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Principal Supervision Management: Exploring Interconnected Functions and Teacher Instructional Practices in a Vocational School

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ABSTRACT

Background: Principal supervision plays an essential role in supporting teachers' instructional practices; however, supervision is often implemented as fragmented administrative activities rather than an interconnected managerial process.
Aim: This study aims to explore how planning, organizing, actuating, and controlling (POAC) functions are interconnected within principal supervision management and how these processes relate to teachers' instructional practices in a vocational school.
Method: A qualitative case study was conducted at SMK Muhammadiyah 03 Weleri, involving four purposively selected participants comprising the principal, vice principal, and two teachers. Data were collected through semi-structured interviews, observations, and document analysis. Deductive and inductive coding were employed within an interactive analytical process, supported by source and methodological triangulation.
Results: The findings reveal that principal supervision management operates through four interconnected functions. Planning establishes supervision priorities based on institutional and teacher needs, while organizing distributes supervisory responsibilities among school personnel. Actuating involves program communication, classroom observation, and follow-up monitoring, whereas controlling connects evaluation and feedback with professional development and subsequent supervision planning. Participants reported changes in classroom management and engagement in professional learning, although these perceptions do not establish causal improvements in instructional performance.
Conclusion: Principal supervision management functions as a continuous managerial cycle linking planning, implementation, evaluation, and follow-up. These findings provide a context-specific understanding of interconnected supervision functions and their relevance to teacher professional development in vocational education.

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INTRODUCTION

Quality education requires focused, systematic, and sustainable school management, particularly in ensuring the quality of the teaching process carried out by teachers. In this context, the principal has a strategic responsibility to plan, organise, initiate, and oversee various school programs, including supervising teacher teaching performance (Ansori et al., 2021). Principal supervision ideally does not only function as an administrative assessment activity, but also as a professional development process that supports teachers in developing their ability to plan learning, manage classes, implement appropriate teaching strategies, utilise learning media, and conduct objective and continuous evaluation of learning outcomes (Fujiono et al., 2023). Through the implementation of systematic management functions, supervision can be organised in a structured manner, starting from program preparation, division of tasks, implementation of coaching, to

monitoring and follow-up on the results of supervision (Napitupulu & Warta, 2026).Thus, principal superviramadsion management is expected to provide a work environment that supports teachers' pedagogical development and teaching practices oriented toward students' needs and school educational goals (Suyatno et al., 2023).

In practice, principal supervision does not always run as ideally as it should be. Supervision is often understood as an administrative review of learning and is not fully directed at continuously developing teaching performance (Sari et al., 2024). Supervision planning is sometimes not prepared based on the real needs of teachers, the division of supervision tasks has not been carried out clearly, the implementation of coaching has not been carried out consistently, and supervision of follow-up to supervision results is still limited (Haryanto, 2024). In addition, the principal's limited time, high administrative burden, lack of teacher involvement in preparing supervision programs, and less than optimal use of supervision results as a basis for professional development mean that supervision activities tend to be routine and formal (Suryana, 2022). These conditions indicate the need to examine not only supervisory activities but also how managerial functions are interconnected throughout the supervision process.

Implementation of supervision that is not managed systematically may be associated with limitations in the development of teacher instructional practices (Kholidi, 2025; Nurlaela & Muaini, 2023). Teachers may not receive feedback, guidance, and follow-up that is appropriate to the problems they face in planning, implementing, and evaluating learning (Juliyati & Samsu, 2025). This condition may be associated with less varied teaching methods, less effective classroom management, limited use of learning media, and limited use of learning outcomes assessment to inform the learning process (Mea, 2024). In the long term, weak supervisory management may be associated with limitations in teachers' pedagogical development, learning effectiveness, and the achievement of educational goals in schools (Ruchmayano et al., 2026). Therefore, principal supervision needs to be managed in a more planned, organised, directed, and controlled manner, with supervision results used as a basis for supporting teacher instructional development (Sulistiana et al., 2025).

The theoretical implications of this problem can be explained through George R. Terry's management functions, which include planning, organising, actuating, and controlling. In the context of principal supervision, planning relates to the preparation of a supervision program based on teacher needs, organising includes the division of tasks and the arrangement of resources, actuating relates to the implementation of coaching and providing motivation, while controlling relates to monitoring, evaluating, and following up on the results of supervision (Hunter & Broughton, 2025). These four functions can be understood as interrelated components of supervision management, linking administrative supervision with ongoing professional development processes (Ruswandi & Khoeriah, 2026). Comprehensive management functions can provide a structure for identifying teacher development needs, coordinating supervision activities, involving teachers, and following up on supervision findings in relation to teaching practices and teacher pedagogical competence (Wiyono et al., 2022). Thus, Terry's management functions provide a relevant analytical framework for examining how principal supervision is organised and connected across managerial stages (Napitupulu & Warta, 2026).

In this study, principal supervision management refers to the managerial process of planning, organising, implementing, and controlling supervision activities (Ruswandi & Khoeriah, 2026), whereas instructional supervision refers specifically to the examination and development of teachers' instructional practices through supervision techniques, principles, and approaches that support the improvement of teaching practices (Maisyaroh et al., 2021). Accordingly, information on facilities, student affairs, committee activities, and teacher discipline is treated as contextual evidence of supervision management, whereas teacher instructional performance is examined through evidence directly related to teaching practices, feedback, reflection, evaluation, and professional development.

Previous studies have demonstrated the relevance of principal supervision and the POAC framework for teacher performance and professional development. Ruswandi & Khoeriah (2026), for example, examined POAC-based principal supervision in relation to teacher performance in elementary schools. Therefore, the use of POAC itself cannot be positioned as the novelty of the present study. Other studies have shown that principal instructional and distributed leadership is associated with teacher professional development (Amzat et al., 2022), while school leadership is also associated with teacher professional collaboration (Hsieh et al., 2024). Thus, the existing literature has established the relevance of principal leadership, supervision, and teacher development. However, the interconnection of these managerial functions within a continuous supervision process remains insufficiently explained, particularly in vocational high school contexts.

This gap concerns how needs-based planning is connected to the organisation and implementation of supervision and how supervision results subsequently inform feedback, professional development, and subsequent supervision planning. Although previous research has examined vocational high school principal supervision, including its performance and evaluation (Yuliana et al., 2023), the interconnection among these managerial stages as a continuous cycle remains insufficiently explained. Therefore, the vocational high school context is relevant because the supervision process in this study involves the coordination of supervisory responsibilities, teacher development needs, coaching, feedback and reflection, evaluation, and professional development follow-up. Therefore, the relationship between supervision results and subsequent supervision planning is important to examine as part of a continuous managerial cycle rather than viewing supervision merely as an administrative activity.

Based on this positioning, this study does not claim novelty from the application of the POAC framework itself. Instead, it examines how planning, organising, actuating, and controlling are implemented and interconnected in principal supervision management at SMK Muhammadiyah 03 Weleri, particularly in processes related to teachers' instructional performance. The study provides an empirical account of how supervisory processes are connected across managerial stages, from planning based on school and teacher needs to organising supervisory responsibilities and the implementation of coaching, evaluation, and follow-up that inform teacher development and subsequent supervision planning.

