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Teacher Competence, Infrastructure, and Learning Effectiveness: Implications for Student Learning Outcomes in Integrated Islamic Elementary Schools

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Abstract

This study examined the effects of teacher competence and infrastructure on learning effectiveness and student learning outcomes at SDIT Al-Mizan Jatiwangi. The study employed a quantitative approach with an explanatory survey design. The participants consisted of 70 respondents selected through simple random sampling from a population of 225 teachers, parents, and school committee members. Data collection used questionnaires, observations, and documentation. The instruments were tested through validity and reliability analyses, while hypothesis testing employed multiple linear regression, t-tests, F-tests, and coefficient of determination analysis using SPSS 26.0. The findings showed that teacher competence exerted a positive and significant effect on learning effectiveness with a contribution of 36.24%. Infrastructure also demonstrated a positive and significant effect on learning effectiveness with a contribution of 49.84%. Simultaneously, teacher competence and infrastructure explained 55.00% of the variance in learning effectiveness. Learning effectiveness further exerted a positive and significant effect on student learning outcomes with a contribution of 64.48%. The findings indicate that learning effectiveness in integrated Islamic elementary schools is influenced by the interaction between teacher competence, educational facilities, and instructional quality. The study highlights

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the importance of strengthening teacher professional development and improving educational infrastructure simultaneously to support effective learning and student achievement.

Keywords: teacher competence; infrastructure; learning effectiveness; student learning outcomes; integrated Islamic elementary school

INTRODUCTION

Education plays an important role in improving the quality of human resources and supporting national development (Sata, 2024). Primary education serves as the foundation for developing students' cognitive, social, emotional, and moral competencies (Schonert-Reichl et al., 2015). Schools need to implement effective learning processes to support academic achievement and character development among students (Sujianti et al., 2025). Learning quality is influenced by teacher competence and the availability of educational infrastructure (Mukti & Noviafitri, 2024). Teacher competence includes pedagogical, professional, social, and personal dimensions that support instructional implementation (Handini, 2024). Educational infrastructure supports learning activities and enhances student participation during instruction (Samsuddin et al., 2026). Learning effectiveness is reflected in students' active participation, the appropriate use of instructional strategies, and measurable learning outcomes (Dumaguing & Yango, 2023).

Various educational challenges remain evident at the primary school level, particularly in integrated Islamic elementary schools that combine academic and religious learning (Damayanti, 2025). SDIT Al-Mizan Jatiwangi has implemented Qur'anic memorization programs, technology-based learning, and Islamic character reinforcement. Preliminary observations revealed variations in teacher competence and limitations in educational infrastructure. Several school facilities, including library learning resources, classrooms, sanitation facilities, and science learning equipment, were still inadequate to support instructional activities. School educational reports also indicated variations in students' literacy and numeracy achievement. Some students had not yet achieved optimal learning outcomes. Classroom participation and students' critical thinking skills also required further improvement. These conditions indicate that teacher competence and infrastructure contribute to learning effectiveness and student learning outcomes in primary schools (Sova et al., 2022; Yusran, 2022).

Previous studies have examined the relationships among teacher competence, infrastructure, learning effectiveness, and student learning outcomes. Hazami and Herminingsih (2017) found that teacher competence influences learning effectiveness. Andini and Supardi

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(2018) reported that teachers' pedagogical competence contributes to learning effectiveness. Rosdiana (2013) showed that teacher competence and teaching commitment affect learning effectiveness and student learning outcomes. Husain et al. (2022) and Wulandari and Uwameiye (2023) demonstrated that teacher competence and learning facilities influence student learning outcomes. Jannah and Sontani (2018) identified infrastructure as a factor affecting students' learning motivation, while Ricardo and Meilani (2017) explained that learning motivation contributes to student learning outcomes. Although the relationships among these variables have been widely examined, most previous studies focused on partial relationships and general school contexts. Studies integrating teacher competence, infrastructure, learning effectiveness, and student learning outcomes within a single research model in the context of integrated Islamic elementary schools remain limited.

The limited number of studies conducted within integrated Islamic elementary schools deserves attention because the instructional characteristics differ from those of general elementary schools. Learning in integrated Islamic elementary schools emphasizes not only academic achievement but also character development and the strengthening of Islamic values. SDIT Al-Mizan Jatiwangi implements an integrated curriculum that combines the national curriculum with Islamic educational values. These instructional characteristics position teacher competence and infrastructure as important components in supporting learning effectiveness and student learning outcomes. Therefore, further investigation regarding the relationships among teacher competence, infrastructure, learning effectiveness, and student learning outcomes within integrated Islamic elementary schools is necessary.

