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## Academic Coaching Based Supervision for Strengthening Teachers' Professional Competence in the Era of Educational Transformation: A Case Study in Primary School

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### ABSTRACT

Educational transformation requires teachers to continuously develop professional competence to create adaptive, innovative, and student centered learning. Academic supervision should therefore function not only as an evaluation mechanism but also as a professional development strategy. However, conventional supervision often emphasizes administrative assessment rather than sustainable teacher improvement. This study aims to analyze the implementation of coaching-based academic supervision and its contribution to strengthening teachers' professional competence at SD Negeri Balerejo. This study employed a qualitative approach with a case study design. Data were collected through interviews, classroom observations, and documentation involving the principal and teachers. Data were analyzed through data condensation, data display, and conclusion drawing, with credibility ensured through source and technique triangulation. The novelty of this study lies in explaining how coaching based academic supervision integrates instructional leadership, reflective dialogue, and continuous mentoring within a primary school context. The findings reveal that coaching based academic supervision improves teachers' competence in developing instructional materials, implementing student centered learning strategies, utilizing educational technology, and conducting professional reflection. This study contributes to the development of academic supervision models by positioning supervision as a collaborative professional learning process rather than merely an evaluation activity.

## 1. Introduction

Educational transformation in the 21st century has significantly changed school management and learning practices. The advancement of digital technology, curriculum reforms, and increasing demands for creativity, collaboration, communication, and critical thinking require schools to continuously develop their

organizational capacity. Schools are no longer merely educational institutions but have become learning organizations that must strengthen the professionalism of their human resources. In this context, teachers play a central role in educational transformation because learning quality is strongly influenced by teachers' professional competence.

Teachers' professional competence includes mastery of subject matter, development of instructional materials, implementation of innovative learning strategies, utilization of educational technology, and continuous professional development. Professional teachers are expected not only to conduct effective teaching but also to reflect on and improve their instructional practices. One important factor supporting the improvement of teacher competence is academic supervision conducted by school principals. Sanoto and Prastania (2022) found that school principal supervision has a positive and significant relationship with teachers' professional and pedagogical competencies in elementary schools.

Academic supervision is a strategic function of educational management aimed at improving learning quality through systematic professional guidance. It involves planning, classroom observation, reflection, feedback, and follow up activities rather than merely evaluating teachers' performance. Subekti (2023) explained that academic supervision is a professional development process conducted by school principals through planning, implementation, and evaluation of learning activities. In modern educational perspectives, academic supervision has shifted from an administrative control oriented approach toward a developmental approach that positions teachers as professional partners. Devisa et al. (2026) emphasized that developmental based academic supervision is built through collaborative relationships between supervisors and teachers to improve instructional quality.

Developmental-based academic supervision has become increasingly relevant in the era of educational transformation because it integrates professional mentoring, reflective practices, technology utilization, and continuous professional development. Ma'ruf and Sonia (2025) stated that this supervision model emphasizes two way communication, collaboration, and reflection to enhance teacher competence. One important strategy within this approach is coaching and mentoring, which enables teachers to evaluate their teaching practices, receive constructive feedback, and develop professional capacity. Silva et al. (2025) demonstrated that coaching and mentoring-based academic supervision can improve teacher motivation, professional reflection, and instructional quality through collaborative support processes.

The implementation of developmental-based academic supervision involves several essential dimensions, including supervision planning, implementation, follow-up, and coaching and mentoring approaches. Effective planning ensures that supervision programs are aligned with teachers' needs, while implementation involves classroom observation, professional discussion, and feedback. Harlena (2025) found that coaching-based academic supervision improves learning quality through systematic reflection, classroom observation, and follow up processes. Furthermore, Suchyadi et al. (2022) highlighted that supervision without follow up

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tends to become a formal administrative activity with limited impact on teacher professional improvement. The effectiveness of academic supervision is closely related to the role of school principals as instructional leaders. School principals are responsible for developing a professional culture that encourages collaboration, reflection, and instructional innovation. Saman and Hasanah (2024) stated that the role of school principals as academic supervisors positively influences teacher competence, particularly in instructional development, technology integration, communication, and professional collaboration.

