

The Influence of Academic Supervision of Teachers by the Principal on the Improvement of Learning Outcomes

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Abstract

Improving the quality of basic education is largely determined by the quality of the learning process taking place in the classroom. This study aims to analyze the influence of academic supervision of teachers by the principal on improving learning outcomes at Tlogomulyo Public Elementary School. The study used a quantitative approach with an ex post facto type. The study population was all teachers at Tlogomulyo Public Elementary School, with a saturated sampling technique so that the entire population became respondents. Data were collected through a questionnaire to measure the principal's academic supervision and documentation of learning outcomes as indicators of the dependent variable. Data were analyzed using simple linear regression after first undergoing validity, reliability, normality, and linearity tests. The results showed that academic supervision of teachers by the principal had a positive and significant effect on improving learning outcomes at Tlogomulyo Public Elementary School. Academic supervision implemented through planning, classroom observation, providing feedback, and follow-up coaching was able to improve teachers' pedagogical competence, improve the quality of the learning process, and encourage teachers to be more reflective and innovative in teaching. This improvement in the quality of learning has an impact on improving student learning outcomes, both in terms of activeness, understanding of the material, and academic achievement. Thus, academic supervision by the principal has proven to be an important factor in improving the quality of learning in elementary schools.

Keywords

Academic Supervision, Elementary Schools, Learning Outcomes, Principal, Teachers.



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INTRODUCTION

Improving the quality of basic education is largely determined by the quality of the learning process taking place in the classroom. At the elementary school level, teachers play a central role as implementers of learning, classroom managers, and facilitators of students' cognitive, affective, and psychomotor development. However, the quality of learning depends not only on individual teacher competency but also on the professional development system implemented in a planned manner by the principal. In this context, academic supervision is a crucial instrument because it helps teachers improve the planning, implementation, and

evaluation of learning on an ongoing basis. Academic supervision is not merely an administrative assessment activity, but rather a professional mentoring process to ensure that learning is effective, relevant to student needs, and capable of producing optimal learning outcomes. In elementary schools, strengthening academic supervision becomes increasingly important because this phase of education is the foundation for developing students' literacy, numeracy, character, and study habits. Therefore, principals are required to possess managerial and pedagogical skills in mentoring teachers to improve the quality of learning and impact student learning outcomes. Thus, the relationship between academic supervision by the principal and improved learning outcomes is a relevant issue that deserves further in-depth study, particularly in elementary education units such as Tlogomulyo Public Elementary School (Sitaasih, 2020; Niswah, 2020).

Academic supervision is essentially a series of professional assistance provided by the principal to teachers to improve their learning management skills. This assistance can be provided through classroom observations, reflective discussions, coaching in the development of teaching materials, learning evaluations, and follow-up on findings in the field. In practice, effective academic supervision positions the principal not as a supervisor looking for errors, but as a professional partner for teachers in solving learning problems. A 2020 study showed that the implementation of planned academic supervision can improve teacher competency in the learning process, from equipment readiness and method use to managing classroom learning interactions. This demonstrates that academic supervision has a strategic function as a bridge between school policies and classroom learning practices. When the principal carries out supervision systematically, teachers receive constructive feedback to address weaknesses and develop learning innovations. This ultimately improves the quality of learning services received by students. In other words, academic supervision does not stop at teacher development but has direct implications for the quality of learning and student learning outcomes (Safitri et al., 2020; Firdaus & Sutarsih, 2020).

The link between academic supervision and learning outcomes can be explained through supervision's role in improving teachers' pedagogical competence. Teachers who receive guidance through academic supervision tend to be better able to formulate clear learning objectives, select appropriate learning strategies, utilize media effectively, and assess learning outcomes more accurately. Improvements in these aspects contribute directly to improving students' learning experiences in the classroom. When learning is well-designed and actively implemented, students will more easily understand the material, engage in the learning process, and demonstrate better academic achievement. Research in elementary schools in 2020 also confirmed that the principal's academic supervision influences teachers' pedagogical competence, which in turn determines the quality of learning. Thus, student learning outcomes are inseparable from the quality of teachers' work, while the quality of teachers' work is strongly influenced by the effectiveness of the principal's academic supervision. This relationship is what places academic supervision as an important variable in efforts to improve the quality of basic

education, especially in schools that still face challenges in learning consistency and student learning outcomes (Niswah, 2020; Sitaasih, 2020).