This study aimed to analyze the effects of teacher competence and infrastructure on learning effectiveness and student learning outcomes at SDIT Al-Mizan Jatiwangi. The study focused on the relationships between teacher competence, infrastructure, learning effectiveness, and student learning outcomes. The study contributes to the development of educational management research within the context of integrated Islamic elementary schools. The findings also provide practical implications for schools in designing strategies to improve teacher competence and develop educational infrastructure to support learning effectiveness and student learning outcomes.

Based on the preceding discussion, this study proposed the following research questions:

1. To what extent does teacher competence affect learning effectiveness?
2. To what extent does infrastructure affect learning effectiveness?

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3. To what extent do teacher competence and infrastructure jointly affect learning effectiveness?
4. To what extent does learning effectiveness affect student learning outcomes at SDIT Al-Mizan Jatiwangi?

METHODS

This study employed a quantitative approach with an explanatory survey design to analyze the relationships among teacher competence, infrastructure, learning effectiveness, and student learning outcomes at SDIT Al-Mizan Jatiwangi (Sofya et al., 2024; Adhikari & Sharma, 2024). The quantitative approach was selected because the study focused on examining relationships among variables through statistical analysis. The research was conducted at SDIT Al-Mizan Jatiwangi, Majalengka Regency, from February to August 2025.

The participants consisted of teachers, parents, and school committee members of SDIT Al-Mizan Jatiwangi, with a total population of 225 respondents. The sample was determined using a random sampling technique to provide equal opportunities for all population members to be selected as research participants (Noor et al., 2022). The sample size was calculated using Slovin's formula with a 10% margin of error, resulting in 70 respondents as the research sample (Nurkholis et al., 2024).

The study involved four variables, namely teacher competence as the first independent variable (X1), infrastructure as the second independent variable (X2), learning effectiveness as the intervening variable (Y), and student learning outcomes as the dependent variable (Z). Teacher competence was measured based on pedagogical, professional, social, and personal competencies according to the Regulation of the Minister of National Education Number 16 of 2007. Infrastructure was measured based on educational facility and infrastructure standards according to the Regulation of the Minister of National Education Number 24 of 2007. Learning effectiveness was measured through input, process, output, and outcome indicators that reflected students' learning experiences and achievements (Mulyasa, 2010; Rajaram, 2020). Student learning outcomes were measured through cognitive, affective, and psychomotor domains (Ricardo & Meilani, 2017; Owan et al., 2022).

The research instrument consisted of a closed-ended questionnaire using a five-point Likert scale developed based on the theoretical indicators of each research variable (Joshi et al., 2015). The questionnaire was used to collect data regarding teacher competence, infrastructure, learning effectiveness, and student learning outcomes. The use of the Likert scale enabled the

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researcher to measure respondents' perceptions systematically and quantitatively. Data collection was also conducted through observation and documentation to support the quantitative data obtained from the questionnaires (Sadan, 2017). Observation was used to obtain information regarding learning conditions and school facilities, while documentation was used to collect school profile data and educational reports.

Before being administered, the instruments were tested for validity and reliability. The validity test employed Pearson Product Moment correlation to examine the accuracy of each questionnaire item (Hidayati et al., 2023). The reliability test used Cronbach's Alpha to measure the consistency of the research instruments (Chan & Idris, 2017). The research data were subsequently processed using SPSS version 26.0.

Data analysis employed descriptive and verificative analyses. Descriptive analysis was used to describe the conditions of teacher competence, infrastructure, learning effectiveness, and student learning outcomes, whereas verificative analysis was conducted to examine the relationships among research variables (Statistics, 2013). Before hypothesis testing, the data were tested using the Kolmogorov–Smirnov normality test and multicollinearity tests using Variance Inflation Factor (VIF) and tolerance values. Simple linear regression analysis was employed to examine partial effects among variables, while multiple linear regression analysis was used to examine the simultaneous effects of teacher competence and infrastructure on learning effectiveness (El Aissaoui et al., 2019; Orogun et al., 2021). Hypothesis testing was conducted using t-tests and F-tests at a significance level of 0.05.

The study obtained permission from SDIT Al-Mizan Jatiwangi before the data collection process began. All respondents received explanations regarding the research objectives and questionnaire procedures. Participation was voluntary, and the collected data were kept confidential and used solely for research purposes. Respondents' identities were not disclosed in the research report to maintain participant privacy and data confidentiality.