Previous studies have confirmed the contribution of academic supervision to teacher professional development. Aminah et al. (2022) explained that academic supervision is an effective strategy for improving teacher professional competence because it provides opportunities for guidance and instructional improvement. Similarly, Akbar et al. (2024) found that school principal academic supervision contributes to improving elementary school teachers' performance. Meyriza (2024) also revealed that effective academic supervision enhances teacher professionalism, while Fauziah et al. (2020) demonstrated that collaborative supervision strengthens teachers' involvement in professional competency development.

Despite its strategic role, the implementation of academic supervision in schools still faces various challenges. Supervision activities are often dominated by administrative evaluation rather than sustainable professional development. Limited time availability among school principals, inadequate understanding of coaching approaches, and weak follow up mechanisms remain obstacles to effective supervision implementation. Arifin (2022) emphasized that the success of academic supervision is highly determined by the quality of follow up activities, particularly through reflection and professional discussions aimed at improving teaching practices.

These challenges indicate a gap between the ideal concept of developmental based academic supervision and its practical implementation in schools. Previous studies have mostly examined academic supervision in general or investigated the relationship between supervision and teacher competence using quantitative approaches. However, studies exploring how developmental based academic supervision is implemented, how coaching and mentoring strategies are practiced, and how supervision contributes to teacher professional competence development in elementary schools within the context of educational transformation remain limited.

This research gap highlights the importance of investigating developmental-based academic supervision as a strategy for improving teacher professionalism. This study focuses not only on supervision as a formal school program but also on understanding the processes, strategies, and experiences of school principals and teachers in implementing supervision as a professional development mechanism. This condition was also identified at SD Negeri Balerejo, Tlogomulyo District, Temanggung Regency. Preliminary observations showed that although academic supervision had been implemented by the school principal, its impact on improving teacher professional competence was not yet optimal. Some teachers continued to

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apply conventional teaching methods and had limited utilization of educational technology. Furthermore, supervision activities remained largely focused on administrative compliance rather than mentoring processes that encouraged reflection and professional growth.

Therefore, strengthening developmental-based academic supervision is necessary to support teacher professional development in elementary schools. Through coaching, mentoring, reflection, and professional collaboration, supervision can assist teachers in improving their ability to design, implement, and evaluate learning effectively. Accordingly, this study aims to analyze the implementation of developmental-based academic supervision and its contribution to improving teachers' professional competence in the era of educational transformation at SD Negeri Balerejo. The findings are expected to contribute theoretically to educational management studies, particularly academic supervision, and provide practical implications for school principals in designing effective and sustainable teacher development strategies.

## **2. Methodology**

### ***Research Design***

This study employed a qualitative approach with a case study design. The qualitative approach was selected because this study aimed to gain an in depth understanding of the implementation of developmental based academic supervision in improving teachers' professional competence in the era of educational transformation at SD Negeri Balerejo. The case study design enabled the researcher to explore the processes, strategies, experiences, and meanings constructed by school principals and teachers regarding academic supervision practices within the authentic context of the school environment. The case study approach was considered appropriate because the research focused on understanding a contemporary educational phenomenon within its real-life setting, particularly how academic supervision was planned, implemented, followed up, and perceived by the participants as a mechanism for teacher professional development.

### ***Research Site and Participants***

This research was conducted at SD Negeri Balerejo, Tlogomulyo District, Temanggung Regency, Indonesia. The research site was selected purposively based on the consideration that the school had implemented academic supervision as part of its efforts to improve teacher professionalism. However, the implementation of supervision still required strengthening to become a continuous developmental process that could effectively respond to the demands of educational transformation.

The research participants were selected using a purposive sampling technique. Participants were chosen based on their direct involvement and relevant understanding of the implementation of academic supervision. The participants

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consisted of one school principal and eight teachers at SD Negeri Balerejo. The school principal was selected as the key informant because of their strategic role in planning, implementing, evaluating, and following up academic supervision programs. Meanwhile, teachers were selected as research participants because they directly experienced professional guidance through academic supervision and were involved in the process of developing professional competence through instructional practices.