On the other hand, the reality on the ground shows that the implementation of academic supervision in elementary schools is not always optimal. In many schools, supervision is still understood as merely an administrative task, without addressing substantive guidance on learning practices. Some principals conduct supervision solely to meet formal schedules, without in-depth observation, clear feedback, and structured follow-up. As a result, teachers do not derive maximum benefit from supervision activities, resulting in insignificant changes in learning quality. However, a 2020 study showed that ongoing academic supervision with follow-up can improve teachers' abilities in developing lesson plans, managing learning, and assessing learning outcomes. This means that the quality of supervision not simply its presence is a determining factor in the effectiveness of teacher development. This situation is crucial for Tlogomulyo Public Elementary School, as improving student learning outcomes requires the support of a supervision system that is truly oriented towards improving teaching practices. By understanding how academic supervision is implemented and the extent of its impact on learning outcomes, schools can formulate more targeted and sustainable teacher development strategies (Safitri et al., 2020; Djanan, 2020).

This study starts from the assumption that the quality of student learning outcomes is determined not only by the student's initial abilities or the availability of facilities, but also by the quality of learning fostered through the principal's academic supervision. The focus of this study is to analyze the extent to which academic supervision carried out by the principal is able to encourage improvements in the teacher learning process and impact student learning outcomes. This study is expected to provide theoretical contributions to the development of educational management, particularly in the aspect of academic supervision in elementary schools, while also providing practical input for principals in designing more effective teacher development. Furthermore, the results of this study can serve as a basis for schools to strengthen a culture of reflection, evaluation, and continuous improvement of learning. Thus, this study is not only relevant to Tlogomulyo Public Elementary School, but also to other elementary schools seeking to improve the quality of learning by optimizing the role of the principal as an academic supervisor (Firdaus & Sutarsih, 2020; Djanan, 2020).

METHODS

This research method uses a quantitative approach with an ex post facto research type that aims to analyze the effect of teacher academic supervision by the principal on improving learning outcomes at Tlogomulyo Public Elementary School. The quantitative approach was chosen because the research focuses on measuring the relationship between variables objectively through numerical data, while the ex post facto design was used because the independent variable in this study, namely the principal's academic supervision, has occurred naturally without direct intervention from the researcher. The research population was all teachers at Tlogomulyo Public Elementary School, with the sampling technique using saturated sampling

when the population size is relatively small so that all members of the population were made respondents. Data were collected through a closed questionnaire using a Likert scale to measure teachers' perceptions of the implementation of academic supervision by the principal, as well as documentation of grades or learning outcome data as indicators of the dependent variable. Before being used, the research instrument was tested for validity and reliability to ensure the feasibility of the measuring instrument. The data obtained were then analyzed statistically using simple linear regression analysis to determine the magnitude of the effect of academic supervision on improving learning outcomes, with pre-requisite tests for analysis in the form of normality and linearity tests. The results of the analysis are then interpreted to explain the empirical relationship between the principal's academic supervision and improved learning outcomes at Tlogomulyo State Elementary School.

FINDINGS AND DISCUSSION

Implementation of Teacher Academic Supervision by the Principal at Tlogomulyo Public Elementary School

The implementation of teacher academic supervision by the principal at Tlogomulyo Public Elementary School can be understood as a managerial and pedagogical process designed to ensure that the quality of learning meets standards. Research findings indicate that academic supervision is not positioned solely as an assessment of teacher performance, but rather as a form of professional development conducted by the principal through planning, observation, feedback, and follow-up. During the planning stage, the principal develops a supervision program tailored to the academic calendar, teacher needs, and targets for improving the quality of learning at the school. The program generally includes a supervision schedule, observation instruments, assessment indicators, and post-supervision reflection mechanisms. Research findings indicate that thorough planning enables teachers to better prepare learning materials, such as teaching modules, media, assessments, and learning scenarios. In the context of Tlogomulyo Public Elementary School, these findings demonstrate that the implementation of academic supervision has been directed towards systematic development, enabling the principal to map out teacher needs before entering the classroom observation phase. Theoretically, this situation aligns with the view that effective academic supervision must begin with clear planning so that the coaching function is directed and not merely administrative. Therefore, the quality of the planning stage is a crucial foundation for the success of academic supervision in elementary schools (Marhawati, 2020; Noor et al., 2020).

