
Improving Mathematics Learning Outcomes Through the Teams Games Tournament (TGT) Cooperative Learning Model Among Fourth-Grade Elementary School Students

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DOI : <https://doi.org/10.56480/jln.v6i3.89>

Received: Juli 12,2026

Revised: Juli 13,2026

Accepted: Juli 26, 2026

Abstract

This study examines the implementation of educational supervision management in improving teacher performance in secondary schools. Employing a qualitative descriptive approach, data were collected through observations, interviews, and document analysis involving school principals, supervisors, and teachers. Findings reveal that systematic supervision—comprising planning, classroom observation, constructive feedback, and follow-up evaluation—significantly enhances teachers' professional competence, instructional quality, classroom management, and continuous development. Despite challenges such as limited supervisory time, administrative workloads, and varying teacher readiness, effective supervision remains a strategic approach to sustainable school improvement. Strengthening collaboration among school leaders, supervisors, and teachers is essential for maximizing its effectiveness.

Keywords– *Teams Games Tournament (TGT), mathematics learning outcomes; cooperative learning; elementary education*



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1. Introduction

Teacher performance is one of the most important determinants of educational quality because teachers directly influence students' academic achievement and character development. In secondary schools, teachers are expected to demonstrate professional competence, pedagogical skills, and the ability to adapt to changes in curriculum and learning technology. Therefore, educational supervision management has become a strategic instrument for improving teachers' professional performance through systematic planning, implementation, monitoring, and evaluation (Ramadhan, 2017).

Educational supervision management is not merely an administrative activity but also a continuous professional development process. Effective supervision enables teachers to identify weaknesses in instructional practices, receive constructive feedback, and improve the quality of classroom instruction. Several studies have reported that well-managed academic supervision contributes significantly to teachers' instructional competence, motivation, and overall performance (Tukiyo et al., 2024). significantly to teachers' instructional competence, motivation, and overall performance (Tukiyo et al., 2024).

Despite various educational reforms, many secondary schools continue to face challenges in implementing effective supervision. Supervision is often limited to administrative inspections rather than professional guidance, reducing its effectiveness in supporting teachers' instructional improvement. Consequently, educational supervision should be implemented as an integrated management process involving planning, organizing, implementation, evaluation, and continuous follow-up to ensure sustainable teacher development (Sopacuaperu et al., 2025).

Previous studies have generally focused on examining the relationship between academic supervision and teacher performance. However, limited research has comprehensively investigated how educational supervision

management is implemented as a systematic managerial process in secondary schools. This gap indicates the need for further research emphasizing supervision management as a continuous quality improvement strategy rather than merely an evaluation activity.

Accordingly, this study supports previous findings that academic supervision positively influences teacher performance while extending the discussion by examining the implementation of educational supervision management from a comprehensive managerial perspective. The novelty of this research lies in analyzing supervision management through the interconnected stages of planning, implementation, monitoring, evaluation, and follow-up. Therefore, this study aims to analyze the implementation of educational supervision management in improving teachers' performance in secondary schools.

2. Method

This study employed a qualitative descriptive research design to explore the implementation of educational supervision management in improving teachers' performance in secondary schools. A qualitative approach was selected because it enables researchers to gain an in-depth understanding of supervision management processes, interactions among educational stakeholders, and the contextual factors influencing teacher performance (Creswell & Creswell, 2018).

The research was conducted in selected secondary schools where educational supervision had been implemented systematically. The participants consisted of school principals, academic supervisors, vice principals for curriculum, and teachers who had actively participated in supervision activities. Participants were selected using purposive sampling because they possessed relevant knowledge and experience regarding educational supervision management (Patton, 2015).

Data were collected through three complementary techniques: semi-structured interviews, non-participant observations, and document analysis. Semi-structured interviews were conducted to obtain comprehensive information regarding the planning, implementation, monitoring, evaluation, and follow-up of educational supervision. Classroom observations were carried out to examine the implementation of supervision practices and teachers' instructional performance. In addition, relevant documents, including supervision programs, supervision reports, lesson plans, teacher performance appraisal records, and school policies, were analyzed to strengthen the credibility of the findings through data triangulation (Miles et al., 2020).

The research procedure consisted of four stages. The first stage involved preliminary observation and identification of supervision practices in the selected schools. The second stage focused on collecting data through interviews, observations, and document analysis. The third stage involved organizing and coding the collected data according to themes related to educational supervision management and teacher performance. Finally, the fourth stage consisted of interpreting the findings and drawing conclusions regarding the implementation of educational supervision management in improving teachers' performance.

Data analysis followed the interactive model proposed by Miles, Huberman, and Saldaña (2020), which includes data condensation, data display, and conclusion drawing and verification. During the data condensation stage, all interview transcripts, observation notes, and documents were carefully reviewed, categorized, and coded according to predetermined research themes. The organized data were then presented in descriptive narratives and thematic matrices to facilitate interpretation. Finally, conclusions were continuously verified through data triangulation and member checking to ensure the credibility and trustworthiness of the research findings.