### ***Data Collection Techniques***

Data were collected through three techniques: observation, in-depth interviews, and documentation. Observation was conducted to obtain empirical information regarding the implementation of developmental-based academic supervision, professional interactions between the school principal and teachers, and classroom learning practices related to improving teachers' professional competence. The observation process focused on supervision activities, mentoring practices, teacher involvement, and instructional implementation. In depth interviews were conducted with the school principal and teachers to explore their experiences and perspectives regarding academic supervision practices. The interviews focused on several aspects, including supervision planning, supervision implementation, forms of professional guidance provided, the application of coaching and mentoring approaches, follow-up activities, and the contribution of supervision to improving teachers' professional competence. Documentation was used to support and strengthen the research findings. The documents analyzed included academic supervision programs, supervision instruments, teachers' instructional documents, supervision follow up records, and other relevant school documents related to teacher professional development.

The selection of participants was based on specific inclusion criteria to ensure that the participants had sufficient experience and information related to the phenomenon under study. The inclusion criteria for the school principal included: (1) actively serving as the principal of SD Negeri Balerejo during the research period, (2) having direct responsibility for designing and implementing academic supervision programs, and (3) being involved in teacher professional development activities. Meanwhile, the inclusion criteria for teachers included: (1) having worked at SD Negeri Balerejo for at least two years, (2) having experienced academic supervision conducted by the school principal, (3) being actively involved in instructional planning and classroom implementation, and (4) being willing to provide information regarding their experiences and perceptions of academic supervision practices. These criteria were applied to ensure that the selected participants could provide rich and relevant data regarding the implementation of developmental-based academic supervision.

### ***Research Instruments***

In qualitative research, the researcher functions as the primary instrument (*human instrument*) who is responsible for determining the research focus, collecting data, interpreting information, and drawing conclusions. The researcher was directly

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involved throughout the research process to understand the phenomenon being studied comprehensively. To support the data collection process, the researcher used additional instruments, including interview guidelines, observation sheets, and documentation analysis forms. These supporting instruments were developed based on the indicators of developmental-based academic supervision and teachers' professional competence, including supervision planning, implementation, coaching and mentoring practices, follow-up activities, and professional development outcomes.

### ***Data Analysis***

Data analysis was conducted using the interactive analysis model proposed by Miles, Huberman, and Saldaña, which consists of three interconnected stages: data condensation, data display, and conclusion drawing and verification. Data condensation involved selecting, focusing, simplifying, and organizing data obtained from interviews, observations, and documentation. The condensed data were then categorized into thematic patterns related to the research focus. Data display was conducted by presenting organized information in the form of descriptions and thematic interpretations to facilitate understanding of the research findings. The final stage involved drawing conclusions and verifying findings continuously throughout the research process. The analysis focused on several themes, including academic supervision planning, implementation of developmental based supervision, supervision follow up activities, coaching and mentoring approaches, and improvement of teachers' professional competence.

### ***Trustworthiness of Data***

The credibility of the research findings was ensured through source triangulation and technique triangulation. Source triangulation was conducted by comparing information obtained from different participants, particularly the school principal and teachers, to identify consistency and accuracy of the findings. Technique triangulation was conducted by comparing data obtained from different collection methods, including interviews, observations, and documentation. Continuous verification was carried out throughout the research process to ensure that the findings accurately represented the actual implementation of developmental-based academic supervision at SD Negeri Balerejo.

## **3. Results and Discussion**

### ***Data Categorization Process and Identification of Research Themes***

The analysis process began by organizing data obtained from interviews, observations, and documentation into systematic categories. Interview transcripts from the school principal and teachers were repeatedly reviewed to identify meaningful statements related to academic supervision practices and teacher professional development. Observation notes and documentary evidence were then compared with interview data to identify similarities, differences, and patterns.

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Through the data condensation process, several initial categories were identified, including supervision planning, classroom observation practices, reflective dialogue, feedback provision, mentoring activities, follow-up programs, and changes in teachers' professional competence. These categories were subsequently grouped into four main themes: (1) planning of developmental-based academic supervision, (2) implementation of academic supervision through coaching and mentoring, (3) follow up activities to strengthen teacher competence, and (4) the impact of supervision on teachers' professional competence. The themes were continuously verified through source and technique triangulation before being presented as research findings.