METHOD

The methodology section describes the data collection procedures, sources, and analysis techniques employed in this study. This research adopted a qualitative approach with a case study design to examine in depth how school principal supervision management was implemented and connected to teachers' instructional performance within a specific school context. The study was conducted at SMK Muhammadiyah 03 Weleri, Indonesia. The case was purposively selected based on preliminary observations indicating that the school had an established supervision system involving the principal, curriculum team, supervision team, and senior teachers, with supervision practices covering planning, classroom observation, feedback, evaluation, and professional development. This made the school an information-rich case for examining how managerial functions were interconnected throughout the supervision process in the school.

The participants were selected using purposive sampling and consisted of four participants: P1, the principal; P2, the vice principal who was also involved in the supervision team; and P3 and P4, teachers. Participants were selected based on their direct involvement in the planning, implementation, monitoring, evaluation, and follow-up of supervision activities and their knowledge of the school's supervision program. The inclusion criteria were as follows: (1) direct involvement in the supervision process; (2) knowledge of the implementation of the school's supervision program; and (3) willingness to provide information about the supervision process and its follow-up. This composition provided perspectives from the principal as the decision-maker, supervisory personnel involved in managing supervision, and teachers who experienced the supervision process directly.

Data collection was conducted from 2 February to 5 June 2026 using semi-structured interviews, observations, and document analysis. Four individual interviews were conducted, with one interview for each participant, and each interview lasted approximately 30–50 min. The interviews were audio-recorded with the participants' consent. Observations were conducted twice: on 2 February 2026 as an initial observation, and on 30 May 2026 as a follow-up observation. Each observation was conducted during the school's effective hours, from 07:00 to 15:00, to obtain contextual information about school activities and the implementation of the supervision.

Document analysis involved six documents directly related to the supervision process: (1) the supervision program, (2) the supervision schedule, (3) supervision instruments, (4) teachers' instructional planning documents, (5) supervision evaluation documents, and (6) professional development follow-up documents. These documents were used to complement the interview and observation data and to examine the implementation of the planning, organising, actuating, and controlling functions. The research instruments consisted of semi-structured interview guides, observation sheets, and document checklists (Morgan, 2022).

The recorded interviews were transcribed for further analyses. As the interviews were conducted in Indonesian, the quotations presented in this English-language manuscript were translated into English by the researcher, while maintaining the original meaning of the participants' statements. Qualitative data analysis combined deductive and inductive coding methods. Interview, observation, and documentary data were reviewed and coded to identify statements, activities, and processes relevant to the principal's supervisory management. The initial codes were then grouped into broader categories to facilitate analysis. The deductive categories were based on the four management functions of planning, organising, actuating, and controlling (POAC), while patterns that emerged from the data beyond these predefined functions were retained as inductive categories. The categories were compared across participants and data sources to identify recurring patterns and relationships, which were subsequently developed into the themes. The themes were then interpreted to examine how POAC functions were connected throughout the supervision process. This thematic interpretation was used to construct Figure 1 as an analytical representation of the interconnected supervision processes. Data were analysed interactively through the processes of data condensation, data display, and conclusion drawing, while the trustworthiness of the findings was supported through source and methodological triangulation (Ahmed, 2024).

Ethical considerations were addressed throughout this study. This study did not obtain formal ethical approval or ethical exemption from an institutional review board. Before data collection, all participants were informed about the purpose and procedures of the study and provided informed consent to participate, including consent for the audio recording of the interviews. Participation was voluntary, and participants were free to decline to answer questions they did not wish to address. To protect confidentiality, the participants' identities were anonymised using the codes P1–P4, and the reporting of findings was limited to information relevant to the research objectives. Particular attention was given to the hierarchical relationship between the principal, supervisory personnel, and teachers to ensure that participation was not presented as an institutional obligation to the teachers.

The analysis focused on examining how the planning, organising, actuating, and controlling (POAC) functions were interconnected throughout the supervision process, particularly in relation to planning, implementation, evaluation, and follow-up as a continuous managerial cycle.

RESULTS AND DISCUSSION

Results

Planning Phase of School Principal Supervision

The findings indicate that planning constitutes the initial stage of school principal supervision. The analysis identified five interconnected elements within this stage: supervision program development, identification of supervision targets, needs assessment, alignment with educational

regulations, and supervision scheduling. These elements were identified primarily through interview data and were examined in relation to observation and documentary evidence to establish how planning was organised in practice in the school.

The principal explained that every supervision process begins with careful planning, which serves as the basis for implementing the managerial supervision. This planning is reflected in the preparation of a supervision program covering various managerial aspects of the school, followed by the establishment of a supervision schedule and identification of supervision targets.

"Of course, everything begins with planning because planning serves as the guide for the implementation of managerial supervision." (P1) (P1)

"After that, we prepare the supervision schedule." (P1)

"First, we develop a supervision program, which covers various aspects of managerial supervision, including school facilities and infrastructure, learning activities, and student affairs." (P1)

These statements indicate that planning encompasses both the organizational and instructional dimensions of supervision. In the present analysis, information concerning facilities, infrastructure, and student affairs is interpreted as contextual evidence of the broader organisation of supervision rather than as direct evidence of teachers' instructional performance. The instructional dimension is reflected more specifically in the identification of teacher development needs, supervision targets, scheduling, and preparation for subsequent instructional supervision.

In addition to designing the supervision program, the principal determines the supervision targets based on teachers' professional development needs. The findings reveal that novice teachers are given higher priority than senior teachers because they require more intensive guidance in carrying out instructional responsibilities.

"…the priority is given to junior teachers who have only recently started teaching at our school."(P1)

"…junior teachers who still have limited teaching experience." (P1)

The identification of novice teachers as priority targets indicates that supervision planning is differentiated according to teachers' professional needs rather than applied uniformly. This finding was supported by teachers' accounts of the relevance of supervision to their teaching experience and development needs**.**

Supervision planning is also grounded in an assessment of the school's needs and aligned with applicable educational regulations. The principal emphasised that the supervision program is not developed merely to fulfil administrative requirements but is designed to address the school's actual managerial improvement needs. Furthermore, the implementation of supervision is guided by prevailing educational policies and regulations, which provide its legal foundation.

"..."…it is based on the school's vision and mission as well as the school's needs for managerial improvement." (P1)

"…starting from ministerial regulations up to the most recent policies, which serve as the legal basis for conducting managerial supervision." (P1)

The documentary evidence was used to examine this aspect of planning by comparing the principal's account with the available supervision program and related planning documents. This comparison provided documentary support for the existence of formal planning and its alignment with the school's supervision priorities. Moreover, the objectives of supervision were clearly

established during the planning stage. According to the principal, managerial supervision aims to achieve instructional management that is effective, efficient, and accountable.

