ACADEMIC SUPERVISION MANAGEMENT BY SCHOOL PRINCIPALS IN ENHANCING THE PEDAGOGICAL COMPETENCE OF KINDERGARTEN TEACHERS

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Abstract

Academic supervision is a principal's managerial function that plays a crucial role in improving the quality of learning in kindergartens (TK). Kindergarten teachers are required to possess pedagogical competencies appropriate to the developmental characteristics of early childhood. This study aims to describe the principal's academic supervision management in improving the pedagogical competency of kindergarten teachers. This study used a qualitative approach with descriptive methods. Data collection techniques included observation, interviews, and documentation. The results indicate that the principal's academic supervision management is implemented through the planning, implementation, and evaluation stages of supervision. Academic supervision that is carried out in a planned, continuous, and coaching manner can improve the pedagogical competency of kindergarten teachers, particularly in planning play-based learning, implementing developmentally appropriate learning, and evaluating child development.

Keywords: management, academic supervision, principal, pedagogical competency, kindergarten teachers.

INTRODUCTION

Early childhood education (PAUD) is a crucial stage in shaping the foundation of a child's development, encompassing cognitive, social-emotional, language, physical-motor, as well as moral and religious values. At the kindergarten (TK) level, the learning process must be designed in accordance with the developmental characteristics of young children, emphasizing the principle of learning through play. Therefore, kindergarten teachers are required to possess high pedagogical competence to effectively design, implement, and evaluate meaningful learning experiences that meet children's needs.

However, in practice, various issues related to kindergarten teachers' pedagogical competence persist, such as lesson planning that is not fully child-development-based, the use of limited and repetitive teaching methods, and suboptimal implementation of child development assessments. This situation highlights the need for continuous professional development for kindergarten teachers to ensure the quality of learning continues to improve.

As educational leaders, school principals play a strategic role in enhancing teachers' professionalism through the implementation of academic supervision. Academic supervision serves not only as a monitoring activity but also as a developmental process aimed at helping teachers enhance their pedagogical skills. For academic supervision to be effective, supervision management is required that encompasses systematic planning, implementation, and evaluation aligned with the characteristics of learning in kindergarten.

In today's educational context, learning challenges are becoming increasingly complex, particularly with the implementation of the Deep Learning Curriculum policy in early childhood education, which demands that teachers be more creative, reflective, and adaptive to children's needs. Additionally, technological advancements and post-pandemic social changes have further influenced learning patterns in kindergarten. These conditions

underscore the importance of the principal's role in effectively managing academic supervision to enhance kindergarten teachers' pedagogical competencies.

Previous studies have shown that academic supervision conducted in a planned and sustained manner can improve the quality of learning and teachers' professionalism. Previous research findings reveal that collaborative and humanistic academic supervision can improve teachers' ability to plan instruction, apply appropriate teaching methods, and conduct comprehensive assessments of learning outcomes. Other studies also confirm that effective academic supervision management contributes to enhancing teachers' pedagogical competencies and has a positive impact on the quality of the learning process in early childhood education.

Nevertheless, studies specifically examining school principals' management of academic supervision in enhancing teachers' pedagogical competencies at the kindergarten level remain limited. Therefore, this research is crucial to provide an empirical understanding of how planning, implementation, and evaluation of academic supervision are carried out by kindergarten principals, as well as how these contribute to enhancing teachers' pedagogical competencies.

Based on this background, the research questions in this study are: (1) how do kindergarten principals plan academic supervision, (2) how do kindergarten principals implement academic supervision to improve teachers' pedagogical competencies, and (3) how are academic supervision evaluated and followed up to improve teachers' pedagogical competencies. The objective of this study is to describe the kindergarten principal's academic supervision management, which encompasses the planning, implementation, and evaluation of academic supervision in enhancing the pedagogical competencies of kindergarten teachers. The findings of this study are expected to provide theoretical contributions to the development of early childhood education management studies, as well as practical contributions for kindergarten principals and teachers in improving the quality of early childhood learning.

METHOD

1. Research Approach and Design

This study employs a mixed-methods approach with a sequential explanatory design, which involves the sequential combination of quantitative and qualitative methods. The first phase involved the collection and analysis of quantitative data to assess the implementation of academic supervision by school principals and the level of teachers' pedagogical competence. The second stage involved qualitative exploration through interviews and observations to provide a more comprehensive explanation of the quantitative findings. This approach was chosen because academic supervision management requires not only measuring effectiveness but also understanding the processes, strategies, and dynamics of its implementation in the field.