This study had several limitations. The research was conducted in only one integrated Islamic elementary school, limiting the generalizability of the findings to other integrated Islamic elementary schools in Indonesia. Data collection relied on respondents' perceptions through questionnaires, which may have introduced subjective responses. In addition, the study focused only on teacher competence and infrastructure as factors related to learning effectiveness and student learning outcomes. Other factors, such as school leadership, family environment, and student learning motivation, were not examined comprehensively in this study.

RESULTS

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This study examined the effects of teacher competence and infrastructure on learning effectiveness and their implications for student learning outcomes at SDIT Al-Mizan Jatiwangi. The analysis was conducted systematically through instrument quality testing, classical assumption testing, and hypothesis testing using simple and multiple linear regression analyses. All data processing procedures were performed using SPSS version 26.0.

Instrument Validity Test

The study employed the Pearson Product Moment correlation to examine the validity of each questionnaire item. The analysis compared the calculated correlation coefficient (r-count) with the r-table value of 0.300 at a significance level of 0.05. The instrument items met the validity criterion when the r-count value exceeded the r-table value.

Table 1. Instrument Validity Test Results

Variable	Number of Items	r-count Range	r-table	Criteria
Teacher Competence	23	0.460–0.818	0.300	Valid
Infrastructure	30	0.335–0.743	0.300	Valid
Learning Effectiveness	9	0.537–0.835	0.300	Valid
Learning Outcomes	13	0.594–0.729	0.300	Valid

The teacher competence variable obtained r-count values ranging from 0.460 to 0.818, indicating that all questionnaire items satisfied the validity criterion. The infrastructure variable produced r-count values between 0.335 and 0.743, with all items exceeding the minimum validity threshold. The learning effectiveness variable showed correlation coefficients ranging from 0.537 to 0.835, while the learning outcomes variable obtained coefficients between 0.594 and 0.729. All questionnaire items produced r-count values higher than the r-table value of 0.300, indicating that all instrument items were valid and appropriate for data collection.

Reliability Test

The study employed Cronbach's Alpha to evaluate the internal consistency of the research instruments. The instruments met the reliability criterion when the Cronbach's Alpha value exceeded 0.700.

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Table 2. Reliability Test Results

Variable	Cronbach's Alpha	Reliability Threshold	Criteria
Teacher Competence	0.951	0.700	Reliable
Infrastructure	0.943	0.700	Reliable
Learning Effectiveness	0.897	0.700	Reliable
Learning Outcomes	0.922	0.700	Reliable

The teacher competence variable obtained a Cronbach's Alpha value of 0.951, while the infrastructure variable obtained a value of 0.943. The learning effectiveness variable produced a reliability coefficient of 0.897, and the learning outcomes variable obtained a coefficient of 0.922. All variables produced Cronbach's Alpha values higher than the reliability threshold of 0.700. The lowest reliability coefficient was 0.897, whereas the highest coefficient reached 0.951. These findings indicate that all research instruments demonstrated high internal consistency and satisfied the reliability requirements for further parametric statistical analysis.

Normality Test

The study employed the Kolmogorov–Smirnov test to examine whether the research data satisfied the assumption of normal distribution. The data met the normality assumption when the significance value exceeded 0.05.

Table 3. Normality Test Results

Variable	Kolmogorov–Smirnov Sig.	Sig. Level	Criteria
Teacher Competence	0.200	0.05	Normal
Infrastructure	0.200	0.05	Normal
Learning Effectiveness	0.065	0.05	Normal
Learning Outcomes	0.080	0.05	Normal

The teacher competence variable obtained a significance value of 0.200, while the infrastructure variable also produced a significance value of 0.200. The learning effectiveness variable obtained a significance value of 0.065, and the learning outcomes variable produced a significance value of 0.080. All variables obtained significance values higher than the alpha level of 0.05. These results indicate that all research variables were normally distributed and satisfied the assumptions required for parametric statistical analysis.

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Multicollinearity Test

The study conducted a multicollinearity test to examine the linear relationship among the independent variables in the regression model. The analysis used tolerance and Variance Inflation Factor (VIF) values to identify the presence of multicollinearity. The model satisfied the multicollinearity assumption when the tolerance value exceeded 0.10 and the VIF value remained below 10.