"…managerial supervision aims to realize instructional management that is effective, efficient, and accountable." (P1)

This objective positions supervision as a managerial process that provides organizational support for instructional improvement rather than merely as an administrative inspection of teachers. However, the objective itself is not treated as evidence of improved instructional performance; evidence concerning teachers' instructional performance is examined in the subsequent stages of supervision. Teachers ' perspectives further indicated that supervision planning was conducted in a participatory manner. Teachers stated that the principal involved them in determining the supervision schedule by considering teaching schedules and instructional content, with supervision activities arranged in relation to the teaching and learning process.

"The principal involves teachers in planning managerial supervision because it is closely related to teaching schedules and the learning materials being delivered." (P4)

This account complements the principal's description of scheduling and indicates that teacher participation was part of the planning process. The observation data were used to examine the implementation context of this arrangement, while the supervision schedule provided documentary evidence of the planned timing of supervision. Thus, the finding regarding participatory scheduling was derived through a comparison of interview, observation, and documentary sources rather than from a single participant's statement.

Overall, the analysis shows that the planning stage operates as an interconnected process rather than a set of separate administrative activities. The process begins with the development of a supervision program, followed by needs assessment, identification of priority targets, scheduling, alignment with regulations, and formulation of supervision objectives. The planning process subsequently provides a basis for organising supervisory responsibilities and implementing instructional supervision. This finding supports the deductive POAC category of planning while also highlighting an inductively identified feature of the process, namely the differentiation of supervision targets according to teachers' professional needs and the involvement of teachers in the scheduling.

3.2 Organizing Phase of School Principal Supervision

The findings indicate that organising is the stage following the development of the supervision plan. At this stage, the principal distributes roles, authority, and responsibilities to organise supervision implementation. The analysis identified three main elements at this stage: delegation of responsibilities, coordination among supervisory personnel, and assignment based on professional competence. Organising is not solely centred on the principal but involves the curriculum team, supervision team, and senior teachers according to their respective roles. The principal explained that the supervision process cannot be carried out individually because of its broad scope. Therefore, a supervision team was established by appointing the vice principal for curriculum as the leading sector and involving experienced senior teachers with strong professional competencies to support the implementation of managerial supervision in the school.

"Managerial supervision cannot be carried out entirely by the principal alone. Therefore, I ask the curriculum team to serve as the leading sector, and I also seek assistance from senior teachers who possess greater competencies to help implement this managerial supervision." (P1)

The principal further emphasised this point:

"…the curriculum team serves as the leading sector." (P1)

These accounts indicate that organising was implemented through the delegation and coordination of supervisory responsibilities rather than through the principal's individual

involvement. Senior teachers were also assigned responsibilities based on their teaching experiences and professional competences.

"…senior teachers who possess stronger competencies assist me in implementing managerial supervision." (P1)

These findings were further supported by the vice-principal, who explained that supervision responsibilities were distributed according to organizational positions and assigned duties. The principal supervised the vice-principals, whereas the vice-principals and supervision team supervised the department heads and teachers.

"All teachers are required to undergo supervision. However, the level of supervision differs. Vice principals are supervised by the principal, while department heads and teachers are supervised by the vice principals together with the supervision team." (P2)

In practice, each member of the supervision team is assigned specific responsibilities based on their respective areas of expertise. For example, one team member was responsible for monitoring committee activities and program implementation to encourage accountability in the program.

"My primary focus is on committee activities and monitoring how programs are implemented so that committee members become more accountable in carrying out their responsibilities." (P2)

This information concerning committee activities is interpreted as contextual evidence of the organizational structure of supervision rather than direct evidence of teachers' instructional performance.

From the teachers' perspective, however, the division of responsibilities meant that supervision was more frequently conducted by the supervision team than directly by the principal.

"The principal's direct involvement is not very visible because the supervision team is the one assigned to conduct the supervision, rather than the principal personally." (P3)

This account introduces a different perspective on the principal's involvement. Rather than treating it as evidence that contradicts the principal's managerial role, the difference indicates a distinction between managerial involvement and direct operational supervision. While P1 described the principal's role in establishing and coordinating the supervision structure, P3 emphasised that direct supervision was commonly delegated to the supervision team.

Overall, the organising phase was characterised by the establishment of a supervisory structure, delegation of authority, role distribution based on position and competence, and coordination among the principal, curriculum team, supervision team, and senior teachers. This finding supports the deductive POAC category of *organising*, while the differentiated roles between managerial coordination by the principal and operational implementation by the supervision team emerged from the participants' accounts.

Actuating Phase of School Principal Supervision

The findings indicate that the actuating phase represents the implementation of the supervision plans and organizational arrangements established during the preceding stages. The analysis identified several interconnected activities in this phase, including communicating the supervision program, preparing supervision instruments, assessing teachers' instructional readiness, identifying instructional needs, conducting staged supervision, and providing follow-up monitoring. Therefore, the implementation of supervision extends beyond classroom observations and represents a structured process for implementing planned supervision activities.

The implementation of supervision begins with the socialisation of the supervision program to all teachers. The principal explained that once the supervision program has been developed,

information regarding the supervision process—including the schedule and assigned supervisors—is communicated to teachers before supervision activities take place. This process enables teachers to understand the supervision procedures and prepare themselves for the professional guidance process.

"After preparing the supervision program, we socialise it to all teachers. We also provide the schedule for managerial supervision." (P1)

"During the socialization session, we explain the managerial supervision program, including who the supervisors are and the supervision schedule, before the activities begin." (P1)

This statement was supported by teachers, who reported that supervision information is communicated openly through monthly staff meetings and the school's WhatsApp group.

"Yes, we are informed. Usually, the information is delivered during monthly meetings or through the school's WhatsApp group. Before managerial supervision is conducted, the principal informs us through the WhatsApp group or during the monthly teachers' meeting." (P4)

These accounts indicate that program socialisation functioned as an initial actuating activity through which teachers received information about supervision procedures, schedules, and responsible supervisors before implementation.

In addition to program socialisation, schools prepare supervision instruments that serve as guidelines for the supervision process.

"…the documents prepared for the supervision process include the academic supervision instruments themselves." (P1)

The vice principal explained that these supervision instruments were developed collaboratively through curriculum team meetings and adjusted to the school's needs.

"Regarding my involvement in supervision planning, the curriculum team first prepares the initial draft, and then we discuss it together in meetings. The curriculum draft is synchronized with the school's actual needs." (P2)

The development and use of these instruments indicate that the implementation of supervision is supported by standardised procedures and coordinated preparation rather than relying solely on individual judgment.

During implementation, supervision also considers teachers' preparedness in terms of instructional administration and teaching documents. Teachers are required to prepare instructional documents, including lesson plans, before supervision is conducted.

"The lesson plans must be prepared, and the checklist has already been provided." (P2)

"Teachers' administrative documents must be complete, and classroom instruction should also demonstrate high quality." (P3)

"At the beginning of each academic year, teachers are required to submit their instructional documents according to their teaching assignments." (P4)

These documents represent evidence of teachers' instructional readiness and are, therefore, distinguished from broader administrative aspects of school supervision. The implementation of supervision also considers teachers' instructional needs. Before supervision is conducted, the principal identifies teachers' needs related to instructional media and other learning resources.

