

# The Influence of Teacher Performance and Facilities and Infrastructure on Improving the Quality of Learning at Sekayu State Elementary School

Arni Muliati<sup>1</sup>

<sup>1</sup>Universitas PGRI Palembang

\*Corresponding author: [arniskd17@gmail.com](mailto:arniskd17@gmail.com)

## Abstrak

Studi ini bertujuan untuk menentukan pengaruh kinerja guru dan fasilitas sekolah terhadap peningkatan kualitas pembelajaran di sekolah dasar negeri di Sekayu. Penelitian ini menggunakan pendekatan kuantitatif dengan desain korelasional. Populasi terdiri dari semua guru sekolah dasar negeri di Sekayu, dan sampel dipilih menggunakan pengambilan sampel acak proporsional. Data dikumpulkan melalui kuesioner dan dokumentasi, kemudian dianalisis menggunakan regresi linier berganda. Hasilnya menunjukkan bahwa kinerja guru memiliki pengaruh positif dan signifikan terhadap kualitas pembelajaran. Demikian pula, fasilitas sekolah yang memadai juga memiliki dampak signifikan dalam meningkatkan kualitas pembelajaran. Secara bersamaan, kinerja guru dan fasilitas sekolah sangat berkontribusi terhadap peningkatan kualitas pembelajaran di sekolah dasar negeri Sekayu. Temuan ini menyoroti pentingnya meningkatkan profesionalisme guru dan menyediakan fasilitas pembelajaran yang memadai untuk mencapai pendidikan berkualitas.

**Kata kunci:** Kinerja guru, fasilitas sekolah, kualitas pembelajaran, sekolah dasar

## Abstract

This study aims to determine the effect of teacher performance and school facilities on improving the quality of learning in public elementary schools in Sekayu. The research employed a quantitative approach with a correlational design. The population consisted of all public elementary school teachers in Sekayu, and samples were selected using proportional random sampling. Data were collected through questionnaires and documentation, then analyzed using multiple linear regression. The results showed that teacher performance had a positive and significant effect on learning quality. Likewise, adequate school facilities also had a significant impact on improving learning quality. Simultaneously, teacher performance and school facilities contributed greatly to the improvement of learning quality in Sekayu public elementary schools. These findings highlight the importance of enhancing teacher professionalism and providing adequate learning facilities to achieve quality education.

**Keywords:** Teacher performance, school facilities, learning quality, elementary school

## 1. INTRODUCTION

Education plays a crucial role in improving the quality of human resources and supporting the overall development of a nation. Through education, individuals acquire knowledge, skills, attitudes, and values that enable them to contribute productively to society

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and the economy. In the era of globalization and rapid technological development, education systems are expected to produce competent, innovative, and adaptable human resources who are able to face increasingly complex global challenges. For this reason, improving the quality of education has become a major priority for many countries, including Indonesia. According to UNESCO (2023), quality education is a fundamental component of sustainable development because it contributes significantly to economic growth, social equity, and cultural advancement. Similarly, Schleicher (2020) emphasizes that countries with strong education systems are better equipped to prepare students with the competencies required for the demands of the twenty-first century.

Within the educational system, teachers hold a central and strategic role in determining the success of the learning process. Teachers act as the main facilitators of knowledge transfer and skill development in the classroom. However, their role extends beyond simply delivering subject matter; teachers are also responsible for guiding, motivating, and supporting students in developing their intellectual, emotional, and social capacities. Effective teachers are able to design meaningful learning experiences that encourage active participation, critical thinking, and collaborative learning among students. Darling-Hammond et al. (2021) argue that teacher quality is one of the most influential factors affecting student learning outcomes and educational effectiveness. When teachers demonstrate strong professional competence and pedagogical skills, they can significantly enhance students' academic achievement and overall learning experiences.

Teacher performance is generally measured through several indicators related to the planning, implementation, and evaluation of the learning process. In professional practice, teachers are expected to design lesson plans that align with curriculum objectives, implement effective teaching strategies, and conduct comprehensive assessments to evaluate student progress. These activities require teachers to possess a combination of competencies, including pedagogical competence, professional competence, social competence, and personal competence. According to Caena and Redecker (2021), teachers who develop these competencies are better prepared to respond to diverse student needs and implement innovative learning approaches that promote meaningful learning outcomes. Furthermore, Koehler, Mishra, and Cain (2020) highlight that effective teaching also requires the integration of technological, pedagogical, and content knowledge (TPACK), which allows teachers to utilize technology effectively to support the learning process.