### ***Planning of Developmental Based Academic Supervision at SD Negeri Balerejo***

The findings of this study indicate that the implementation of developmental based academic supervision at SD Negeri Balerejo began with a systematic planning process conducted by the school principal. The supervision planning process considered teachers' professional development needs, learning conditions, and the demands of educational transformation, which require teachers to continuously develop innovative learning practices. The school principal developed an academic supervision program by establishing supervision objectives, determining implementation schedules, preparing supervision instruments, and identifying aspects of teacher competence that required improvement. The planning process was not merely oriented toward examining teachers' instructional administration but was designed as a foundation for continuous professional development and teacher guidance.

Interview data revealed that the school principal intentionally shifted the orientation of supervision from administrative evaluation toward professional development. The principal stated: *"In developing the supervision program, I do not only focus on the completeness of teachers' administrative documents, but also consider teachers' needs in improving learning quality. We direct supervision as a mentoring process so that teachers can improve and develop their teaching practices."* (SP, interview, April 10, 2026). This finding was strengthened by teacher testimony indicating that the planning stage helped teachers understand the developmental purpose of supervision. A teacher explained: *"Before supervision was conducted, the school principal explained the objectives of supervision and the aspects that would be observed. Therefore, we did not perceive supervision as an activity to find mistakes, but rather as guidance to improve our teaching practices."* (T1, interview, April 13, 2026). Based on the observation results, the school principal had prepared academic supervision documents containing supervision schedules, classroom observation instruments, and follow-up plans. These findings indicate that academic supervision at SD Negeri Balerejo had been designed as a structured developmental activity oriented toward strengthening teacher professionalism.

Observation results showed that before supervision activities were implemented, the principal conducted communication meetings with teachers to explain the objectives, procedures, and expected outcomes of supervision. In addition,

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documentation analysis confirmed the availability of academic supervision programs, supervision schedules, classroom observation instruments, and follow-up plans. These three sources of data indicate that academic supervision at SD Negeri Balerejo was systematically planned as a developmental activity rather than merely an evaluation mechanism

### ***Implementation of Developmental-Based Academic Supervision through Coaching and Mentoring***

The implementation of academic supervision at SD Negeri Balerejo was carried out through four sequential stages: (1) classroom observation, (2) reflective discussion, (3) feedback and professional guidance, and (4) follow up mentoring activities. The findings revealed that the school principal applied a developmental approach by positioning teachers as professional partners in improving learning quality.

The first stage involved classroom observation conducted by the school principal to identify teachers' instructional practices, classroom management strategies, use of learning media, and student engagement. Observation data showed that the principal used supervision instruments containing indicators of lesson planning, teaching implementation, and learning evaluation. The school principal explained: *"During classroom observation, I focus on understanding how teachers teach, how students respond, and what challenges appear during learning activities. The purpose is not to judge teachers but to understand what support they need."* (SP, interview, April 16, 2026). The observation findings were supported by documentation analysis showing that classroom observation sheets were completed for each supervision activity.

After classroom observation, the principal conducted reflective conversations with teachers. The discussion focused on teachers' experiences, learning challenges, and possible strategies for improvement. The school principal stated: *"After observing teachers' learning activities, I do not immediately provide an assessment, but rather engage in discussions. I ask teachers about their learning experiences, the challenges they encounter, and together we find solutions for improvement."* (SP, interview, April 16, 2026). Teachers confirmed that reflective discussions encouraged them to evaluate their own teaching practices. One teacher explained: *"The discussion after supervision helped me understand which parts of my teaching needed improvement. The principal encouraged me to think about solutions rather than simply telling me what was wrong."* (T3, interview, April 18, 2026).

The third stage involved providing constructive feedback through a coaching approach. The principal provided suggestions based on classroom observation findings while encouraging teachers to identify solutions independently. A teacher stated: *"After supervision, the school principal provides direct feedback. He does not blame us but provides guidance on how learning can become more interesting, for example through the use of learning media and variations in teaching methods."* (T3, interview, April 18, 2026). Observation results indicated that feedback sessions were conducted through professional dialogue rather than one-way

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instruction. The principal encouraged teachers to discuss instructional challenges and formulate improvement strategies.