"…teachers need adequate facilities for the instructional process, whether instructional media, the development of teaching materials, or other instructional resources. These needs are identified together with the teachers." (P1)

This finding indicates that actuating is not limited to implementing predetermined supervision activities but also involves responding to teachers' instructional needs identified during the process.

Furthermore, supervision was implemented in two stages. The first stage consisted of classroom observations aimed at identifying teachers' strengths and areas requiring improvement in instructional practice.

"There are two rounds of supervision. The first supervision examines how teachers conduct the learning process, and the identified weaknesses become the basis for future improvements." (P1)

Teachers likewise perceived that supervision was conducted intensively to identify aspects of instruction that could be further enhanced.

"The principal conducts supervision intensively to identify aspects of the teaching and learning process that can still be improved." (P4)

The second stage served as a follow-up monitoring process to review developments identified after the first supervision cycle. During this stage, the principal conducts further observations and gathers feedback from students regarding teachers' instructional practices.

The second supervision is then conducted. Usually, we ask students whether the teachers have implemented the learning process properly, and the students provide the feedback." (P1)

The two-stage process indicates that supervision operated as a continuing cycle in which classroom observation identified areas for further attention and subsequent monitoring reviewed the follow-up process. Student feedback provides an additional source of information about teachers' instructional practices.

Beyond monitoring classroom instruction, supervision encompasses teacher discipline. Teacher attendance records, direct observations, and checklist-based monitoring instruments are used to monitor the professional responsibilities.

"Teacher discipline is monitored through fingerprint attendance records." (P2)

"Field observations are conducted, and several instruments are used as checklists to monitor teachers' performance of their duties." (P4)

In this study, evidence concerning attendance and teacher discipline is interpreted as contextual evidence of the broader supervision-management process rather than as direct evidence of instructional performance.

Overall, the actuating phase was implemented through program socialisation, preparation and use of supervision instruments, verification of instructional readiness, identification of teachers' instructional needs, staged classroom supervision, and follow-up monitoring. These findings support the deductive POAC category of *actuating*, while the analysis also identified an empirically grounded feature of the process: supervision was implemented as a staged cycle in which initial classroom observations informed the subsequent monitoring and feedback. Thus, actuating functioned not only as the execution of planned activities but also as a mechanism for responding to teachers' instructional needs during implementation.

Controlling Phase of School Principal Supervision

The findings indicate that the controlling phase extended beyond classroom observation to encompass evaluation, reflection, follow-up, and professional development activities. The analysis identified four interconnected activities in this phase: communicating supervision results, providing feedback and reflection, evaluating findings collectively, and using supervision results for professional development and subsequent supervision planning. Thus, the controlling function is not merely evaluative but connects supervision findings with follow-up actions and subsequent planning. The principal explained that supervision findings are used as evaluation materials to identify challenges encountered by teachers during the teaching and learning process. Following each supervision session, supervisors and teachers discuss the findings to identify appropriate solutions.

"The classroom supervision process enables us to identify problems or areas of dissatisfaction in the teaching and learning process, and these become the basis for evaluation." (P1)

"After the supervision is completed, we hold discussions to communicate the findings identified during the supervision process. If teachers are able to resolve the issues independently, they can implement the necessary improvements immediately." (P1)

These accounts indicate that evaluation was accompanied by feedback and follow-up discussion rather than being limited to recording supervision results. The evaluation results are subsequently followed by reflective discussions and constructive feedback.

"…we provide feedback and reflection to the teachers." (P1)

The vice principal reinforced this process by explaining that teachers requiring further improvement are invited to discuss the identified issues with the principal and that the findings continue to be monitored.

"If a teacher still has deficiencies, he or she will be invited to the principal's office for discussion." (P2)

"The monitoring process continues after supervision by reviewing the findings that emerged." (P2)

From the teachers' perspective, the controlling process provides opportunities to clarify their instructional practices and receive feedback. Teachers also receive written evaluation notes that serve as references for subsequent improvement.

"Teachers are given the opportunity to clarify or explain what they did during the supervision process." (P3)

"The notes provided after supervision are given to teachers as evaluation materials to help them improve their teaching." (P3)

Another teacher explained that supervision findings are communicated through key evaluation points that guide teachers in improving aspects of instruction that still require attention.

"After the supervision results are compiled, we receive key points that can be used to improve aspects of our teaching that still require enhancement." (P4)

"One form of follow-up is feedback. The school provides us with feedback after the managerial supervision process has been completed." (P4)

The accounts from P1–P4 therefore show convergence regarding the existence of feedback, reflection, and follow-up after supervision, while also indicating that teachers are given opportunities to respond to and clarify the findings. In addition to individual follow-up, supervision findings are discussed collectively during supervision team evaluation meetings. The principal explained that

each supervisor presents the results of supervision, after which the findings are analyzed collaboratively. When similar issues are identified across several teachers, the school develops collective interventions such as external training, In-House Training (IHT), or activities through the Professional Learning Community (*Komunitas Belajar*).

"The supervision team holds evaluation meetings where each supervisor presents the supervision findings to the principal, and we discuss them together. If similar findings emerge across several teachers, appropriate interventions are provided, such as inviting guest teachers, organizing In-House Training, or bringing in external resource persons." (P1)

This process shows that individual supervision findings are aggregated and interpreted collectively to determine broader professional development needs. The implementation of these follow-up activities demonstrates that supervision continues beyond classroom observation.

"Supervision does not end when the observation is completed. It is an ongoing process. We evaluate whether teachers have improved after participating in training designed to solve the problems identified during supervision." (P1)

As part of these follow-up efforts, the school utilizes the Professional Learning Community (Komunitas Belajar) and other professional development initiatives as part of teacher professional learning.

"As a follow-up, improvement programs can be scheduled through the Professional Learning Community or In-House Training." (P1)

Teachers likewise confirmed that supervision follow-up activities are conducted continuously.

"…the follow-up activities are carried out continuously because they are aligned with the school's vision of continuously improving the quality of teaching and learning." (P4)

The use of IHT and the Professional Learning Community indicates that supervision findings are translated into collective professional development responses rather than remaining as individual evaluation records.

Furthermore, supervision findings are used not only for immediate follow-up but also as a basis for planning future supervision programs.

"…the results of the managerial supervision become the starting point for supervision in the following year and serve as the basis for further improvements." (P1)

This finding demonstrates a feedback loop in which the results of one supervision cycle inform subsequent planning, linking the controlling function back to the planning stage.

Overall, the controlling phase was implemented through evaluation, feedback and reflection, collective analysis of supervision findings, professional development follow-up, and the use of supervision results for subsequent planning. These findings support the deductive POAC category of *controlling*, while the empirical analysis identifies a continuous feedback cycle linking evaluation and follow-up to subsequent supervision planning. Evidence from P1–P4 converged on the existence of feedback and follow-up, while the different roles of participants provided complementary perspectives on how these processes were implemented. Thus, controlling functioned not only as an evaluation mechanism but also as a mechanism for professional development and organizational learning.