Table 4. Multicollinearity Test Results

Variable	Tolerance	VIF
Teacher Competence	0.649	1.541
Infrastructure	0.649	1.541

The teacher competence variable obtained a tolerance value of 0.649 and a VIF value of 1.541. The infrastructure variable also produced a tolerance value of 0.649 and a VIF value of 1.541. Both variables obtained tolerance values higher than 0.10, indicating the absence of excessive linear relationships among the independent variables. In addition, both variables produced VIF values below 10, confirming that the regression model did not experience multicollinearity. These results indicate that the independent variables met the assumptions required for further parametric regression analysis.

Partial Hypothesis Testing (t-test)

The study employed the t-test to examine the partial effect of each independent variable on the dependent variable. The analysis evaluated the effects of teacher competence and infrastructure on learning effectiveness, as well as the effect of learning effectiveness on student learning outcomes.

Table 5. Partial Hypothesis Testing Results

Variable Relationship	t-count	Sig.	Criteria
Teacher Competence → Learning Effectiveness	2.786	0.007	Significant
Infrastructure → Learning Effectiveness	5.288	0.000	Significant
Learning Effectiveness → Learning Outcomes	11.092	0.000	Significant

The teacher competence variable produced a t-count value of 2.786 with a significance value of 0.007. The result indicates that teacher competence exerted a positive and statistically significant effect on learning effectiveness. The infrastructure variable obtained a t-count value of

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5.288 and a significance value of 0.000, indicating a significant positive effect on learning effectiveness. The relationship between learning effectiveness and student learning outcomes produced the highest t-count value of 11.092 with a significance value of 0.000. This finding indicates that learning effectiveness exerted a strong positive effect on student learning outcomes. Overall, all variable relationships obtained significance values below 0.05, confirming that the proposed hypotheses were statistically accepted.

Multiple Linear Regression Analysis

The study employed multiple linear regression analysis to examine the simultaneous effects of teacher competence and infrastructure on learning effectiveness.

Table 6. Multiple Linear Regression Results

Variable	Regression Coefficient (B)	Sig.
Constant	3.328	0.415
Teacher Competence	0.116	0.007
Infrastructure	0.184	0.000

The regression model generated a constant value of 3.328. Teacher competence obtained a regression coefficient of 0.116, indicating that each increase in teacher competence was associated with an increase in learning effectiveness by 0.116 units. Infrastructure produced a higher regression coefficient of 0.184, indicating a relatively stronger contribution to learning effectiveness within the regression model. Both variables obtained significance values below 0.05, indicating that the estimated coefficients were statistically significant. The regression equation can therefore be expressed as follows:

$$Y = 3.328 + 0.116X_1 + 0.184X_2$$

where Yrepresents learning effectiveness, X_1represents teacher competence, and X_2represents infrastructure.

Simultaneous Hypothesis Testing (F-test)

The study employed the F-test to evaluate the overall feasibility of the regression model in explaining learning effectiveness.

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Table 7. Simultaneous Hypothesis Testing Results

F-count	Sig.	Criteria
40.958	0.000	Significant

The regression model produced an F-count value of 40.958 with a significance value of 0.000. The significance value below 0.05 indicates that the regression model possessed adequate explanatory power in predicting learning effectiveness. The result confirms that teacher competence and infrastructure jointly contributed to variations in learning effectiveness within the research model.

Coefficient of Determination

The coefficient of determination is used to measure the proportion of the contribution of independent variables to learning effectiveness.

Table 8. Coefficient of Determination Results

Variable Relationship	Correlation (r)	R Square	Contribution
Teacher Competence → Learning Effectiveness	0.602	0.3624	36.24%
Infrastructure → Learning Effectiveness	0.706	0.4984	49.84%
Teacher Competence and Infrastructure → Learning Effectiveness	0.742	0.5500	55.00%

The teacher competence variable obtained a correlation coefficient of 0.602 with an R Square value of 0.3624, indicating that teacher competence explained 36.24% of the variance in learning effectiveness. The remaining 63.76% was associated with factors outside the research model.

The infrastructure variable produced a correlation coefficient of 0.706 with an R Square value of 0.4984. The result indicates that infrastructure contributed 49.84% to variations in learning effectiveness, while the remaining 50.16% was influenced by other variables not included in the model.

The simultaneous relationship between teacher competence, infrastructure, and learning effectiveness generated a correlation coefficient of 0.742 with an R Square value of 0.5500. The finding indicates that both independent variables jointly explained 55.00% of the variance in learning effectiveness, whereas 45.00% was associated with other external factors.