In addition to coaching, the principal implemented mentoring activities by providing examples of instructional materials, sharing teaching experiences, and assisting teachers in developing learning resources. One teacher explained: *“The school principal often provides examples of instructional materials and gives suggestions based on his experience. This helps us gain a better understanding of more effective learning practices.”* (T5, interview, April 18, 2026). Documentation analysis supported this finding through the availability of revised instructional materials and teacher learning media developed after supervision activities. These findings demonstrate that coaching and mentoring practices at SD Negeri Balerejo were implemented through structured stages involving observation, reflection, feedback, and continuous assistance.

### ***Follow Up Activities of Academic Supervision in Improving Teachers' Professional Competence***

The findings indicate that follow-up activities represent an essential component of developmental-based academic supervision. After classroom observations and learning evaluations were conducted, the school principal provided recommendations for improvement and mentoring based on individual teachers' needs. The school principal explained: *“The results of supervision do not end only in written notes. After supervision, we conduct follow up activities according to teachers' needs. Some teachers require assistance in developing instructional materials, while others need support in strengthening their use of educational technology.”* (SP, interview, April 21, 2026).

Teacher interviews confirmed that follow-up activities influenced their professional improvement. A teacher stated: *“After receiving feedback from the school principal, I tried to improve my teaching methods, especially in using learning media. The mentoring after supervision helped me better understand the aspects that needed improvement.”* (T2, interview, April 23, 2026). Observation results showed that teachers began applying suggestions obtained during supervision, particularly in the use of varied learning strategies and instructional media. Documentary evidence also indicated the existence of follow-up records containing recommendations and improvement plans. Therefore, the consistency among interview, observation, and documentation data confirms that follow-up activities transformed supervision into a continuous professional development process. These findings demonstrate that supervision follow up activities transform academic supervision from merely an evaluation process into a continuous professional development mechanism for teachers.

### ***The Impact of Developmental-Based Academic Supervision on Teachers' Professional Competence***

The findings reveal that developmental-based academic supervision contributed to improving teachers' professional competence at SD Negeri Balerejo. The

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improvement was reflected in teachers' ability to develop instructional materials, implement learning strategies, utilize technology, and conduct reflection on their teaching practices. A teacher stated: *"Previously, learning activities mostly used simple methods, but after receiving guidance through supervision, we started trying to use digital media and learning methods that encourage students to become more active."* (T4, interview, April 24, 2026). The school principal also explained: *"The visible change is that teachers have become more open toward learning innovations. They have started discussing instructional problems and trying to find solutions together."* (SP, interview, April 25, 2026). Observation results supported these statements by showing that teachers began implementing more varied instructional approaches, using digital learning resources, and involving students more actively in classroom activities. Furthermore, analysis of teachers' instructional documents revealed improvements in lesson plans and learning media after supervision activities. These findings indicate that developmental-based academic supervision contributed to strengthening teachers' professional competence through continuous guidance and reflective practice.

### ***Research Findings Based on Data Triangulation***

The thematic analysis and triangulation process confirmed the consistency of findings obtained from interviews, observations, and documentary evidence. Each identified theme was systematically verified by comparing information from different data sources before conclusions were established. This process ensured that the findings accurately represented the implementation of developmental-based academic supervision at SD Negeri Balerejo. The comparison among interview data, observation results, and documentary evidence demonstrates the credibility and consistency of the research findings, which are presented in Table 1.

Table 1. Research Findings Based on Data Triangulation

| <b>Research Focus</b>                                | <b>Interview Findings</b>                                                                                                          | <b>Observation Findings</b>                                                                                      | <b>Documentary Evidence</b>                                                              | <b>Research Findings</b>                                                                                     |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Planning of developmental-based academic supervision | The school principal explained that supervision was designed based on teachers' needs and learning quality improvement.            | The school principal communicated the supervision program to teachers before implementation.                     | Supervision programs, supervision schedules, and supervision instruments were available. | Academic supervision was systematically planned with an orientation toward teacher professional development. |
| Implementation of academic supervision               | The school principal and teachers reported the existence of classroom observation, reflective discussions, and feedback provision. | Professional interactions between the school principal and teachers were observed during supervision activities. | Classroom observation instruments and supervision records were available.                | Supervision was implemented through a collaborative approach using coaching and mentoring strategies.        |

| Research Focus                                   | Interview Findings                                                                | Observation Findings                                                                                  | Documentary Evidence                                                 | Research Findings                                                                                    |
|--------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Supervision follow-up activities                 | Teachers reported receiving mentoring and improvement guidance after supervision. | The school principal conducted discussions and monitored teachers' professional development progress. | Supervision follow-up documents were available.                      | Follow-up activities strengthened the process of developing teachers' professional competence.       |
| Improvement of teachers' professional competence | Teachers reported improvements in learning strategies and technology utilization. | Teachers began implementing more varied instructional methods.                                        | Teachers' instructional materials and learning media were available. | Developmental-based academic supervision contributed to improving teachers' professional competence. |