Reported Changes in Teachers' Instructional Performance

The findings indicate several reported changes in teachers' instructional practices following the implementation of school principal supervision management. Participants described these changes

particularly in relation to classroom management and professional learning. Because the study did not directly measure changes in teacher performance over time, these findings are presented as participants' reported perceptions rather than evidence of a causal effect of supervision. One reported change concerned teachers' classroom management competencies. P1 described classroom management as one of the indicators observed following the supervision process:

"The first indicator is the improvement of teachers' competencies in classroom management." (P1)

This account suggests that classroom management was perceived by the principal as an area in which teachers demonstrated development following the supervision process.

P3 similarly described teachers' continued efforts to learn and develop themselves as part of the changes observed following the supervision process:

"…the teaching and learning process motivates us to continue learning and improving ourselves." (P3)

This indicates that professional learning and self-improvement were among the practices associated with the supervision process. Rather than demonstrating a direct improvement in teacher performance, this finding reflects participants' accounts of teachers' efforts to develop their professional practices.

Overall, participants' accounts pointed to changes in several aspects of teachers' professional and instructional practices, particularly classroom management and continued professional learning. These accounts suggest that the supervision process was experienced as part of teachers' ongoing professional development, while the extent and nature of these changes were not independently measured in the study.

The relationships among the four management functions, namely planning, organizing, actuating, and controlling, and the reported changes in teachers' instructional performance are summarized in Figure 1. Figure 1 represents the analytical interpretation developed from the thematic analysis and illustrates the interconnected supervision process rather than a causal model of improvement.

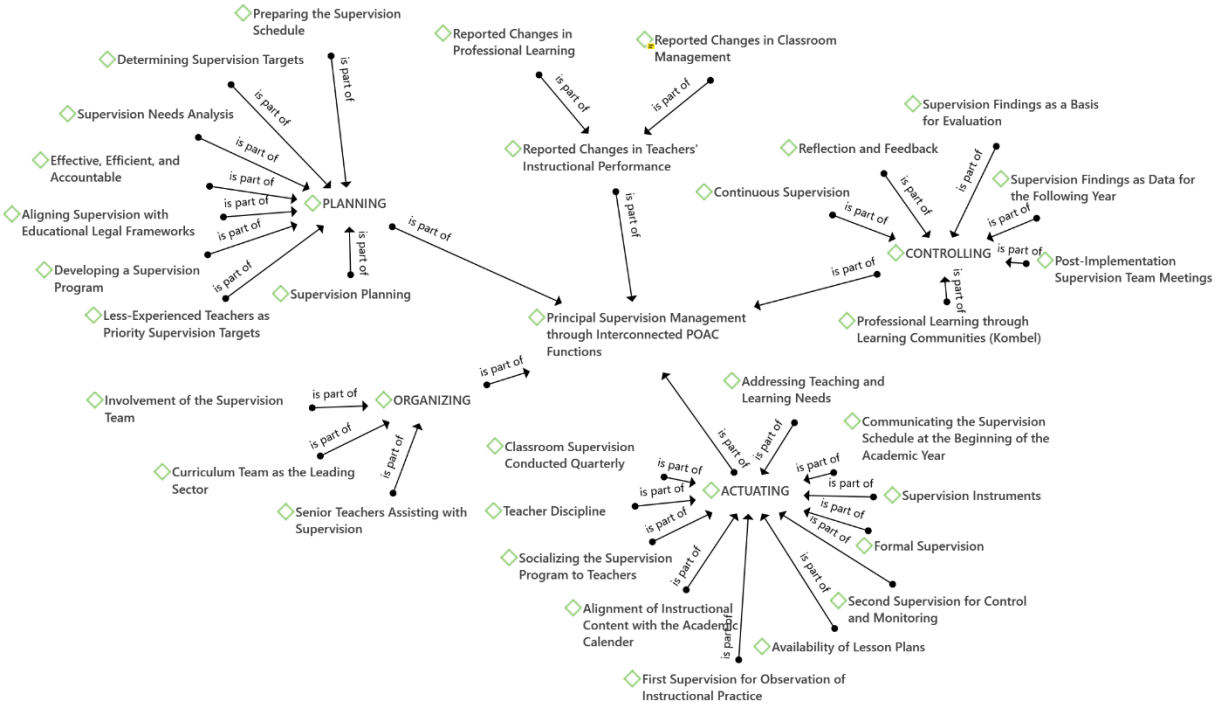


Figure 1. Interconnected POAC Functions in Principal Supervision Management and Reported Changes in Teachers' Instructional Performance

Discussion

Principal Supervision Planning

Research findings indicate that supervision planning is the primary foundation of principal supervision management (Khoriah, 2026; Terry & Rue, 2022). Planning is not only realized through the preparation of a supervision schedule, but also includes an analysis of school needs, determining supervision targets, developing programs based on educational regulations, and formulating supervision objectives related to teachers' instructional development. These findings indicate that the principal organized supervision planning systematically, positioning it as more than an incidental administrative activity and linking it to the school's identified needs and teacher development priorities.

The results of this study are consistent with the management functions described by Terry & Rue (2022), which explain that planning is the initial function that establishes goals, identifies needs, determines strategies, and allocates resources for subsequent activities. In the context of this study, the planning function was reflected in the connection between school needs, teacher priorities, supervision targets, and implementation arrangements. This finding indicates that planning provided an organizational basis for the subsequent supervision process, rather than demonstrating a direct effect on teacher competence.

This finding also addresses the problem outlined in the Introduction, which states that supervision may tend to focus on administrative audits rather than teacher professional development. In the case studied, supervision planning based on school and teacher needs indicates an orientation toward professional development alongside administrative requirements. This interpretation is consistent with Lorensius et al. (2022), who emphasizes the importance of supervision that is connected to teachers' professional learning needs. Thus, the present finding supports the view that needs-based planning can provide a more contextually relevant basis for supervision, although the study does not establish that such planning independently produces improvements in teacher competence.

Setting supervision targets based on the priority needs of teachers, particularly those with limited teaching experience, demonstrates the use of differentiated priorities in supervision planning. This approach reflects the allocation of supervisory attention toward teachers who require greater professional support. According to Hallinger & Kovačević (2022) effective instructional leadership emphasizes teacher capacity development through practices that respond to teacher and school needs. In the present case, prioritizing less-experienced teachers represents a context-specific mechanism for allocating supervisory attention according to perceived professional needs.

In addition, teacher involvement in preparing the supervision schedule shows that the planning process was participatory (Harris et al., 2022; Leithwood et al., 2020). Teacher involvement provided an opportunity for communication between the principal and teachers regarding teaching schedules and instructional content. This finding is consistent with distributed leadership perspectives, which emphasize the involvement of school members in leadership and decision-making processes (Harris et al., 2022). In this case, teacher participation was evident primarily in scheduling rather than in all aspects of supervision-program formulation; therefore, it is more appropriately interpreted as participatory planning within a specific component of the supervision process.