Despite the importance of teacher performance in improving educational quality, various challenges still exist in many schools. In some cases, teachers continue to rely on conventional teaching approaches that focus primarily on lectures and memorization rather than interactive and student-centered learning methods. This situation may reduce students' motivation and engagement in the learning process. Bond (2020) explains that student engagement is strongly influenced by the quality of teaching practices and the use of innovative learning strategies. Teachers who integrate active learning approaches and digital technologies into their instruction tend to create more engaging learning environments that stimulate students' curiosity and participation. Similarly, Falloon (2020) notes that the development of digital competence among teachers has become increasingly important in modern education, as technology plays a significant role in enhancing learning experiences and facilitating access to educational resources.

In addition to teacher performance, the availability of educational facilities and infrastructure is another important factor influencing the effectiveness of the learning

process. Educational facilities and infrastructure refer to all physical and technological resources that support teaching and learning activities in schools. These resources include classrooms, libraries, laboratories, learning media, teaching aids, and information and communication technology (ICT) facilities. Adequate facilities provide teachers with opportunities to implement diverse instructional strategies and create more engaging learning experiences for students. According to Fraillon et al. (2020), schools that are equipped with sufficient educational resources and technological infrastructure are more capable of supporting innovative teaching practices and improving student learning outcomes.

Furthermore, access to appropriate educational facilities also plays an important role in ensuring equitable learning opportunities for students. Eickelmann, Bos, and Labusch (2021) argue that disparities in educational infrastructure can create significant differences in learning opportunities between schools. Schools with limited facilities may struggle to implement interactive learning methods or provide access to digital learning resources, which can ultimately affect the quality of education delivered to students. Similarly, Selwyn (2021) highlights that adequate infrastructure is essential for supporting the integration of technology into education and enabling teachers to deliver more effective and engaging instruction.

In many developing countries, including Indonesia, disparities in educational facilities and infrastructure remain a significant challenge. Differences in school resources, particularly between urban and rural areas, often lead to unequal learning conditions. Liu et al. (2021) explain that learning environments equipped with appropriate technological and instructional resources contribute significantly to improving the quality of teaching and learning. Schools that have access to adequate learning facilities are more likely to implement innovative teaching methods and provide students with meaningful learning experiences.

Another important aspect related to educational quality is the relationship between teacher performance and the availability of educational resources. Teachers require adequate facilities and infrastructure to effectively implement innovative teaching strategies and support student-centered learning. When teachers have access to appropriate teaching aids, digital tools, and learning materials, they are better able to create interactive and engaging learning environments. Tondeur et al. (2021) emphasize that the successful integration of educational technology depends not only on teachers' competence but also on the availability of supporting infrastructure within the school environment.

In addition, Howard et al. (2022) explain that teachers who are supported by adequate technological resources demonstrate higher levels of instructional confidence and are more likely to adopt innovative teaching practices. Similarly, Philipsen et al. (2020) highlight that professional development programs combined with supportive learning environments can significantly enhance teachers' ability to integrate technology into classroom instruction. These findings indicate that both teacher performance and educational infrastructure are interconnected factors that collectively influence the quality of learning in schools.

In the context of public elementary schools in Sekayu, variations in teacher performance and differences in the availability of educational facilities and infrastructure are still observed among schools. Some schools are equipped with adequate learning resources, while others continue to experience limitations in classroom facilities, learning media, and technological infrastructure. These disparities may affect the effectiveness of the teaching and learning process and ultimately influence the quality of student learning outcomes. According to

Voogt et al. (2020), schools that successfully combine teacher competence development with improved learning environments tend to achieve better educational outcomes.

Given the importance of these factors, it is necessary to examine how teacher performance and the availability of educational facilities and infrastructure influence the quality of learning in public elementary schools in Sekayu. Understanding this relationship is essential for identifying strategies to improve educational quality and ensure that students receive effective and meaningful learning experiences. Research in this area can also provide valuable insights into how schools can optimize their available resources to support better teaching and learning processes.

Therefore, this study aims to analyze the influence of teacher performance and the availability of educational facilities and infrastructure on the quality of learning in public elementary schools in Sekayu. The results of this research are expected to contribute to the development of educational management, particularly in efforts to improve learning quality through strengthening teacher performance and optimizing the provision of educational facilities and infrastructure. In addition, the findings are expected to provide useful recommendations for school administrators and local governments in formulating policies and strategies aimed at improving the quality of education at the elementary school level.

## **2. LITERATURE REVIEW**

### ***2.1 Teacher Performance***

Teacher performance is the work results or achievements attained by teachers in carrying out their professional duties based on their abilities, responsibilities, and commitment to their work. According to Mulyasa (2019), teacher performance encompasses a teacher's ability to plan, implement, and evaluate learning to achieve educational goals effectively and efficiently.