This finding is consistent with Hallinger et al. (2020), who explained that instructional leadership has become one of the key factors in improving school quality because it focuses on teacher development, instructional supervision, and the establishment of an academic culture. Effective school principals do not merely provide directions but also develop support systems that enable teachers to continuously improve their instructional practices. Furthermore, Salovita and Pakarinen (2021) explained that school leadership has a strong relationship with the establishment of professional learning communities (PLCs), namely school cultures that encourage teachers to learn collaboratively, engage in reflection, and share instructional practices. This finding is also supported by Nadzifah et al. (2026), who found that principals' instructional leadership contributes to strengthening teachers' pedagogical competence through instructional supervision, professional development support, and the creation of a collaborative learning environment. Similarly, Soriyawati et al. (2026) emphasized that school leadership enhances teacher professional competence through continuous supervision, motivation, and professional development opportunities provided by principals. This perspective aligns with the findings of this study, which show that academic supervision at SD Negeri Balerejo was implemented through professional communication between the school principal and teachers, thereby creating a collaborative developmental environment.

However, unlike some previous studies that emphasize instructional leadership primarily as a structural leadership practice implemented through formal supervision systems, this study highlights the interpersonal dimension of leadership, particularly the quality of professional relationships between school principals and teachers. The difference may occur because SD Negeri Balerejo implements supervision within the context of a relatively small primary school environment, where direct interaction, personal communication, and continuous mentoring are more feasible compared to larger schools. Therefore, the effectiveness of supervision in this context is not only determined by the existence of supervision procedures but also by the principal's ability to build trust and

psychological safety among teachers. This finding expands previous perspectives by showing that developmental-based academic supervision functions as a bridge between instructional leadership and teacher professional learning. While Hallinger et al. (2020) emphasized the strategic role of principals in improving instruction, this study demonstrates the specific mechanism through which such leadership operates, namely through coaching conversations, reflective practices, and individualized mentoring.

Unlike traditional supervision models that tend to position teachers as objects of evaluation, developmental-based supervision positions teachers as subjects of professional growth. This finding reinforces the perspective of Nguyen et al. (2025), who argued that schools capable of developing professional learning communities are more effective in improving teaching practices because teachers are provided with opportunities to engage in collective learning and professional exchange. Nevertheless, the findings of this study differ from contexts where supervision remains dominated by compliance-based evaluation. This difference may be explained by the school leadership orientation at SD Negeri Balerejo, where supervision was intentionally designed as a developmental process rather than an accountability mechanism. In schools where supervisory practices are still strongly associated with inspection and judgment, teachers may demonstrate resistance and perceive supervision as a threat rather than professional support. Therefore, this study contributes to the understanding that developmental-based academic supervision can serve as a strategic model for elementary schools in responding to the challenges of educational transformation because it integrates supervisory functions, instructional leadership, and continuous teacher professional development.

The findings reveal that the effectiveness of academic supervision at SD Negeri Balerejo began with a systematic planning process. The school principal identified teachers' professional needs, developed supervision programs, prepared supervision instruments, and determined mentoring strategies that were appropriate to teachers' conditions. These findings indicate that effective supervision requires a needs-based supervision approach. This finding is consistent with Özdemir et al. (2024), who stated that effective school leadership is characterized by the ability of leaders to develop professional development systems that are aligned with the needs of the school organization. School principals need to understand teachers' conditions so that competency development programs are not generic but instead address specific instructional challenges faced by teachers.

Although this finding supports previous studies regarding the importance of needs-based professional development, this study provides a more contextual perspective by showing that supervision planning at the primary school level is closely connected with teachers' daily instructional realities. Previous research often examines supervision planning at the organizational level, whereas this study emphasizes how principals translate teachers' practical classroom challenges into supervision priorities. This difference highlights that effective supervision planning requires not only managerial competence but also contextual understanding of teachers' professional conditions.

