Implementation of Transformative Supervision in Improving The Quality of Project-Based Learning

Ahmad Hariyadi1, Sri Utaminingsih1, Gunawan Setiadi1, Khamdun Khamdun1, Siti Aniqoh Shofwani2

1Universitas Muria Kudus, Kudus, Indonesia

2 STIE Semarang, Semarang, Indonesia

\*Corresponding Author: ahmad.hariyadi@umk.ac.id

**Abstract.** This study aims to describe the implementation of transformative supervision in improving the quality of project-based learning (PjBL) at SMAN 1 Rembang. The background of this study is based on the importance of the role of principals and supervisors in directing teachers to become reflective, creative, and innovative learning facilitators in the Merdeka Belajar era. Transformative supervision is seen as an approach that encourages cultural and structural changes in learning practices through reflective dialogue, inspirational leadership, and strengthening the professional capacity of teachers. This research method uses a descriptive qualitative approach with data collection techniques through observation, in-depth interviews, and documentation. The research subjects included principals, subject teachers, and supervisors. The results of the study showed that the implementation of transformative supervision contributed significantly to improving the quality of planning, implementation, and evaluation of project-based learning. Participatory and empathetic supervision can encourage teachers to innovate, collaborate, and reflect on themselves continuously. The implications of this study indicate that the transformative supervision model can be an effective strategy to improve teacher professionalism and the quality of learning, especially in implementing the PjBL approach. Recommendations are given for schools to strengthen a dialogic supervision culture, support the development of teacher learning communities, and make supervision an integral part of the transformation of educational quality.

**Keywords:** transformative supervision; project-based learning; learning quality; educational innovation

INTRODUCTION

Educational supervision is a professional development process carried out systematically to assist teachers in improving their competence, effectiveness, and the quality of the learning process. According to Glickman, Gordon, & Ross-Gordon (2014), educational supervision not only serves as a control mechanism but also functions as a professional development approach through reflection, collaboration, and empowerment. In the context of secondary schools, educational supervision includes classroom observations, guidance in lesson planning, teacher performance evaluations, and reflective dialogues aimed at formulating strategies to improve learning quality (Julaikah et al., 2024; Hariyadi, 2018; Sodikun et al., 2024). The current development of education demands a paradigm shift in learning, from teacher-centered to student-centered approaches. One relevant and innovative approach in facing the challenges of 21st-century education is Project-Based Learning (PjBL**)**. This approach enhances students’ critical thinking, creativity, collaboration, and communication skills. However, in many educational institutions, including public senior high schools (SMAN) in Rembang Regency, the implementation of PjBL has not been fully optimized. Many teachers still struggle to design meaningful learning projects, and there is a lack of support and mentoring in the implementation of innovative teaching strategies.

Project-Based Learning is a constructivist approach that emphasizes student engagement in completing real-world projects collaboratively. According to Thomas (2000), PjBL enables students to develop 21st-century skills such as critical thinking, collaboration, communication, and creativity (Ilyas et al., 2021; Nguyen et al., 2020). The key to successful PjBL lies in meticulous planning, the teacher's role as a facilitator, and authentic assessment that focuses on both the learning process and outcomes. Therefore, transformative supervision becomes crucial to ensure that teachers possess the skills and commitment necessary to implement PjBL effectively and sustainably. In this context, educational supervision plays a strategic role as an instrument to guide, facilitate, and empower teachers to implement instructional innovations optimally. Transformative supervision, which emphasizes collaboration, critical reflection, and continuous professional development, emerges as an alternative solution to promote changes in educational practice (Hariyadi et al., 2014). Rather than focusing solely on administrative compliance, transformative supervision fosters adaptive and humanistic instructional leadership.