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The relationship between learning effectiveness and student learning outcomes produced the highest correlation coefficient of 0.803 with an R Square value of 0.6448. The result indicates that learning effectiveness explained 64.48% of the variance in student learning outcomes, while the remaining 35.52% was influenced by factors beyond the scope of the research model.

Sensitivity Analysis

The study employed sensitivity analysis using standardized beta coefficients to compare the relative contribution of each independent variable to learning effectiveness.

Table 9. Sensitivity Analysis Results

Variable	Beta Coefficient	Interpretation
Teacher Competence (X1)	0.283	Positive contribution
Infrastructure (X2)	0.538	Positive contribution

The teacher competence variable obtained a standardized beta coefficient of 0.283. The result indicates that a one standard deviation increase in teacher competence was associated with a 0.283 standard deviation increase in learning effectiveness. The infrastructure variable produced a standardized beta coefficient of 0.538, indicating that a one standard deviation increase in infrastructure was associated with a 0.538 standard deviation increase in learning effectiveness.

The comparison of beta coefficients shows that infrastructure demonstrated a greater sensitivity effect on learning effectiveness than teacher competence. The larger beta coefficient indicates that changes in infrastructure produced a relatively stronger contribution to variations in learning effectiveness within the regression model.

DISCUSSION

This study investigated the relationships among teacher competence, infrastructure, learning effectiveness, and student learning outcomes at SDIT Al-Mizan Jatiwangi. The findings confirmed that teacher competence and infrastructure significantly contributed to learning effectiveness, while learning effectiveness significantly influenced student learning outcomes. The regression analysis further demonstrated that teacher competence and infrastructure jointly explained a substantial proportion of the variance in learning effectiveness. These findings

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indicate that instructional quality in integrated Islamic elementary schools is shaped by the interaction between human resource capacity, educational support systems, and the effectiveness of classroom learning processes.

Teacher competence showed a positive and significant effect on learning effectiveness. The analysis indicated that teacher competence contributed 36.24% to variations in learning effectiveness, suggesting that improvements in teacher competence were associated with more effective instructional processes. This finding indicates that teacher competence functions as a central component of instructional quality because it influences classroom management, instructional interaction, learning organization, and student engagement. Teachers with strong pedagogical competence are generally more capable of designing learning activities systematically, adapting instructional approaches to student characteristics, and encouraging active participation during classroom instruction. Professional competence also supports teachers in organizing learning materials effectively and maintaining the continuity of instructional processes.

The findings are consistent with Hanafi and Setiyani (2021), who reported that teacher competence contributes significantly to effective learning management in primary schools. Similarly, Fikriya et al. (2024) found that strengthening teacher competence improves lesson planning quality and supports more effective teaching and learning processes. Fitriyah and Fauzi (2025) also emphasized that teacher competence plays an important role in improving instructional quality in elementary education. These studies collectively suggest that teacher competence represents not only an individual professional attribute but also a determining factor in the effectiveness of classroom learning.

Within integrated Islamic elementary schools, teacher competence carries broader educational responsibilities because teachers are expected to integrate academic instruction, character formation, and Islamic values within classroom learning. In SDIT contexts, teachers function not only as instructional facilitators but also as moral exemplars who guide students' religious, ethical, and social development. Zuhaeriah et al. (2020) argued that teacher competence in Islamic education contributes directly to educational quality because Islamic education teachers are responsible for integrating intellectual, spiritual, and moral dimensions within instructional practices. In addition, Arif et al. (2025) explained that the competencies required of Islamic education teachers have become increasingly multidimensional in the digital era, particularly in relation to adaptive pedagogy, technological integration, and value-based learning. These perspectives reinforce the present findings that teacher competence in SDIT settings extends

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beyond instructional delivery and substantially shapes learning effectiveness.

Infrastructure also demonstrated a positive and significant effect on learning effectiveness. The coefficient of determination analysis showed that infrastructure contributed 49.84% to variations in learning effectiveness, indicating a relatively stronger contribution compared with teacher competence. This finding suggests that educational facilities function as enabling conditions that support instructional interaction, classroom participation, and learning accessibility. Adequate classrooms, instructional media, educational technology, library resources, and supportive physical learning environments help teachers implement learning activities more effectively and encourage students to participate actively during instruction. Conversely, limited facilities may reduce instructional flexibility and constrain learning innovation.

The findings support Rahmawati et al. (2024), who found that school infrastructure contributes significantly to learning effectiveness and learning quality. Ahmad (2025) also highlighted that educational facilities influence academic performance because physical learning environments shape students' learning experiences and instructional quality. In addition, Maratkyzy (2025) explained that school infrastructure affects student engagement, comfort, and learning performance by influencing the conduciveness of learning environments. These findings indicate that infrastructure should not be viewed merely as a physical complement to education, but rather as an important component of the instructional ecosystem that supports effective learning processes.