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Similarly, Amzat et al. (2022) found that instructional leadership by school principals influences teacher professional development. School principals who actively provide academic support, mentoring, and guidance for teacher development are able to enhance teachers' engagement in professional learning processes. Within the context of educational transformation, supervision planning has become increasingly important because teachers face new demands, including the ability to utilize technology, implement student-centered learning approaches, and develop instructional innovations. This finding is consistent with Lailiyah et al. (2026), who demonstrated that effective clinical supervision contributes significantly to teachers' professional competence by improving instructional planning, teaching strategies, and classroom management. Their findings reinforce the argument that supervision planning should be based on teachers' actual instructional needs rather than merely fulfilling administrative requirements. Liu et al. (2024) emphasized that educational technology transformation requires professional development systems that enable teachers to engage in continuous and adaptive learning. This argument is reinforced by Shari and Yuliana (2026), who found that instructional leadership plays an important role in strengthening teachers' digital literacy competencies through professional training, mentoring, motivation, and instructional supervision. Their findings indicate that technology integration in education requires sustained leadership support rather than short-term training interventions. Within the context of educational transformation, supervision planning has become increasingly important because teachers face new demands, including the ability to utilize technology, implement student-centered learning approaches, and develop instructional innovations.

However, unlike technology focused professional development models that emphasize digital skill acquisition, the findings of this study indicate that technology improvement occurs as a consequence of broader developmental supervision processes. Teachers at SD Negeri Balerejo improved technology utilization not through isolated training programs but through continuous guidance integrated into supervision activities. This suggests that technology competence development may be more sustainable when embedded within school-based professional learning systems. Therefore, the findings of this study strengthen the argument that academic supervision planning is not merely an administrative responsibility of school principals but represents a strategic management approach for developing teachers' professional capacity

The findings of this study indicate that the implementation of academic supervision at SD Negeri Balerejo was conducted through coaching and mentoring approaches. The school principal not only conducted classroom observations but also provided opportunities for teachers to engage in reflection, discuss instructional challenges, and collaboratively identify solutions. This approach reflects the characteristics of modern supervision, which emphasizes professional relationships between supervisors and teachers. Within the coaching approach, the school principal acts as a facilitator who assists teachers in developing awareness of their own instructional practices through reflective questioning and constructive feedback. These findings are supported by Glover et al. (2023), who stated that instructional coaching represents one of the most effective forms of teacher professional

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development because it connects theoretical knowledge with authentic classroom practices. In line with this perspective, Harmita et al. (2026) found that the implementation of coaching and mentoring in clinical academic supervision improves teaching quality by strengthening reflective practices, professional dialogue, and continuous guidance between supervisors and teachers. This evidence further supports the argument that coaching-based supervision is more effective when implemented as a collaborative developmental process rather than a one-directional evaluation activity.

Although the findings are consistent with previous studies on instructional coaching, this study provides a different emphasis by demonstrating that coaching effectiveness depends strongly on the school context. In professional development programs conducted externally, coaching is often facilitated by trained coaches outside the school environment. In contrast, this study shows that school principals can perform coaching roles when they possess sufficient instructional knowledge and establish collaborative relationships with teachers. This finding suggests that internal school-based coaching may provide a more sustainable alternative, particularly for primary schools with limited access to external professional development resources.

Telford et al. (2021) further demonstrated that coaching activities conducted through classroom observation and feedback provision can improve the quality of teachers' instructional practices. Knight and Skrtic (2021), through a meta-analysis study, revealed that teacher coaching programs have a positive effect on improving teaching practices. The difference between this study and some previous coaching studies lies in the scope and intensity of implementation. While previous studies often examine structured coaching programs with predetermined cycles, this research demonstrates a naturally embedded coaching process within routine academic supervision. This indicates that coaching principles can be integrated into existing school management practices without requiring separate professional development structures.

The findings of this study reveal that supervision follow-up activities represent an essential component in improving the effectiveness of developmental based academic supervision. The school principal did not stop at classroom observation and performance evaluation but provided continuous mentoring based on teachers' specific needs. This finding is consistent with Graham et al. (2020), Sancar et al. (2021), and Sims et al. (2025), who emphasized that effective professional development requires sustainability, collaboration, practice-based learning, and organizational support.