The urgency of strengthening transformative supervision increases as curriculum changes and educational dynamics demand teachers to be more independent and creative in designing learning processes. Traditional top-down and evaluative supervision models are no longer relevant. Instead, an empowering and dialogic supervision model is needed so that teachers can develop as both facilitators and innovators. This study, therefore, aims to examine how the implementation of transformative supervision can enhance the quality of project-based learning and its impact on improving teaching practices and student learning outcomes in schools. 21st-century education transformation emphasizes the importance of instructional approaches that encourage students to think critically, creatively, collaboratively, and communicatively. One effective approach to achieve these goals is Project-Based Learning (PjBL), which positions students as active participants in the learning process through the completion of meaningful, contextual projects. According to Bell (2010), PjBL promotes deep student engagement through authentic experiences that integrate knowledge, skills, and social values. However, in many secondary schools, including SMAN Rembang, the implementation of PjBL faces several obstacles. Teachers often lack the capacity to design curriculum-integrated projects, and there is insufficient support to foster instructional innovation.

This is where educational supervision holds a vital role in guiding, motivating, and facilitating teachers to innovate in their instructional practices (Nisa Mubarok et al., 2024; Susilowati et al., 2024[ Faizin at al, 2024). In this context, transformative supervision is an appropriate approach. Introduced by Mezirow (1997) in the context of transformative learning theory, this approach emphasizes a shift in perception through critical reflection, dialogue, and empowerment. In education, Cranton (2006) explained that transformative supervision functions as a collaborative process that enables teachers to discover new meanings in their practice through reflective mentoring, rather than mere administrative oversight. Furthermore, international studies by Nguyen, Walker, & Nguyen (2020) in *Educational Management Administration & Leadership* show that dialogue- and reflection-based transformative supervision significantly improves teachers' motivation and pedagogical competence in secondary schools.

Educational supervision, as a systematic professional development process, aims to help teachers improve their competence and the effectiveness of the learning process. According to Glickman, Gordon, & Ross-Gordon (2014), supervision is not only a control mechanism but also a professional development strategy involving reflection, collaboration, and empowerment. In secondary schools, this includes classroom observation, planning guidance, teacher evaluation, and reflective dialogue to improve instructional quality. Research by Hazi & Arredondo Rucinski (2009) emphasized that supervision grounded in transformational principles significantly enhances project-based learning quality, particularly in schools that foster a collaborative learning culture.Transformative supervision not only enhances teaching skills but also builds a professional culture that supports innovation and continuous learning. Research by Wanzare (2012) in the *Journal of Educational Administration* highlights that dialogic and reflective supervision models encourage active teacher participation in the learning process, improving both job satisfaction and instructional quality. In the context of PjBL implementation at SMAN Rembang, transformative supervision is seen as a strategy to overcome pedagogical stagnation and revive innovation among teachers.

Thus, this study aims to examine the implementation of transformative supervision in enhancing the quality of project-based learning, as well as identifying changes in teachers’ instructional practices and student engagement as indicators of program success. Transformative supervision emerges as a model that goes beyond administrative and technical evaluation, encouraging a paradigm shift, critical reflection, and the empowerment of teachers as agents of change. According to the Transformational Leadership Theory by Bass and Avolio (1994), transformative supervision is characterized by inspiration, idealized influence, intellectual stimulation, and individualized consideration—all of which play crucial roles in cultivating an innovative learning climate.

Several international studies support the role of transformative supervision in improving learning quality. For example, Leithwood & Jantzi (2006) found that transformational leadership significantly contributes to teacher capacity and student achievement. Additionally, Hallinger (2011) emphasized that transformation-based supervision strategies are effective in schools pursuing pedagogical change. At SMAN 1 Rembang, efforts to improve project-based learning still face challenges such as the lack of reflective mentoring for teachers, limited innovation in project planning and implementation, and weak inter-teacher collaboration. In this context, the implementation of transformative supervision is seen as a promising strategy to address these challenges through ongoing mentoring, teacher-centered professional development, and the creation of a collaborative and reflective learning culture.