The findings of this study are also consistent with Fujiono et al. (2023), who emphasize the importance of systematically developed supervision programs with clear objectives and implementation mechanisms. Suyatno et al. (2023) likewise highlight the relevance of teacher needs in supervision planning. Together, these studies and the present findings suggest that clear planning and attention to teacher needs provide an important organizational basis for directing supervision activities. However, the present study does not demonstrate that the quality of planning itself caused changes in pedagogical competence.

Furthermore, the preparation of a supervision program based on educational regulations shows that the principal considered both internal school needs and the policy framework governing supervision (Fatmariyanti et al., 2023). In the case studied, regulatory alignment provided a formal basis for the supervision program, while needs assessment provided contextual relevance. The combination of these considerations shows how formal educational requirements were incorporated into school-level supervision planning.

From an organizational development perspective, supervision planning can provide a basis for professional learning within schools (Rickinson et al., 2022; Sa'adah et al., 2026). In this study, teacher participation and the identification of professional needs created an organizational basis for subsequent coaching, feedback, and professional development activities. However, a broader professional learning culture cannot be attributed to the planning stage alone because the development of such processes also involved the organizing, actuating, and controlling stages identified in the findings.

The significance of this finding therefore lies not in the use of POAC or in proposing a new planning model, but in the empirical illustration of how planning operated in the case studied. Supervision planning combined school needs assessment, prioritization of teachers requiring greater support, regulatory alignment, and teacher participation in scheduling. These elements provided the basis for the subsequent organizing, actuating, and controlling processes. Thus, the finding offers a context-specific account of how the planning function was implemented within the supervision management system at SMK Muhammadiyah 03 Weleri.

Organizing Principal Supervision

Research results indicate that the organization of principal supervision is implemented through the establishment of a work structure involving the principal, the vice principal for curriculum as the leading sector, the supervision team, and senior teachers according to their respective competencies and areas of responsibility. This division of tasks indicates that supervision is not solely centered on the principal but is carried out collaboratively through coordination among school personnel. In the

case studied, the organizing function therefore operated through delegation of responsibilities, coordination among supervisory personnel, and distribution of tasks according to organizational position and professional competence.

These findings are consistent with Terry & Rue (2022), who explain that the organizing function involves grouping work, dividing tasks, establishing working relationships, and coordinating resources. In the present case, these functions were reflected in the distribution of supervisory responsibilities among the principal, curriculum team, supervision team, and senior teachers. The findings, however, do not establish that this organizational arrangement independently improved supervision effectiveness or teacher performance.

The formation of a supervisory team involving the vice principal and senior teachers demonstrates that the principal has implemented the principle of distributed leadership, which involves distributing leadership to personnel with relevant competencies. According to Harris et al. (2022), distributed leadership involves sharing leadership responsibilities among members of the school community. In this case, the principle was reflected in the delegation of operational supervisory responsibilities to the curriculum team and senior teachers, with supervisory tasks distributed within the existing school structure.

The findings are also consistent with Leithwood et al. (2020), who emphasize collective leadership capacity through the involvement of teachers and educational staff in school activities. The involvement of senior teachers in supervision illustrates how professional experience and competence were considered in assigning supervisory responsibilities. However, the available data do not establish that their involvement directly developed leadership capacity or created a learning organization.

The appointment of the vice principal for curriculum as the leading sector demonstrates a clear coordination mechanism. This arrangement is consistent with recent empirical evidence showing that principal supervision in vocational schools involves structured distribution of supervisory responsibilities and coordination among school personnel (Lessy et al., 2024). Furthermore, the division of supervision based on organizational position indicates that supervisory authority was differentiated across organizational levels. The principal was responsible for supervising the vice principals, while the vice principals together with the supervision team supervised department heads and teachers. This arrangement illustrates how supervisory responsibilities were differentiated according to organizational roles rather than concentrated entirely at the principal level.

The delegation of supervision to the supervision team also indicates a distinction between the principal's managerial role in coordinating the supervision system and the team's operational role in conducting supervision activities. This arrangement reflects the organizing function through the distribution of supervisory responsibilities according to organizational roles and professional competencies. The finding should not, however, be interpreted as evidence that teamwork made supervision more effective. Rather, the data indicate that teamwork provided an organizational mechanism for distributing and implementing supervisory responsibilities. This distinction is important because the study examines how supervision was organized rather than comparatively measuring the effectiveness of individual and team-based supervision.

The findings are broadly consistent with Ansori et al. (2021), which discuss the role of collaboration and teamwork in supervision activities. The present case provides contextual detail on how such collaboration was structured through the appointment of the curriculum team as the *leading sector*, the involvement of senior teachers, and the hierarchical distribution of supervisory responsibilities. From an organizational theory perspective, the formation of a supervisory team demonstrates an effort to distribute organizational responsibilities and coordinate available human resources. Hallinger & Kovačević (2022) emphasize the importance of organizational arrangements that support instructional leadership. In the present case, the division of supervisory duties reflected

a coordinating role for the principal alongside the delegation of operational responsibilities to other personnel.

The findings do not provide sufficient evidence to conclude that this arrangement had become part of the school's broader organizational culture or directly improved the quality of teacher instruction. Instead, the evidence demonstrates that supervision was organized through a collaborative structure involving several school personnel. The significance of this finding lies in its context-specific illustration of how the organizing function operated at SMK Muhammadiyah 03 Weleri. The process involved delegation of supervisory responsibilities, appointment of the curriculum team as the coordinating sector, involvement of senior teachers based on professional competence, and differentiation of supervisory authority according to organizational position. These arrangements connected the planning stage with supervision implementation by establishing responsibilities across the supervisory structure. Thus, the finding provides an empirical account of how principal supervision was operationalized in the case studied rather than proposing a universally effective organizational model.

Implementation of Principal Supervision

Research results indicate that supervision is a concrete implementation of previously developed planning and organization. Supervision is not only realized through classroom observation activities, but also begins with socialization of the supervision program to teachers, provision of supervision instruments, assessment of learning administration readiness, identification of teacher needs, implementation of phased observations, and monitoring of teacher task implementation and discipline. These activities indicate that the actuating function was implemented through a sequence of communication, preparation, instructional support, observation, and follow-up activities rather than through classroom observation alone.

These findings are consistent with the actuating function in Terry & Rue (2022) management theory, which involves mobilizing organizational resources to implement planned programs. The actuating function includes communication, direction, coordination, and guidance to organizational members. In the present case, these elements were reflected in the communication of supervision procedures, preparation of supervision instruments, identification of teacher needs, and implementation of supervision activities. The findings therefore illustrate how the actuating function operated in the supervision process without establishing a direct causal effect on teacher competence.