2. Population, Subjects, and Sampling Techniques

a. Population

The population in this study consists of all kindergarten teachers and kindergarten principals in the study area of Kramatwatu Subdistrict, Serang Regency. The population comprises 22 kindergartens with a total of 45 teachers and 22 principals.

b. Sample

The quantitative sample was determined using the proportionate stratified random sampling technique, taking into account school status (public/private) to ensure representativeness. If the population size is relatively small (<100), the total sampling technique is used. For the qualitative phase, the purposive sampling technique was used, which involves selecting informants considered to have the deepest understanding of academic supervision implementation, including:

· 3–5 kindergarten principals
· 6–8 teachers
· 1 kindergarten supervisor (if relevant)

3. Research Instruments and Instrument Quality Assessment

a. Quantitative Instruments

The instrument used is a Likert-scale questionnaire (1–5) consisting of two variables:

1. Principal's Academic Supervision Management, with indicators:
o Supervision planning
o Supervision implementation
o Supervision follow-up
o Supervision evaluation
2. Kindergarten Teachers' Pedagogical Competence, with indicators:
o Understanding of student characteristics
o Lesson planning
o Lesson implementation
o Lesson evaluation
o Child potential development

b. Qualitative Instruments

· Semi-structured interview guide
· Supervision observation sheet
· Documentation study (supervision program, teaching modules, evaluation reports)

c. Validity and Reliability Tests

1. Content Validity

Conducted through expert judgment by 2–3 experts in educational management/early childhood education.

2. Empirical Validity Test

Using Pearson's Product-Moment Correlation. An item is considered valid if r_(calculated) > r_(table).

3. Reliability Test

Using Cronbach's Alpha coefficient. The instrument is considered reliable if $\alpha \geq 0.70$.

4. Validity of Qualitative Data

Using the following techniques:
o Source triangulation
o Methodological triangulation
o Member checking
o Audit trail

4. Research Procedure

The research procedure is carried out through the following stages:

1. Preparation Stage
o Literature review
o Instrument development
o Instrument pilot testing
o Obtaining research permits
2. Data Collection Phase
o Interviews with school principals and teachers
o Observation of supervision implementation
o Collection of supporting documents
3. Data Analysis Phase
o Qualitative data analysis
o Integration of results (mixing data)

4. Report Preparation Phase
o Interpretation of results
o Drawing conclusions
o Formulation of recommendations
5. Data Analysis Techniques
a. Quantitative Analysis
Data was analyzed using:
· Descriptive statistics (mean, percentage, standard deviation)
· Normality test
· Pearson correlation test
· Simple linear regression test to determine the effect of supervisory management on teachers' pedagogical competencies
b. Qualitative Analysis
Using the Miles & Huberman model:
1. Data reduction
2. Data presentation
3. Drawing conclusions/verification
c. Data Integration
Qualitative results are integrated during the interpretation stage to provide a comprehensive understanding of the effectiveness of academic supervision.
6. Research Limitations
Some limitations of this study include:
1. Quantitative data is based on respondents' perceptions and thus has the potential to contain subjective bias
2. The scope of the study is limited to a specific region, so the generalizability of the research results remains limited.
3. External factors such as school organizational culture and foundation policies cannot be fully controlled.
4. The limited research timeframe may affect the depth of observation regarding the implementation of supervision

RESULT AND DISCUSSION

The results of this study are presented based on quantitative findings and supplemented with qualitative data. The analysis focuses on two main variables: the school principal's academicsupervision management and the pedagogical competencies of kindergarten teachers.
1. Description of the School Principal's Academic Supervision Management
The results of the descriptive analysis indicate that academic supervision management falls into the "good" category.

Table 1. Description of the Principal's Academic Supervision Management

Indikator Supervisi	Mean	Presentase (%)	Kategori
Perencanaan Supervisi	4,21	84,2	Sangat baik
Pelaksanaan Supervisi	3,98	79,6	Baik
Tindak Lanjut Supervisi	3,87	77,4	Baik
Evaluasi Supervisi	3,75	75,0	Baik
Rata-rata total	3,95	79,05	Baik

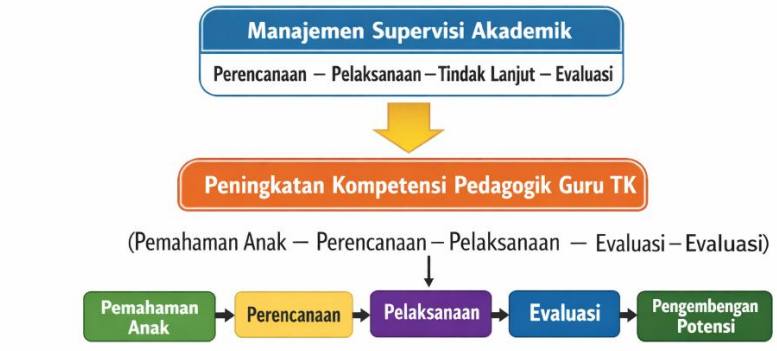
The findings indicate that the planning aspect of supervision received the highest score. School principals have developed a scheduled and systematic supervision program. However, the evaluation aspect of supervision received a relatively lower score, indicating a need to

strengthen ongoing monitoring and the documentation of follow-up actions. Interview results corroborate the quantitative data that supervision is conducted at least twice per semester and is accompanied by reflective discussions following classroom observations.