The simultaneous regression analysis further demonstrated that teacher competence and infrastructure jointly exerted a positive and significant effect on learning effectiveness, with a combined contribution of 55.00%. This result indicates that learning effectiveness emerges through the interaction between instructional competence and educational support systems rather than through isolated educational factors. Competent teachers require adequate facilities to implement instructional strategies effectively, while educational facilities require competent teachers who can maximize their instructional utilization. The relationship between both variables therefore reflects the interconnected nature of educational quality within the learning process.

These findings are consistent with Luqman et al. (2019), who reported that teacher competence and educational facilities jointly influence teacher performance and student achievement. Gurion and Limbong (2025) similarly identified teacher competency and educational infrastructure as important determinants of educational quality. The present study extends these findings by demonstrating that the interaction between teacher competence and infrastructure becomes particularly important within integrated Islamic elementary schools, where instructional

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activities simultaneously target academic achievement, character formation, and religious value integration.

Learning effectiveness also showed a positive and significant effect on student learning outcomes, with a contribution value of 64.48%, representing the strongest relationship identified within the research model. This finding indicates that effective learning processes substantially influence students' cognitive, affective, and psychomotor achievement. Effective learning environments facilitate active participation, improve conceptual understanding, strengthen critical thinking skills, and encourage sustained engagement during classroom instruction. As a result, students become more capable of achieving expected learning objectives and academic performance standards.

The findings align with Joy and Garcia (2000), who described learning effectiveness as an important indicator of instructional success and educational quality. Kintu et al. (2017) also found that effective instructional design and learning processes significantly influence student learning outcomes. These studies indicate that learning outcomes are shaped not only by curriculum content or assessment systems but also by the quality of instructional interaction and classroom learning experiences. Learning effectiveness therefore functions as an important mechanism through which teacher competence and educational resources influence student achievement.

In the context of integrated Islamic elementary schools, effective learning extends beyond academic performance because instructional activities also support character development and the internalization of Islamic values. Learning effectiveness therefore contributes not only to academic achievement but also to the development of discipline, responsibility, and ethical behavior among students. This finding highlights the importance of developing instructional strategies that integrate academic learning objectives with character and religious education simultaneously.

Overall, the findings demonstrate that teacher competence, infrastructure, and learning effectiveness form an interconnected educational system that collectively shapes student learning outcomes at SDIT Al-Mizan Jatiwangi. Improving educational quality in integrated Islamic elementary schools therefore requires balanced institutional strategies that combine teacher professional development, infrastructure enhancement, and continuous instructional quality improvement.

CONCLUSION

This study examined the effects of teacher competence and infrastructure on learning effectiveness and student learning outcomes at SDIT Al-Mizan Jatiwangi. The findings showed that

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teacher

competence and infrastructure exerted positive and significant effects on learning effectiveness, both individually and simultaneously. Learning effectiveness also demonstrated a positive and significant effect on student learning outcomes. These findings indicate that effective learning in integrated Islamic elementary schools is shaped by the interaction between teacher competence, educational facilities, and instructional quality. In the SDIT context, learning effectiveness supports not only academic achievement but also character formation and the integration of Islamic values within classroom learning.

This study contributes empirical evidence regarding the interconnected roles of teacher competence, infrastructure, and learning effectiveness in improving educational quality in integrated Islamic elementary schools. The findings highlight the importance of strengthening teacher professional development and improving educational facilities simultaneously to support effective learning and student achievement. However, the study was limited to one integrated Islamic elementary school and a specific set of research variables. Future studies may involve broader educational settings and additional variables to provide a more comprehensive understanding of factors influencing learning effectiveness and student learning outcomes.

FUTURE DIRECTIONS

Future research may involve broader educational settings and larger participant groups to strengthen the generalizability of the findings across integrated Islamic elementary schools. Additional variables such as school leadership, organizational culture, parental involvement, student motivation, and digital learning readiness may also be incorporated to provide a more comprehensive analysis of factors affecting instructional quality and student achievement.

Further studies may apply mixed-methods or longitudinal designs to examine the dynamics of instructional effectiveness over time. Comparative research between integrated Islamic schools and general elementary schools may also offer deeper insights into the distinctive characteristics of educational management, character formation, and learning practices within Islamic-based educational institutions.

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