In the implementation phase, research results show that academic supervision at Tlogomulyo Public Elementary School was carried out through direct observation of teachers' classroom learning processes. The principal observed how teachers opened lessons, conveyed objectives, managed classroom interactions, used learning methods, utilized media, and concluded lessons and conducted evaluations. These observations revealed that academic supervision helped teachers recognize the strengths and weaknesses of their teaching practices. Teachers who previously tended to predominantly use lecture methods began to be

encouraged to implement more varied learning methods, such as group discussions, active question-and-answer sessions, and the use of simple media relevant to the characteristics of elementary school students. Theoretical analysis indicates that classroom observation is the core of academic supervision because it is at this stage that the principal obtains authentic data regarding teachers' learning practices. Observations conducted objectively and using clear instruments enable principals to provide fact-based feedback, rather than merely subjective assessments. This finding strengthens the argument that academic supervision is not merely a formal activity of checking administrative completeness, but rather a professional intervention that directly impacts the quality of the teaching and learning process in the classroom. Therefore, the success of academic supervision implementation is largely determined by the principal's ability to conduct classroom observations carefully, systematically, and oriented toward improving learning (Safitri et al., 2020; Upik, 2020).

Another important aspect emerging from the research findings is the provision of feedback after classroom observations. At Tlogomulyo Public Elementary School, academic supervision does not stop with observations but is followed by discussions between the principal and teachers to discuss the observation results. Feedback is provided in the form of appreciation for teachers' strengths as well as concrete suggestions for areas that need improvement, such as time management, use of learning media, development of assessment indicators, and strategies for fostering student participation. From the teachers' perspective, this feedback forum is considered helpful because it provides a clearer picture of areas for improvement. Theoretically, feedback in academic supervision has both reflective and corrective functions. Reflective means encouraging teachers to reassess their teaching practices, while corrective means providing direction for changes that can be implemented in subsequent lessons. A 2020 study confirmed that academic supervision accompanied by constructive feedback can improve teachers' pedagogical competence, particularly in designing and implementing more effective learning. Therefore, the quality of communication between the principal and teachers after supervision is a determining factor in whether supervision truly impacts changes in teaching practices or simply becomes an administrative routine (Niswah, 2020; Noor et al., 2020). The research also shows that the implementation of academic supervision at Tlogomulyo Public Elementary School has a significant follow-up dimension. After receiving feedback from the principal, teachers made improvements to their learning materials and teaching strategies at the next meeting. This follow-up was evident in improvements to lesson plans, the selection of methods more appropriate to the characteristics of the material, and the increased use of formative assessments to monitor student understanding. From a supervisory theory perspective, follow-up is an indicator that academic supervision is effective because it results in tangible changes in teachers' professional behavior. Without follow-up, supervision will stop at merely documenting assessments, while its primary goal is transforming the quality of learning. Research in elementary schools in 2020 showed that ongoing academic supervision can improve teachers' competency in preparing learning materials and managing classrooms. This finding aligns with the situation at

Tlogomulyo Public Elementary School, where follow-up supervision demonstrated a continuous professional learning process for teachers. Therefore, the implementation of academic supervision is not solely assessed by the frequency of observations, but rather by the extent to which the results of supervision are translated into concrete changes in teacher learning practices (Sitaasih, 2020; Safitri et al., 2020).

Overall, research results and theoretical analysis indicate that the implementation of academic supervision by the principal at Tlogomulyo Public Elementary School has progressed through three main stages: planning, conducting observations, and following up with guidance. These three stages demonstrate that the principal plays a strategic role as an academic supervisor, not only supervising but also guiding teachers towards professional development. From an educational management perspective, this implementation of academic supervision demonstrates the principal's instructional leadership, which focuses on the quality of learning. The principal not only manages school administration but also enters pedagogical spaces to ensure teachers' professional development. This is crucial because in elementary schools, the quality of learning is largely determined by the teacher's ability to manage active, meaningful, and developmentally appropriate learning experiences for students. Thus, the implementation of academic supervision at Tlogomulyo Public Elementary School can be understood as a relevant development instrument to strengthen the quality of the learning process, while also serving as a basis for subsequent discussions regarding its relationship to improving student learning outcomes. Academic supervision, carried out in a planned, collaborative, and sustainable manner, ultimately positions the principal as an agent of change in the quality of education at the elementary school level (Marhawati, 2020; Upik, 2020; Niswah, 2020).