2. Description of Kindergarten Teachers' Pedagogical Competencies
Teachers' pedagogical competencies fall into the good to very good categories.
Table 2. Description of Teachers' Pedagogical Competencies

Indikator Kompetensi Pedagogik	Mean	Persentase (%)	Kategori
Pemahaman Karakteristik Anak	4,25	85,0	Sangat baik
Perencanaan Pembelajaran	4,10	82,0	Sangat baik
Pelaksanaan Pembelajaran	3,92	78,4	Baik
Evaluasi Pembelajaran	3,80	76,0	Baik
Pengembangan Potensi Anak	4,05	81,0	Sangat baik
Rata-rata total	4,02	80,48	Baik

The data indicate that preschool teachers demonstrate strength in understanding the characteristics of young children, as reflected in their implementation of play-based learning and individualized approaches.
However, the aspect of learning evaluation still requires improvement, particularly regarding the use of authentic assessment tools.
3. The Influence of Supervisory Management on Teachers' Pedagogical Competence
The results of a simple linear regression test indicate that the principal's academic supervisory management significantly influences teachers' pedagogical competence. This means that 46% of the increase in teachers' pedagogical competence is attributed to academic supervisory management, while 54% is influenced by other factors (motivation, teaching experience, training, school culture). This finding is supported by interview results indicating that teachers who receive regular supervision demonstrate improvements in lesson plan development, variation in teaching methods, and reflection on teaching practices.
R value = 0.68
$R^2 = 0.46$
Sig. = 0.000 (<0.05)
4. Research Findings Model The following is a model of the relationships among variables based on the research results:



Gambar 1. Model Hasil Penelitian

This model indicates that systematic and continuous supervision directly contributes to the improvement of teachers' pedagogical competencies.
5. Synthesis of Findings

Overall, the research results indicate that:
1) The principal's management of academic supervision falls into the "good" and "structured" categories.
2) The pedagogical competencies of kindergarten teachers fall into the "good" to "very good" categories.
3) There is a positive and significant relationship between academic supervision management and teachers' pedagogical competencies.
4) Follow-up on supervision is a key factor in driving changes in teaching practices.
These results confirm that academic supervision is not merely an administrative activity but a strategic instrument for improving the quality of learning in kindergarten, making it worthy of a scientific journal article.

DISCUSSION

1. School Principals' Academic Supervision Management from the Perspective of Modern Supervision Theory

The research findings indicate that school principals' academic supervision management falls into the "good" category, with a primary strength in the planning aspect of supervision. This finding aligns with the concept of clinical supervision, which emphasizes systematic planning prior to conducting classroom observations. In clinical supervision, the pre-observation phase is key to agreeing on the focus for improving learning.
According to Dodd (Ministry of Education and Culture 2010), the principles of academic supervision include being practical, systematic, objective, realistic, anticipatory, constructive, cooperative, family-oriented, democratic, active, humanistic, continuous, integrated, and comprehensive. The approaches used in implementing academic supervision are often based on psychological principles. An educational supervision approach depends heavily on the characteristics of the teacher being supervised. (Nurkamal, 2025).
The role of the principal's academic supervision and teacher professionalism in schools is significant, as the continuous and ongoing supervision conducted by the principal can improve the quality of learning, which ultimately enhances the quality of education in Indonesia. Clinical supervision was first introduced and developed by Morris L. Cogan, Robert Goldhammer, and Richard Weller at Harvard University in the late 1950s and early 1960s, along with their colleagues at the Harvard School of Education. The focus of this supervision lies in a specialized approach implemented through face-to-face sessions with the teaching staff. There are two assumptions underlying the practice of clinical supervision. First, teaching is a highly complex activity that requires careful observation and analysis; through this observation and analysis, the instructional supervisor can effectively help teachers develop their ability to manage the learning process. Second, teachers seeking professional development prefer a collegial approach rather than an authoritarian one. (Setiyanti, n.d.).
Academic supervision serves as the foundation for professional oversight activities; the focus of this study is the support system implemented by the school principal to enhance teachers' professional competencies, thereby enabling teachers to better fulfill their core responsibility of educating their students,
in their role as inspirational leaders, school principals should be able to foster improvements in the quality of internal school management, thereby enabling the implementation of a learning process that stimulates students to achieve high academic performance. (Arifin, 2022).
Additionally, the research findings also indicate that supervision has been conducted on a scheduled basis and through reflective dialogue. This aligns with the collaborative supervision approach (Glickman, Gordon, & Ross-Gordon, 2014), which positions teachers

