements in teaching quality.

The study underscores the critical role of school principals in facilitating academic supervision. However, the effectiveness of their supervision is limited by their training and available resources, suggesting that without the necessary support, supervision efforts may not fully translate into improved pedagogical outcomes. Moreover, technological limitations were highlighted as barriers in rural schools, particularly in integrating digital tools into the supervision process.

Recommendations

Enhanced Training for School Leaders: School principals need comprehensive training programs focused on effective supervision techniques. These programs should aim to enhance principals' abilities in observing teaching practices, providing constructive feedback, and designing meaningful follow-up actions. Leadership development should also be included to equip principals with the skills necessary to balance supervision with their administrative duties, ensuring they can manage their time and resources effectively to prioritize supervision.

Addressing Time Constraints: To address the time management challenges faced by both teachers and principals, schools should allocate specific time slots within their schedules for supervision and professional development. This will ensure supervision activities are not sidelined by other responsibilities. Additionally, schools could adopt more efficient models of supervision, such as peer observation or group-based supervision, to reduce the workload on individual principals and make the process more manageable.

Resource Allocation: Policy-makers and school administrators must improve resource allocation to support academic supervision. Schools require access to adequate tools, infrastructure, and financial support to ensure high-quality supervision. This includes providing up-to-date educational materials, technology, and other essential resources to both teachers and supervisors, creating an environment conducive to effective supervision and continuous teacher development.

Strengthening Follow-up Mechanisms: Schools should institutionalize follow-up practices by implementing structured post-supervision meetings, where supervisors and teachers can review progress, set specific goals, and offer additional support as needed. In addition, peer mentoring and collaborative professional development sessions can serve as valuable follow-up mechanisms,

allowing teachers to continue improving their pedagogical practices after the initial supervision.

Leveraging Technology in Supervision: To address technological limitations, particularly in rural schools, there is a need for investment in digital tools and infrastructure that enable online supervision and remote professional development. Schools could form partnerships with local governments or educational NGOs to acquire the necessary technological support, ensuring that supervision processes are modernized and accessible even in resource-constrained settings.

Future Research Directions: Future research should explore the long-term effects of supervision on pedagogical improvement and develop strategies to mitigate the challenges highlighted in this study, particularly in rural and resource-limited environments. Additional studies could investigate innovative supervision models, such as those utilizing technology or peer collaboration, to enhance teacher development and improve supervision effectiveness across diverse educational contexts.

ADVANCED RESEARCH

While this study provides valuable insights into the role of academic supervision in enhancing teachers' pedagogical competence, it is not without limitations. First, the study was conducted in a specific region, South Aceh, with a limited number of schools and participants. As a result, the findings may not be generalizable to other regions or educational contexts, particularly in urban or more resource-rich settings. Future research could expand the geographical scope to include a broader range of schools from different areas, enabling a more comprehensive understanding of how academic supervision functions in diverse contexts.

Second, the study relied primarily on qualitative data, which, while rich in detail, may introduce biases due to the subjective nature of interviews and observations. To address this limitation, future studies could employ mixed methods, combining qualitative insights with quantitative data, such as teacher performance metrics or student outcomes, to provide a more robust and objective assessment of the impact of academic supervision.

Third, this study focused primarily on the perspectives of school principals and senior teachers. It would be beneficial for future research to incorporate the views of a wider variety of stakeholders, including students, other school staff, and policymakers. Understanding the experiences and perceptions of these groups could offer a more holistic view of the effects of academic supervision and the various factors influencing its success.

Lastly, this study highlighted several challenges, such as time constraints and resource limitations, but did not explore specific solutions or strategies for overcoming these barriers in depth. Future research should investigate the effectiveness of different strategies, such as technology-enhanced supervision models, peer supervision, or community-based professional development, in overcoming these obstacles. By focusing on practical, scalable solutions, future

studies could contribute significantly to improving the implementation of academic supervision in both rural and urban schools.

ACKNOWLEDGMENT

The authors would like to express their sincere gratitude to all those who supported and contributed to the completion of this research. First and foremost, the authors would like to thank their academic advisor, for their guidance, encouragement, and invaluable feedback throughout this study. Their expertise and insights have been essential in shaping this research.

The authors are also deeply grateful to the school principals, teachers, and staff in South Aceh who participated in this study. Their willingness to share their experiences and insights made this research possible, and their dedication to improving education is truly inspiring.

Additionally, the authors would like to acknowledge the support of their families and friends, whose encouragement and patience sustained them throughout this research journey. Finally, thanks are extended to [Institution/University Name] for providing the resources and environment necessary to conduct this research.

To all those who contributed, directly or indirectly, your support is greatly appreciated, and the authors are deeply thankful.

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