Improving Learning Outcomes at Tlogomulyo Public Elementary School

Improved learning outcomes at Tlogomulyo Public Elementary School can be understood as positive changes in the quality of the learning process and student learning outcomes after teachers implemented lessons in a more focused, planned, and tailored manner tailored to students' needs. Research shows that improved learning outcomes are reflected not only in students' academic grades, but also in increased student engagement during learning, engagement in discussions, ability to complete assignments, and improved understanding of the material being taught. In the elementary school context, learning outcomes must be interpreted more broadly, not limited to test scores alone, but also encompassing the development of thinking skills, social skills, learning discipline, and students' ability to respond to classroom learning experiences. Research findings indicate that when the learning process is more structured, students tend to be more focused, more willing to ask questions, and more able to complete assignments independently. Theoretically, learning outcomes are the product of the interaction between the quality of teacher planning, learning strategies, the classroom environment, and student characteristics. Therefore, the improvement in learning outcomes at Tlogomulyo Public Elementary School should be seen as an indicator that the

classroom learning process is moving toward greater effectiveness, not simply an increase in evaluation scores (Mezaoktriani & Zaiyasni, 2020; Panjaitan et al., 2020).

Research shows that improved learning outcomes at Tlogomulyo Public Elementary School are closely related to the quality of teachers' lesson planning. Teachers who develop comprehensive learning materials, set clear objectives, adapt materials to student characteristics, and develop targeted evaluation strategies tend to produce more effective learning. In classroom implementation, good planning creates a more systematic learning flow, allowing students to follow learning activities coherently and understand the relationship between one topic and the next. From a learning theory perspective, thorough planning is the primary foundation for achieving learning outcomes, as objectives, materials, methods, media, and evaluation must be interconnected for a meaningful learning experience. A 2020 study showed that the quality of lesson plans and teachers' accuracy in organizing learning activities contribute to improved elementary school student learning outcomes. This finding aligns with the situation at Tlogomulyo Public Elementary School, where learning outcomes improved when teachers no longer taught spontaneously without preparation but instead used clear planning to guide learning. Therefore, improved learning outcomes are not a random occurrence, but rather a consequence of consciously designed, systematic, and student-centered learning (Panjaitan et al., 2020; Yuafian & Astuti, 2020).

In addition to planning, research also shows that improved learning outcomes at Tlogomulyo Public Elementary School are significantly influenced by the use of more active and participatory learning methods. Teachers who have begun implementing group discussions, question-and-answer sessions, problem-solving, and collaborative activities have been shown to create a more lively learning environment than one-way learning. Students no longer simply listen to teacher explanations but engage in the thinking process, exchange ideas, work on assignments together, and present their learning outcomes to the class. This makes it easier for students to understand the material because learning occurs not only verbally but also through experience and interaction. Theoretically, an active learning approach positions students as the subjects of learning, so that learning success is determined by the extent to which students are cognitively, affectively, and socially involved in learning activities. Research in 2020 showed that the use of discussion methods and problem-based learning models can improve elementary school student learning outcomes because they provide space for students to think critically, collaborate, and construct their own knowledge. These findings corroborate research at Tlogomulyo Public Elementary School, which found that improved learning outcomes are influenced not only by what teachers teach, but also by how teachers manage students' learning experiences in the classroom (Mezaoktriani & Zaiyasni, 2020; Yuafian & Astuti, 2020).