One of the key findings of this study was the implementation of supervision program socialization prior to observation activities. The principal communicated the supervision objectives, implementation schedule, and assigned supervisors to teachers through meetings and school communication media. This practice indicates that communication served as an initial mechanism for preparing teachers for the supervision process and clarifying its procedures. According to Terry & Rue (2022), communication is an important element of the actuating function because it enables organizational members to understand their duties, responsibilities, and objectives. The finding is also consistent with Bjørndal et al. (2024) and Fatmariyanti et al. (2023), who emphasize the importance of clear communication in educational supervision.

The implementation of supervision also demonstrates attention to teacher preparedness prior to observation. Teachers were expected to prepare learning materials and instructional documents, while the school provided supervision instruments developed by the curriculum team based on school needs. The use of these instruments provided a common reference for conducting supervision and organizing the information examined during the process. Hallinger & Kovačević (2022) emphasize the importance of clear and focused supervisory arrangements within instructional leadership. In the present case, the instruments functioned as procedural tools supporting the implementation of supervision rather than as evidence of improved teacher performance.

Research findings also show that before supervision was implemented, the principal identified teacher needs related to learning materials, instructional media, and other learning resources. This finding indicates that implementation was responsive to conditions identified by the school and teachers rather than being limited to predetermined supervisory activities. This is consistent with the emphasis on needs-based supervision in educational leadership literature (Fujiono et al., 2023). In the present case, identifying these needs provided a basis for aligning supervisory support with teachers' perceived instructional requirements.

The implementation of supervision in two stages, consisting of initial observation and follow-up supervision, demonstrates a sequential supervision process. The first stage was used to identify aspects of teachers' instructional practice requiring attention, while the second stage was used to monitor subsequent developments. This pattern indicates that supervision was not limited to a single observation but included a follow-up stage that connected findings from the initial observation with subsequent monitoring. This interpretation is consistent with Bjørndal et al. (2024), who described supervision as involving observation, reflection, feedback, and follow-up. However, the present data support the existence of this supervision cycle rather than demonstrating measurable improvement in teacher performance between the two stages of the cycle.

Another feature identified in the findings was the use of student feedback as part of the supervision process. The principal obtained information about teachers' instructional practices from students, in addition to supervisory observations. Because students were not participants in this study and their responses were reported indirectly by the principal, this evidence is treated as a secondary source of information rather than direct evidence of student satisfaction or instructional effectiveness. The use of multiple sources of information is consistent with Chugh et al. (2022), who emphasise the value of multiple perspectives in understanding instructional practice. In this case, student feedback functioned as an additional source of information within the supervision process, rather than evidence that the accuracy or effectiveness of supervision had increased.

In addition to instructional activities, supervision also included monitoring teacher discipline through attendance data, field observations and checklists. These activities represent contextual evidence of the broader supervision-management system and are distinct from evidence directly related to teachers' instructional performance. Thus, disciplinary monitoring illustrates the broader organizational scope of supervision management, whereas classroom observation, instructional documents, teacher needs, and feedback are more directly related to the instructional dimension examined in this study.

The results of this study are consistent with Fujiono et al. (2023), who discussed the role of systematic supervision programs, clear instruments, classroom observations, and ongoing coaching in supporting teacher development. The findings are also broadly consistent with Ansori et al. (2021) regarding the role of systematic supervision in teacher professional development. The present case provides contextual detail on how these activities were combined through program socialisation, preparation of instructional documents and instruments, needs identification, staged observation, feedback, and follow-up. This contextual detail does not establish that these activities caused improvements in teacher performance.

Overall, supervision implementation at SMK Muhammadiyah 03 Weleri was characterised by communication of the supervision program, preparation of supervision instruments and instructional documents, identification of teacher needs, staged classroom observations, feedback, and follow-up monitoring. These findings support the deductive POAC category of *actuating* and show how the planning and organizing stages were translated into operational supervision activities. The implementation process also revealed an empirically grounded pattern in which initial supervision findings informed subsequent monitoring and support. Thus, the significance of this finding lies in its context-specific account of how the actuating function was operationalised within the supervision management process at the case school, rather than in demonstrating a causal effect on instructional performance.

Discussion of Principal Supervision

Research findings indicate that the controlling function extends beyond classroom observations through evaluation, reflection, feedback, supervision team evaluation meetings, professional development activities, and follow-up planning. In the case studied, these activities indicate that supervision results were used to review instructional practices, identify issues requiring attention, and determine subsequent support and supervision activities for teachers. Thus, the controlling function operated as a follow-up mechanism within the supervision cycle rather than solely as an assessment of teacher performance (Terry & Rue, 2022).

These findings are consistent with the controlling function in Terry & Rue (2022) management theory, which involves comparing implementation with predetermined plans, identifying issues, taking corrective actions, and monitoring subsequent activities. In the context of educational supervision, the controlling function was reflected in the use of supervision findings for evaluation, feedback, professional development, and subsequent supervision planning. These findings illustrate the operation of controlling within the supervision process, but do not establish that the process independently improved teacher performance (Napitupulu & Warta, 2026; Ruswandi & Khoeriah, 2026).

One important finding was the evaluation conducted through discussions between the principal and teachers after supervision activities. These discussions provided opportunities for teachers to understand the supervision findings, explain instructional challenges, and discuss possible responses. This indicates that the evaluation was conducted as a dialogic process in which the supervision findings were discussed rather than communicated solely as administrative judgments. According to Bjørndal et al. (2024), effective instructional supervision involves professional reflection and communication between supervisors and teachers. In the present case, this process positioned feedback discussions as part of the supervisory follow-up rather than as a separate administrative activity.

This practice is consistent with the instructional leadership literature, which emphasises feedback as part of teachers' professional learning (Bjørndal et al., 2024; Hallinger & Kovačević, 2022). However, the available evidence supports the provision of feedback and opportunities for reflection, rather than demonstrating that such feedback resulted in measurable changes in teachers' instructional practices.

Furthermore, the findings show that teachers were given opportunities to explain their instructional practices and discuss supervision findings before follow-up decisions were made. This indicates a participatory element in the controlling process because the interpretation of supervision findings included opportunities for teacher clarification and discussion. This is consistent with Harris et al. (2022), who emphasised the importance of collaborative communication in school leadership. The finding suggests that teacher participation was incorporated into the evaluation process, although the available data do not establish that it increased teacher commitment or ownership.

The study also shows that controlling extended beyond individual feedback through supervision team evaluation meetings. In these meetings, supervisors presented their findings for collaborative discussion, with the discussion focusing on issues requiring individual or collective follow-up. When similar needs were identified across teachers, the school responded through professional development activities such as in-house training (IHT), resource-person sessions, and learning community (Kombel) activities. This indicates that supervision findings were used not only for individual feedback but also as information for determining collective professional development activities. This finding is consistent with Fatmariyanti et al. (2023), who emphasised the importance of linking supervision evaluation with teacher development programs.

The implementation of follow-up through IHT and Learning Communities also indicates that supervision findings were connected to broader professional learning activities within the school. This pattern is consistent with recent research showing that leadership practices and professional learning can support teacher collaboration within schools (Ma & Marion, 2024). However, in the

present case, the data demonstrate the use of these activities as follow-up mechanisms rather than sufficient evidence that they had established a broader culture of sustainable professional learning.