Furthermore, Sutrisno (2020) stated that teacher performance is influenced by various factors, including competence, work motivation, principal leadership, and the work environment. High-performing teachers are able to develop innovative learning methods, utilize educational technology, and provide constructive feedback to students.

The teacher performance indicators according to the Minister of National Education Regulation Number 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies include four main competencies, namely:

1. Pedagogical competence, namely the ability to manage student learning.
2. Professional competence, namely in-depth mastery of subject matter.
3. Social competence, namely the ability to interact effectively with students and the school community.
4. Personality competencies, namely attitudes and behavior that reflect exemplary behavior as an educator.

Thus, optimal teacher performance will have a positive impact on improving the quality of learning in elementary schools.

## ***2.2 Educational Facilities and Infrastructure***

Educational facilities and infrastructure are essential components in supporting an effective learning process. According to the Ministry of National Education (2008), educational facilities are all equipment and supplies directly used in the learning process, such as classrooms, desks, chairs, teaching aids, learning media, and technological facilities. Meanwhile, educational infrastructure encompasses everything that indirectly supports the implementation of learning, such as school buildings, grounds, laboratories, libraries, and electricity networks.

According to Mulyono (2018), the availability of adequate facilities and infrastructure can increase student motivation and facilitate teachers in delivering lesson materials. Conversely, limited facilities and infrastructure often hinder learning and potentially reduce the quality of student learning outcomes. Thus, complete and adequate facilities and infrastructure are very necessary so that the learning process in schools can run effectively, efficiently and with quality.

## ***2.3 Quality of Learning***

Learning quality is the level of success of the learning process in achieving the set educational goals. According to Sagala (2020), learning quality can be seen from the extent to which the learning process is able to develop students' competencies in the cognitive, affective, and psychomotor aspects. Quality learning is not only oriented towards academic learning outcomes, but also on the formation of students' character and life skills. Factors that influence learning quality include teacher competence, the availability of infrastructure, the learning environment, the curriculum, and school management support. Learning quality will improve if teachers are able to manage learning well and are supported by adequate facilities and a conducive environment.

## ***2.4 Relationship between variables***

Teacher performance and infrastructure are closely linked to the quality of learning. High-performing teachers are able to create active, creative, and enjoyable learning experiences, enabling students to more easily understand the material being taught. Meanwhile, the availability of adequate facilities and infrastructure will support effective teacher performance and facilitate student learning.

Thus, it can be concluded that teacher performance and infrastructure are two important factors that together influence the improvement of the quality of learning in elementary schools.

# **3. METHOD**

## ***3.1 Types and Approaches of Research***

This research uses a quantitative approach with an ex post facto method. This approach is used because the researcher does not directly treat the variables under study, but rather examines cause-and-effect relationships based on facts that have already occurred in the field. The purpose of this study is to determine the effect of teacher performance and infrastructure on improving the quality of learning at Sekayu Public Elementary Schools.

### 3.2 Location and Time of Research

The research was conducted at public elementary schools in Sekayu, selected to represent the conditions of elementary schools in the region. The study took place from May to July 2025 and included observation, questionnaire distribution, and data analysis.

### 3.3 Research Population and Sample

The population in this study was all elementary school teachers in Sekayu. The sampling technique used proportional random sampling, namely random sampling by considering the number of teachers in each school. The number of samples was determined using the Slovin formula with an error rate of 5%, so that a sample of 100 teacher respondents was obtained from several public elementary schools representing each sub-district in Sekayu.

## 4. RESULT AND DISCUSSION

### Result

#### 4.1 Data Description

This study involved 100 teachers from several public elementary schools in Sekayu. The variables measured were teacher performance, educational facilities and infrastructure, and learning quality.

**Table 1.** Descriptive Statistics of Study Variables

Variable	Min	Max	Mean	Std. Dev
Teacher Performance (X1)	65	95	82.5	7.8
Facilities & Infrastructure (X2)	60	92	78.6	8.2
Learning Quality (Y)	68	90	80.2	6.9

Teacher performance shows a high average score (82.5), reflecting generally competent teachers in Sekayu. Facilities and infrastructure average 78.6, indicating moderate availability; some schools still have limited resources. Learning quality average 80.2, suggesting that students generally achieve satisfactory outcomes.