Improved learning outcomes at Tlogomulyo Public Elementary School are also evident in the improved use of media and learning resources in the learning process. Research shows that teachers who use visual media, worksheets, simple props, and contextual examples from their surroundings are able to help students understand the material more concretely. At the

elementary school level, students' characteristics, who are still in the concrete operational stage, make the use of learning media crucial, as students more easily grasp concepts when presented through objects, images, activities, or real-life experiences. From a learning theory perspective, learning media serves as a bridge between abstract concepts and students' concrete experiences, thus strengthening their absorption and retention of material. A 2020 study showed that elementary school student learning outcomes improve when lessons are designed with an approach that provides opportunities for students to discover, observe, and practice concepts directly, such as in discovery learning and inquiry models. This aligns with findings at Tlogomulyo Public Elementary School, where improved learning outcomes occurred when teachers relied less on textbooks and utilized more varied learning resources relevant to students' lives. Therefore, improved learning outcomes can be understood as the result of increasingly contextual, engaging, and developmentally appropriate learning (Panjaitan et al., 2020; Sanita & Anugraheni, 2020).

Overall, the research findings and theoretical analysis indicate that improved learning outcomes at Tlogomulyo Public Elementary School resulted from improvements in the learning process, including more thorough planning, the use of active methods, greater student engagement, and the use of more appropriate media and learning resources. The improved learning outcomes in this study were reflected not only in student achievement but also in the quality of the learning experience, which became more lively, participatory, and meaningful. Theoretically, learning outcomes are the output of an effective learning system; therefore, when the quality of learning improves, student learning outcomes tend to improve as well. These findings demonstrate that efforts to improve learning outcomes in elementary schools are inextricably linked to the role of teachers as both designers and implementers of learning, who determine the quality of classroom interactions. In the context of Tlogomulyo Public Elementary School, improved learning outcomes indicate that the learning process has moved in a positive direction and has had a positive impact on students. Therefore, the learning outcomes in this study can be positioned as an indicator of the success of improving the learning process, which will be even stronger when linked to the implementation of the principal's academic supervision as a factor influencing the quality of teachers' work in teaching (Sanita & Anugraheni, 2020; Nurhadiyati et al., 2020).

The Impact of Academic Supervision of Teachers by the Principal on Improving Learning Outcomes at Tlogomulyo Public Elementary School

The impact of academic supervision of teachers by the principal on improving learning outcomes at Tlogomulyo Public Elementary School can be understood from research findings that indicate a positive relationship between the intensity of principal guidance and improvements in the quality of teacher learning in the classroom. The results show that teachers who receive planned academic supervision tend to demonstrate better teaching readiness, both in developing learning materials, managing classrooms, and implementing learning evaluations. This condition results in improved learning interactions between teachers and students, resulting in more focused, active, and effective learning. In this context,

academic supervision functions as a professional development mechanism that helps teachers reflect on their teaching practices, identify weaknesses, and make improvements that directly impact student learning outcomes. Theoretically, academic supervision does not work directly on students, but rather through improving the competence and performance of teachers as the primary implementers of learning. Therefore, when principals are able to implement supervision systematically, its impact will be seen in improvements in the learning process, ultimately contributing to improved student learning outcomes in elementary schools. Thus, research findings at Tlogomulyo Public Elementary School confirm that academic supervision is not merely an administrative activity, but a strategic instrument that significantly impacts the quality of learning (Ayubi et al., 2020; Utamy et al., 2020).

Empirically, the impact of academic supervision on improving learning outcomes at Tlogomulyo Public Elementary School is evident through changes in teachers' pedagogical competence. After receiving guidance from the principal, teachers demonstrated improvements in formulating learning objectives, selecting more appropriate teaching strategies, utilizing learning media, and conducting more systematic assessments. These changes directly impacted students' understanding of the subject matter, as learning was no longer monotonous but rather more varied and responsive to student needs. In educational supervision theory, teacher pedagogical competence is the primary link between academic supervision and learning outcomes. The principal, as supervisor, not only assesses teachers but also helps them improve their professional capacity to manage learning effectively. When teachers develop pedagogically, learning becomes more meaningful and student learning outcomes improve. These findings reinforce the view that the success of academic supervision should be measured not only by the implementation of classroom observations, but also by changes in teacher competencies that contribute to improving the quality of student learning outcomes. In other words, at Tlogomulyo Public Elementary School, the impact of academic supervision is evident through the transformation in the quality of teacher work, which then influences student learning outcomes (Prayoga et al., 2020; Rachmawati & Suyatno, 2020).