as professional partners rather than as objects of evaluation. Modern supervision is no longer an inspection but rather reflection-based guidance and continuous professional development. However, the evaluation and follow-up aspects of supervision still require strengthening. From an instructional leadership perspective, the principal does not merely act as an administrator but as a learning leader who ensures continuous monitoring of the impact of supervision on teaching practices (Hallinger, 2011). This means that effective supervision must be accompanied by coaching, mentoring, and capacity-building for teachers. (Setiyanti, 2025).

Thus, the findings of this study confirm that the application of modern supervision principles—which are systematic, dialogic, and continuous—contributes to improving the quality of learning in kindergarten.

2. Enhancement of Kindergarten Teachers' Pedagogical Competencies

Research findings indicate that teachers' pedagogical competencies fall into the good to very good categories, particularly regarding their understanding of early childhood characteristics. This aligns with child development theories (Piaget and Vygotsky), which emphasize the importance of understanding children's cognitive and social developmental stages when designing instruction.

In the context of early childhood education (PAUD), pedagogical competencies encompass the ability to design play-based learning (learning through play), authentic assessment, and the holistic development of children's potential. Research findings indicate that teachers have implemented a child-centered learning approach, which is a core principle of modern early childhood education. Supervisory functions at all levels of education, including kindergarten, are optimized as a means to enhance the quality of education. (Ridwan, 2023).

However, the aspect of learning evaluation remains relatively weaker compared to other indicators. This suggests that teachers still require support in the systematic use of authentic assessment tools and the documentation of children's development. This finding is consistent with several previous studies stating that assessment in early childhood education is often not yet optimal in its implementation.

3. The Influence of Supervisory Management on Teachers' Pedagogical Competence

Competence is a key component of professional standards, alongside a code of ethics as a regulation of professional conduct established within specific procedures and supervisory systems (Hafsah M.Nur & Nurul Fatonah, 2023). According to Sagala (in Wijaya et al., 2023), competence is a combination of mastery of knowledge, skills, values, attitudes, traits, understanding, appreciation, and expectations that underpin an individual's characteristics for performing tasks or work to achieve quality standards in a specific job. According to Fitriyanti (2024), competence is a combination of knowledge, skills, attitudes, and values that enables an individual to perform tasks or work effectively. (Rahman, 2025).

Regression analysis results indicate that academic supervision management contributes 46% to the improvement of teachers' pedagogical competencies. This finding reinforces the theory that supervision is a strategic instrument in teacher professional development. According to the professional development model theory, improvements in teachers' competencies occur through a cycle of reflection, feedback, and practice refinement (Desimone, 2009). Academic supervision conducted in a planned manner enables teachers to receive constructive feedback that impacts improvements in teaching methods, the development of lesson plans, and learning evaluations. The results of this study are also consistent with various previous studies indicating a positive relationship between school principals' academic supervision and teachers' performance and competencies. Several studies conclude that supervisory approaches that are developmental and participatory have a stronger influence than those that are administrative. However, there are still 54% other factors influencing teachers' pedagogical competencies, such as teaching experience, professional training, intrinsic

motivation, school organizational culture, and institutional support. This indicates that supervision is not the sole factor but rather part of the educational quality ecosystem..

CONCLUSION

This study confirms that the principal's academic supervision plays a strategic and decisive role in enhancing the pedagogical competencies of kindergarten teachers. The findings indicate that supervision that is systematically planned, collaboratively implemented, and followed up through reflection and continuous professional development can strengthen teachers' ability to design learning experiences appropriate for young children's characteristics, manage classrooms effectively, and conduct authentic assessments of children's development. Supervision that is not merely administrative but oriented toward professional development has been proven to foster more creative, adaptive, and child-centered teaching practices. The significance of this study lies in the assertion that the quality of learning in early childhood education is greatly influenced by the instructional leadership of school principals through structured and continuous academic supervision management. The empirical evidence obtained indicates that a dialogic and teacher-needs-based approach to supervision is worthy of consideration as a reference in the development of policies and supervisory practices within early childhood education institutions. However, this study has not fully addressed how variations in institutional context, school organizational culture, and the principal's workload influence the effectiveness of academic supervision; thus, these aspects present an area for further research by subsequent scholars.

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