METHODS

This research was systematically structured using a descriptive qualitative approach, with research stages designed to address the focus of the study on the implementation of transformative supervision to improve the quality of project-based learning at SMAN 1 Rembang. This type of research is descriptive qualitative research, aiming to obtain a deep, holistic, and contextual understanding of transformative supervision practices. This approach is appropriate for exploring complex phenomena such as the dynamics of interaction between supervisors and teachers within the educational context. The research was conducted at SMAN 1 Rembang, Central Java, focusing on supervision and the implementation of project-based learning in the school. The research subjects were selected using purposive sampling techniques, based on the following criteria: a) A school principal who plays a supervisory role, b) Teachers who have implemented Project-Based Learning for at least two semesters, c) A supervisory officer who is actively involved in school supervision. The total number of informants was eight, consisting of:a) 1 principal, b) 1 supervisory officer, c) 6 teachers from various subjects relevant to PjBL. Data Collection Techniques and Instruments, In-depth Interviews: Used to explore the perceptions, experiences, strategies, and challenges of informants regarding the implementation of transformative supervision and PjBL, Participant Observation: Conducted to observe directly the supervision activities and the implementation of project-based learning in classrooms and teachers’ rooms., Documentation: Used to collect supporting documents related to supervision and project-based learning implementation. The main research instrument was the researcher themselves. Data Analysis Technique Data analysis was carried out using the Miles and Huberman model (1994), which includes:1) Data Reduction: Filtering and summarizing data from interviews, observations, and documentation. 2) Data Display: Presenting data in narrative form, tables, and category matrices. 3) Conclusion Drawing and Verification: Identifying patterns, themes, and meanings to answer the research focus. Data Validity Data validity was ensured through: 1) Source and Technique Triangulation, 2) Member Check with informants for data validation,3) Audit Trail, by documenting the entire data collection and analysis process in detail, 4) Peer Debriefing, to avoid interpretive bias.

RESULTS AND DISCUSSION

The findings of this study indicate that the implementation of transformative supervision at SMAN 1 Rembang has had a significant impact on the improvement of project-based learning (PjBL) quality. The impact is not only technical-instructional in nature but also encompasses cultural, professional, and structural dimensions. The following discussion is organized around three key themes that reflect the relationship between supervisory practices, pedagogical transformation, and the strengthening of the school ecosystem.

1. Transformative Supervision as a Catalyst for Pedagogical Change

The findings reinforce Transformational Leadership Theory by Bass and Avolio (1994), which emphasizes the role of leaders in inspiring change through four key domains: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. At SMAN 1 Rembang, the school principal successfully embodied this approach through a dialogic, reflective, and solution-oriented supervisory process. This approach has effectively shifted teachers’ paradigms—from mere curriculum implementers to critical and creative instructional agents. This aligns with the perspective of Leithwood & Jantzi (2006), who argue that transformational supervision encourages teachers to view instruction as a space for experimentation rather than an administrative obligation. In this context, the principal no longer acts solely as an evaluator but emerges as a learning coach, actively engaged in the professional learning journey of the teachers.

2. Enhancing the Quality of PjBL through Reflective and Contextual Supervision

There has been a noticeable improvement in both the planning and implementation of project-based learning, indicating that transformative supervision effectively fosters pedagogical awareness among teachers. Teachers are not only encouraged to design contextual projects but also to reflect on the goals, processes, and outcomes of those projects for student learning. These findings are consistent with Thomas (2000) and Larmer & Mergendoller (2015), who emphasize that the success of PjBL relies on relevant project design, active student engagement, and meaningful assessment. With reflective supervisory support, teachers have become more precise in formulating 21st-century skill indicators and developing performance-based assessment rubrics.

Interestingly, teachers who were initially hesitant to adopt PjBL now exhibit high levels of enthusiasm and initiative, particularly in designing interdisciplinary projects. This shift reflects a transformation in pedagogical attitudes—an outcome unlikely to emerge under conventional, control-oriented supervision models.

3. Strengthening a Collaborative Culture as the Foundation for Sustainable Innovation

The formation of Professional Learning Communities (PLCs) and post-supervision collective reflection activities show that the impact of transformative supervision extends beyond the individual level to the collective. Teachers have become part of a supportive learning ecosystem that fosters a culture of continuous professional development. This phenomenon supports the view of Hargreaves & Fullan (2012), who assert that successful educational reform depends on collective capacity building, where collaboration among educational stakeholders is key to institutional transformation. Supervision is no longer perceived as a routine annual activity but as a collaborative learning movement embedded within the school culture. Transformative supervision fosters a sense of ownership in teachers' professional growth. When teachers are involved in the planning, implementation, and evaluation of supervision processes, they develop a stronger sense of responsibility and agency in improving educational quality.