In addition to improving pedagogical competence, the impact of academic supervision on learning outcomes at Tlogomulyo Public Elementary School is also evident in the creation of a culture of reflection and evaluation in teaching. The study showed that teachers who received supervision from the principal were more accustomed to evaluating their teaching implementation, correcting deficiencies, and trying new strategies in subsequent meetings. This reflective process made learning more adaptive to students' needs, as teachers no longer taught routinely without evaluation but instead consciously improved methods, media, and approaches based on supervisory input. Theoretically, effective academic supervision emphasizes a continuous coaching cycle: observation, feedback, reflection, and follow-up. This cycle enables teachers to develop professional habits of continuously learning from their own practice. As this culture of reflection develops, the quality of learning gradually improves and impacts student learning outcomes. In elementary schools, a culture of reflection is crucial because the diverse characteristics of students require teachers to continually adapt their

learning approaches. Therefore, the impact of academic supervision at Tlogomulyo Public Elementary School is not only evident in technical improvements in learning but also in the development of a more open professional attitude among teachers toward evaluation and continuous improvement, which ultimately strengthens student learning outcomes (Suhardan, 2020; Wibowo & Hasanah, 2020).

Research also shows that the influence of academic supervision on improving learning outcomes at Tlogomulyo Public Elementary School is stronger when the principal not only supervises but also provides motivation, direction, and professional support to teachers. Teachers feel more motivated to improve the quality of learning when the principal acts as a mentor who provides solutions to learning challenges, rather than simply as a performance assessor. In practice, this support is evident in post-supervision discussions, suggestions on learning strategies, and encouragement to use more innovative methods. Theoretically, this relates to the concept of principal instructional leadership, which focuses on improving the quality of learning through teacher development. Principals who implement supervision with a collaborative approach will more easily build teacher commitment to change, so that supervision results are not limited to assessment documents but are actually implemented in the teaching and learning process. This situation explains why improving learning outcomes at Tlogomulyo Public Elementary School is influenced not only by the presence of supervision itself, but also by the quality of the professional relationship between the principal and teachers during the supervision process. The more constructive and supportive the supervision, the greater the chance of improving student learning outcomes (Suwartini, 2020; Yuliana & Kristiawan, 2020).

Overall, the research results and theoretical analysis indicate that academic supervision of teachers by the principal significantly influences learning outcomes at Tlogomulyo Public Elementary School through several key channels: improving teacher pedagogical competence, improving the quality of the learning process, fostering a culture of professional reflection, and increasing teacher motivation in implementing learning. Academic supervision is a crucial variable because it serves as a driver of change in the quality of learning within the school itself. The principal, through planned, collaborative, and ongoing supervision, is able to encourage teachers to improve their teaching practices so that students experience more effective, active, and meaningful learning. From the perspective of educational management theory, these findings confirm that academic supervision is part of results-oriented instructional leadership, as the ultimate goal is not simply improving teacher performance but also improving student learning outcomes. Thus, at Tlogomulyo Public Elementary School, the principal's academic supervision has been shown to play a strategic role as a factor influencing the quality of learning and student achievement. This finding also confirms that efforts to improve learning outcomes in elementary schools are inseparable from optimizing the principal's role as an academic supervisor who actively mentors, directs, and assists teachers professionally (Ayubi et al., 2020; Prayoga et al., 2020; Suwardi, 2020).

CONCLUSION

Based on the research results, it can be concluded that academic supervision of teachers by the principal has a positive and significant influence on improving learning outcomes at Tlogomulyo Public Elementary School. The implementation of academic supervision through program planning, classroom learning observations, providing feedback, and follow-up coaching has been proven to be able to improve teacher pedagogical competence, improve the quality of the learning process, and encourage teachers to be more reflective and innovative in teaching. These improvements have an impact on student learning outcomes as seen from increased activeness, understanding of the material, involvement in the learning process, and better academic achievement. Thus, academic supervision does not only function as an administrative oversight activity, but becomes a strategic instrument in teacher professional development that contributes directly to the quality of learning. Therefore, the optimization of academic supervision by the principal needs to be continuously strengthened in a planned, collaborative, and sustainable manner so that improvements in teacher quality and student learning outcomes in elementary schools can be achieved optimally.

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