However, this study differs from professional development models that rely primarily on short term workshops or training activities. The findings indicate that continuous follow up within the school environment provides stronger opportunities for teachers to apply new knowledge directly in classroom practices. This difference may be attributed to the proximity between supervision activities and teachers' instructional contexts, allowing feedback to be immediately implemented and evaluated. Therefore, this study confirms that follow up activities

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represent a key element connecting academic supervision with tangible improvements in teachers' professional competence.

The findings demonstrate that developmental-based academic supervision contributes to improving teachers' professional competence, particularly in developing instructional materials, implementing innovative teaching strategies, utilizing educational technology, and conducting professional reflection. These findings are consistent with Darling-Hammond and Hyler (2020), Muhonen et al. (2022), and Liu et al. (2024), who emphasized that effective teacher professional development should provide meaningful, collaborative, and sustainable learning experiences. Beyond confirming previous findings, this study highlights that competence improvement occurs through an integrated process involving supervision, coaching, reflection, and professional collaboration. This suggests that teacher competence development should not be viewed as an individual responsibility of teachers alone but as a collective responsibility supported by school leadership.

The practical implication of this study is that elementary schools with different characteristics can adopt developmental-based academic supervision by adjusting the implementation strategy to their organizational conditions. In larger schools, coaching-based supervision can be organized through grade-level or subject-based professional learning groups to maintain effective mentoring relationships. In smaller schools, school principals can directly implement coaching cycles through regular classroom observation and reflective dialogue. Successful implementation requires several supporting conditions, including principal instructional competence, teacher openness toward feedback, availability of supervision instruments, and a school culture that values collaboration rather than evaluation.

This study also has several limitations. First, the research was conducted in only one elementary school with a limited number of participants; therefore, the findings should be interpreted within the specific context of SD Negeri Balerejo and cannot be generalized statistically to all schools. Second, the study relied primarily on qualitative data obtained from interviews, observations, and documents, meaning that changes in teacher competence were explored based on participants' experiences and observed practices rather than measured through quantitative assessments. Third, the study focused on the perspective of school principals and teachers without including other stakeholders such as students, parents, or education supervisors. Future research may expand the scope by involving multiple schools, using longitudinal designs, or integrating quantitative measurements to examine the long-term effects of coaching-based academic supervision on teacher competence and student learning outcomes.

#### **4. Conclusion**

This study demonstrates that developmental-based academic supervision at SD Negeri Balerejo contributes to strengthening teachers' professional competence through a supervision process oriented toward professional development rather than

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administrative evaluation. The central finding of this study is that academic supervision becomes more effective when it is implemented as a continuous coaching-based process involving needs identification, classroom observation, reflective dialogue, constructive feedback, and follow-up mentoring. Through this approach, teachers become more actively involved in improving their instructional practices, particularly in developing learning materials, implementing innovative strategies, utilizing educational technology, and engaging in professional reflection.

This study highlights that the key contribution of developmental-based academic supervision lies in repositioning the role of school principals from supervisors who evaluate teacher performance into instructional leaders who facilitate teacher learning and professional growth. The findings extend the understanding of academic supervision by demonstrating that the effectiveness of supervision is strongly influenced by collaborative relationships, trust, and continuous professional support between principals and teachers.

Practically, this study suggests that elementary schools should develop supervision systems that integrate coaching principles into regular academic supervision practices. Rather than focusing only on compliance with administrative requirements, schools need to strengthen supervision as part of a professional learning culture that supports continuous teacher improvement. Future research should examine the effectiveness of coaching-based academic supervision models through broader empirical designs. Further studies may test the implementation of coaching-based supervision at different educational levels, such as junior secondary and senior secondary schools, to identify contextual differences in its application. In addition, mixed-methods research combining quantitative measures of teacher competence improvement with qualitative exploration of supervision experiences would provide more comprehensive evidence regarding the effectiveness and sustainability of coaching-based supervision models. Longitudinal studies are also recommended to investigate the long-term impact of developmental-based supervision on teacher professionalism and student learning outcomes.

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