This study reveals that the implementation of transformative supervision plays a crucial role in enhancing the quality of Project-Based Learning (PjBL) at SMAN 1 Rembang.The discussion is structured around three key dimensions:, (1) the paradigm shift in educational supervision, (2) its impact on project-based learning practices, and (3) the implications for professional culture within the school environment.

A Paradigm Shift in Supervision: From Evaluative to Reflective-Transformational

Supervision at SMAN 1 Rembang has moved beyond its traditional role as an administrative control mechanism and has evolved into a developmental process oriented toward transforming teacher professionalism. The school principal, acting as a supervisor, applies a transformational leadership approach that emphasizes participatory leadership, empathetic communication, and individual teacher empowerment. This model aligns with Transformational Leadership Theory by Bass and Avolio (1994), which includes four key components: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

Field findings show that supervision is delivered through coaching sessions, reflective dialogues, and formative evaluations that foster trust and openness. It is conducted collaboratively, not only assessing teacher performance but also providing space for idea exploration and self-reflection. These results affirm the findings of Leithwood & Jantzi (2006), who argue that transformational school leaders act as facilitators of cultural change within the learning environment.

Transformation of Project-Based Learning (PjBL) Practices

Transformative supervision has had a positive impact on three main aspects of PjBL implementation: project planning, classroom execution, and assessment.

a) Project Planning has become more contextual and responsive to local issues. Teachers design projects based on real-world community problems, such as organic waste management or the revitalization of local cultural heritage. b) Project Implementation has improved student engagement in discussions, teamwork, and the development of practical solutions. Teachers act as facilitators, guiding students through inquiry-based learning processes. c) Assessment has become more systematic, with the use of performance rubrics that evaluate processes, outcomes, and student reflection.

These findings are consistent with Thomas (2000), who asserts that the quality of PjBL is determined by student engagement, the realism of the project context, and the integration of assessment. Effective supervision enables teachers to critically review and refine their project designs with input from peers and supervisors.

Strengthening a Professional and Collaborative School Culture

Consistent implementation of transformative supervision has also fostered the emergence of a collective professional culture among teachers. The school has begun establishing Professional Learning Communities (PLCs) that facilitate the sharing of experiences and best practices, particularly concerning PjBL implementation. The principal promotes lesson study practices and open reflection forums among teachers. As a result, teachers no longer work in isolation but collaborate on planning, implementing, and evaluating their projects. These findings support Hargreaves & Fullan’s (2012) theory on the importance of collective capacity building as the foundation for sustainable change in educational institutions. This collaborative culture indirectly strengthens teachers’ professional autonomy and encourages the development of bottom-up instructional leadership. Teachers have become more confident in initiating innovations and more receptive to constructive feedback.

CONCLUSION

This study concludes that supervision is no longer perceived merely as an administrative oversight activity, but rather as a reflective mentoring process that successfully transforms teachers' pedagogical paradigms and practices. First, the principal, in their role as a transformative supervisor, has developed a coaching model that is dialogic, participatory, and based on the actual needs of teachers. This approach has fostered a conducive learning environment, built professional trust, and encouraged teachers to become adaptive and creative learning facilitators. Second, the quality of Project-Based Learning (PjBL) implementation has significantly improved, as reflected in more contextual project planning, increased student engagement, and the use of authentic assessments aligned with 21st-century skills. Teachers are not only designing meaningful learning projects but are also enhancing their reflective and innovative capacities in response to classroom dynamics.Third, transformative supervision has triggered the emergence of a collaborative professional culture within the school. Teachers voluntarily form learning communities, engage in lesson study, and consistently share best practices. This demonstrates that effective supervision has the potential to transform the school ecosystem into one that is open, innovative, and focused on meaningful learning.

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