Furthermore, the findings demonstrate that supervision was treated as a continuing process because the results from one supervision period were used as a basis for planning subsequent supervision activities. This finding is particularly relevant to the relationship among the POAC functions because it shows that information from the controlling stage was fed back into the planning stage. Supervision therefore operated as a recurring management cycle in which evaluation findings informed subsequent planning. This interpretation is consistent with Rickinson et al. (2022), who emphasise the use of evidence and reflection to inform subsequent organizational improvement processes.

These findings are also consistent with those of Sulistiana et al. (2025) and Juliyati & Samsu (2025), who emphasise the importance of evaluation, feedback, and follow-up in supervision and teacher development. Rather than claiming that these processes significantly improved learning quality or pedagogical competence, the present case provides contextual details on how supervision findings were translated into feedback, professional development activities, and subsequent supervision planning. The organizational use of evaluation meetings, IHT, and Learning Communities further illustrates how individual supervision findings could be connected to collective professional development activities.

Overall, the controlling function at SMK Muhammadiyah 03 Weleri was implemented through evaluation, reflection, feedback, supervision team meetings, professional development activities, and planning follow-up. The findings indicate that controlling functioned as an information and follow-up mechanism within the supervision cycle, with supervision results informing both teacher support and planning. This finding reinforces the relevance of Terry's management framework while providing a context-specific account of how the controlling function was operationalised in principal supervision. Importantly, the findings demonstrate a continuous supervision process but do not establish a causal effect of controlling activities on teacher instructional performance.

Reported Changes in Teachers' Instructional Performance

The reported changes in teachers' instructional practices can be understood in relation to the interconnected implementation of George R. Terry's management functions: planning, organizing, actuating, and controlling. Rather than operating as separate stages, the four functions were connected through a continuous supervision process. Planning established supervision priorities, organizing distributed responsibilities, actuating translated the plan into supervision activities, and controlling provided feedback and follow-up information for subsequent supervision planning.

This interconnected process provided a structure through which supervision findings were linked to teacher support and professional learning. The findings therefore highlight how the POAC functioned as a continuous management cycle in the context of principal supervision at SMK Muhammadiyah 03 Weleri. The reported changes in teachers' instructional practices are interpreted as participants' accounts of this process rather than as evidence that the supervision process directly caused improvements in teacher performance.

One reported change concerned teachers' classroom-management competence. The principal identified classroom management as one area of teacher development observed through the supervision process. This finding is consistent with recent research showing that school principals' instructional leadership is associated with teachers' professional development and instructional growth (Bellibaş et al., 2021). In this context, classroom management can be understood as one aspect of teachers' instructional practice that was perceived as an area of development following the supervision process.

The reported changes in teachers' instructional practices can also be understood in relation to the feedback and follow-up mechanisms identified in the controlling stage. Supervision findings were discussed with teachers through feedback and reflection and were followed, where similar needs

were identified, by professional development activities such as In-House Training (IHT) and Learning Community (Kombel) activities. These practices show how supervision findings were used to inform teacher support and professional learning. They also illustrate the connection between controlling and subsequent professional development within the broader supervision cycle.

The use of IHT and Learning Communities further illustrates how individual supervision findings were connected to collective professional learning activities. This pattern is consistent with recent research showing that leadership practices and professional learning can support teacher collaboration within schools (Ma & Marion, 2024). In the present case, these activities represent an organizational response to supervision findings and provide a mechanism for connecting individual instructional needs with collective teacher learning.

The findings are broadly consistent with Suyatno et al. (2023) and Fujiono et al. (2023), which emphasize the importance of systematic supervision, feedback, and follow-up in teacher professional development. The present study adds contextual detail by showing how these elements were connected within a single supervision cycle at SMK Muhammadiyah 03 Weleri, linking planning and allocation of responsibilities with implementation, evaluation, feedback, and subsequent planning. This finding highlights the practical interconnectedness of POAC functions in principal supervision, particularly within the context of vocational schools.

The significance of this finding lies in the way supervision findings were connected to teacher support and subsequent supervision activities at SMK Muhammadiyah 03 Weleri. Rather than presenting the POAC framework as a mechanism that produces improvement, the findings illustrate how planning, organizing, actuating, and controlling operated as interconnected functions within the supervision process. This interconnectedness linked the supervision findings with feedback, professional learning, and subsequent planning, providing a context-specific account of how principal supervision was organised in the vocational school setting.

Overall, the principal supervision management at SMK Muhammadiyah 03 Weleri was implemented as an interconnected cycle of planning, organising, actuating, and controlling, in which supervision findings informed feedback, professional learning, and subsequent planning. Participants reported changes in aspects of teachers' instructional practices, particularly classroom management and continued professional learning. These findings provide a context-specific illustration of how POAC functions can be connected within principal supervision in a vocational school setting, while the nature and extent of changes in teacher performance remain subject to further investigation using direct and comparative evidence.

CONCLUSIONS

The findings indicate that principal supervision management at SMK Muhammadiyah 03 Weleri was implemented through four interconnected functions: planning, organizing, actuating, and controlling. Planning involved needs analysis, supervision targets, scheduling, and regulatory alignment; organising involved the distribution of responsibilities among the principal, curriculum team, supervision team, and senior teachers; actuating involved program socialisation, supervision instruments, needs identification, classroom observation, and staged monitoring; while controlling involved evaluation, feedback, reflection, professional development activities, and follow-up planning. The supervision findings were also used to inform subsequent professional development and supervision planning, indicating a cyclical supervision process. Participants reported changes in teachers' instructional practices, particularly classroom management and continued professional learning. However, these changes represent reported or perceived changes rather than demonstrated causal effects. Overall, the study provides a context-specific account of how POAC functions were interconnected in principal supervision at SMK Muhammadiyah 03 Weleri and how supervision findings were connected to teacher support and subsequent planning. Given its single-case design, the findings should not be statistically generalised but may provide context-specific propositions for further research in other vocational school settings.

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AUTHOR CONTRIBUTION STATEMENT

FGN contributed to the conceptualisation, methodology, investigation, data collection, formal analysis, and preparation of the original manuscript. S contributed to the methodological guidance, validation, supervision, and critical review and editing of the manuscript. DH contributed to the research supervision, validation, interpretation of findings, and critical review and editing of the manuscript. All authors have read and approved the final version of the manuscript and agree to be held accountable for its content.

AI DISCLOSURE STATEMENT

The authors acknowledge the use of generative artificial intelligence (AI) tools to assist with language refinement, grammatical corrections, and improvements in the clarity and readability of the manuscript. AI-assisted tools were not used to generate or fabricate research data, conduct interviews, or independently determine the research findings and conclusions. All AI-assisted content was critically reviewed, verified, and revised by the authors, who retain full responsibility for the accuracy, originality, integrity, and final content of the manuscript.

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