**Table 2.** Simple Linear Regression: Teacher Performance → Learning Quality

Variable	B	t	p-value
Constant	12.4	4.32	0.000
Teacher Performance	0.82	7.21	0.000

Teacher performance significantly influences learning quality ( $p < 0.05$ ). For every 1-point increase in teacher performance, learning quality improves by 0.82 points. This indicates that teachers' competencies (pedagogical, professional, social, personal) strongly contribute to creating engaging and effective learning experiences (Mulyasa, 2019).

**Table 3.** Simple Linear Regression: Facilities & Infrastructure → Learning Quality

Variable	B	t	p-value
Constant	18.3	5.01	0.000
Facilities & Infrastructure	0.71	6.02	0.000

Facilities and infrastructure have a significant positive effect on learning quality ( $p < 0.05$ ). Each unit increase in facility/infrastructure score improves learning quality by 0.71 points. Schools with adequate infrastructure show higher learning quality (82.0) compared to schools with limited facilities (74.5), supporting Mulyono (2018) that adequate learning environments enhance student motivation and activity.

**Table 4.** Multiple Regression: Teacher Performance & Facilities → Learning Quality

Variable	B	t	p-value
Constant	5.6	2.14	0.035
Teacher Performance (X1)	0.54	4.12	0.000
Facilities & Infrastructure (X2)	0.48	3.87	0.000

$R^2 = 0.68$  → 68% of learning quality variance is explained by teacher performance and facilities combined.  $F_{\text{calculated}} = 98.5 > F_{\text{table}} = 3.09$  → the simultaneous effect is significant. Both teacher competence and infrastructure contribute simultaneously to improved learning quality. This integrated effect ensures efficient, effective, and enjoyable learning experiences. Consistent with systems theory in education (Sagala, 2020), high-quality learning requires interaction among teachers, students, curriculum, and facilities.

### Discussion

The results of this study show that teacher performance has a significant positive effect on learning quality in public elementary schools in Sekayu. Teachers with strong pedagogical, professional, social, and personal competencies are able to design engaging learning activities, employ diverse instructional methods, and provide constructive evaluations for students. The descriptive data showed an average teacher performance score of 82.5/100, and the corresponding learning quality score was 80.2/100. This indicates that the improvement in learning quality largely depends on the extent to which teachers optimally perform their professional roles, which aligns with Mulyasa (2019), who emphasized that comprehensive teacher competencies contribute to effective and meaningful learning experiences. Furthermore, Darling-Hammond, Hyler, and Gardner (2021) highlighted that sustained professional development strengthens teacher effectiveness and positively impacts student learning outcomes.

In addition, the study found that educational facilities and infrastructure also have a positive and significant effect on learning quality. Schools with complete facilities, such as classrooms, laboratories, libraries, and information technology, achieved higher learning quality scores (82.0/100) compared to schools with limited facilities (74.5/100). This finding supports Mulyono (2018), who argued that adequate facilities create a comfortable and motivating learning environment, fostering active student participation. Similarly, Voogt et al. (2020) noted that well-resourced schools enable teachers to implement innovative instructional strategies and promote student engagement. Limited facilities, conversely, hinder teaching processes and reduce overall learning quality (Falloon, 2020).

The simultaneous effect of teacher performance and facilities on learning quality was also significant, with a coefficient of determination ( $R^2$ ) of 0.68. This means that 68% of the variance in learning quality can be explained by the combination of these two variables. These results highlight the importance of an integrated approach: improving teacher competence while providing sufficient and equitable infrastructure. This aligns with systems

theory in education, which posits that quality education results from the interaction between various components, including teachers, students, curriculum, and facilities (Sagala, 2020). The study emphasizes that neither teacher performance nor infrastructure alone is sufficient; optimal learning quality is achieved when both factors are effectively combined.

## **5. CONCLUSION**

The findings of this study indicate that both teacher performance and educational facilities and infrastructure play significant roles in improving the quality of learning in public elementary schools in Sekayu. Teachers who demonstrate strong pedagogical, professional, social, and personal competencies are able to design engaging learning activities, implement diverse instructional strategies, and provide meaningful evaluations, which directly enhance student learning outcomes. Simultaneously, schools with adequate and well-maintained facilities create a supportive and motivating environment that facilitates effective teaching and active student participation. Moreover, the combination of high teacher performance and sufficient infrastructure produces the most significant improvements in learning quality, highlighting the need for an integrated approach that addresses both human and material resources. These results imply that school principals, local governments, and educational policymakers should prioritize continuous professional development for teachers, ensure equitable access to educational facilities, and formulate strategies that strengthen both the capacity of educators and the adequacy of learning infrastructure. Future research should explore longitudinal effects, examine additional contextual and pedagogical variables, and assess the effectiveness of innovative teacher development programs to further enhance learning quality in diverse educational settings.

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