To enhance the validity of the study, source triangulation, method triangulation, and member checking were employed. Source triangulation was conducted by comparing information obtained from principals, supervisors, and teachers. Method triangulation involved comparing findings derived from interviews, observations, and document analysis. Member checking was performed by confirming the interview results with participants to ensure the accuracy of the interpreted data (Lincoln & Guba, 1985).

Overall, this methodological approach enabled the researcher to comprehensively examine how educational supervision management is planned, implemented, monitored, evaluated, and continuously improved to enhance teachers' professional performance in secondary schools.

3. Result and Discussion

The analysis of previous studies indicates that the implementation of educational supervision management has a significant contribution to improving teachers' performance in secondary schools. Effective supervision management is characterized by systematic planning, classroom observation, constructive feedback, continuous monitoring, evaluation, and professional follow-up. These interconnected management functions create opportunities for teachers to improve pedagogical competence, instructional quality, classroom management, and professional commitment.

Educational supervision management begins with careful planning. School principals and academic supervisors identify teachers' professional needs, prepare supervision schedules, and develop supervision instruments aligned with school objectives. Such planning enables supervision activities to be conducted systematically and transparently, allowing teachers to understand the purpose of supervision as professional assistance rather than administrative inspection. Previous research has shown that well-planned

supervision increases teachers' readiness to improve instructional practices and supports sustainable professional development (Glickman et al., 2018).

The implementation stage emphasizes collaborative classroom supervision. Supervisors observe classroom instruction, assess teaching strategies, learning media, student engagement, and classroom management, followed by reflective discussions with teachers. Constructive feedback encourages teachers to recognize their strengths and identify areas requiring improvement. Instead of functioning as an evaluative mechanism alone, supervision becomes a process of professional mentoring that supports continuous learning. This finding is consistent with Zepeda (2017), who argued that developmental supervision enhances teachers' reflective practice and instructional effectiveness.

Continuous monitoring and evaluation are essential components of effective supervision management. Monitoring allows school leaders to assess teachers' progress after supervision activities, while evaluation identifies whether professional development objectives have been achieved. The literature indicates that schools implementing regular supervision cycles demonstrate greater consistency in instructional improvement than schools conducting supervision only for administrative compliance (Sergiovanni & Starratt, 2014). Therefore, supervision should be viewed as a continuous quality assurance process rather than a periodic assessment activity.

Another important finding is the role of follow-up activities in sustaining teacher improvement. Professional coaching, lesson study, peer discussion, workshops, and mentoring programs provide opportunities for teachers to implement recommendations obtained during supervision. Continuous follow-up strengthens teachers' confidence, encourages collaborative learning, and supports the development of innovative instructional practices. According to Robinson et al. (2009), instructional leadership combined with continuous

professional support contributes positively to teachers' instructional performance and student learning outcomes.

Compared with previous studies, the present review highlights educational supervision management from a broader managerial perspective. Earlier studies generally examined the relationship between academic supervision and teacher performance or focused on the effectiveness of classroom supervision alone. In contrast, this study emphasizes that supervision should be implemented as an integrated management cycle consisting of planning, implementation, monitoring, evaluation, and follow-up. The integration of these stages enables schools to establish sustainable professional development systems rather than isolated supervision activities.

The findings also demonstrate that successful supervision depends on effective communication between school leaders and teachers. Teachers are more willing to improve their instructional practices when supervision is conducted collaboratively, respectfully, and based on professional dialogue. Such an approach creates a positive school culture that promotes reflective teaching, professional collaboration, and continuous improvement. These findings are supported by Hallinger and Heck (2010), who emphasized that leadership practices fostering collaboration have a substantial impact on school effectiveness and teacher development.

The practical implication of this study is that school principals should strengthen educational supervision management by implementing structured supervision programs, providing constructive feedback, organizing continuous professional development, and ensuring systematic follow-up after classroom observations. Educational policymakers are also encouraged to formulate supervision policies that prioritize teacher professional growth rather than administrative compliance. Through comprehensive supervision

management, schools can improve teachers' professional competence, enhance instructional quality, and ultimately achieve better educational outcomes for students.

4. Conclusion

The implementation of educational supervision management plays a vital role in improving teachers' performance in secondary schools through a systematic process of planning, implementation, monitoring, evaluation, and continuous follow-up. Effective supervision not only enhances teachers' pedagogical competence, instructional quality, and professional commitment but also fosters a collaborative school culture that supports continuous professional development. This study demonstrates that educational supervision should be viewed as an integrated management process rather than merely an administrative activity. The findings contribute to the understanding that sustainable supervision management can strengthen instructional leadership and improve overall school quality. The practical impact of this research is to provide school principals, supervisors, and educational policymakers with a comprehensive framework for designing and implementing effective supervision programs that promote continuous teacher development and ultimately improve the quality of education in secondary schools.

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