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Instructional leadership and pedagogical competence influencing teacher commitment in Indonesian junior high schools

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Abstract

This study aims to examine the influence of instructional leadership and pedagogical competence on teacher commitment in public junior high schools in West Pasaman Regency. A quantitative associative causal design was employed, involving 72 teachers selected through proportional stratified random sampling from a population of 241 civil servant teachers. Data were collected using a validated Likert-scale questionnaire and analyzed using descriptive statistics and regression analysis. The results indicate that instructional leadership significantly influences teacher commitment by 52%, while pedagogical competence contributes 36.5%. Simultaneously, both variables explain 61.5% of the variance in teacher commitment. Overall, teacher commitment is categorized as high, while instructional leadership and pedagogical competence are in the good category. These findings highlight the importance of strengthening instructional leadership and enhancing pedagogical competence to improve teacher commitment.

Keywords

Indonesian junior high school, instructional leadership, pedagogical competence, teacher commitment,

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Introduction

Education plays a fundamental role in shaping human resources and advancing national development. Within the educational system, teachers hold a central position, as they are directly responsible for planning, implementing, and evaluating the learning process. According to Law No. 20 of 2003 concerning the National Education System, teachers are required not only to deliver instruction but also to guide, assess, and contribute to the development of students' competencies in cognitive, affective, and psychomotor domains. This responsibility highlights the importance of maintaining high levels of professionalism and commitment among teachers.

Recently, rapid advances in science and technology have increased demand for improving educational quality. Teachers are expected to continuously adapt to these changes by enhancing their instructional practices and fostering innovative learning environments. Arifin (2022) emphasizes that improving the quality of education must begin with teachers, as they play a crucial role in developing students' critical and creative thinking skills. In this context, teacher commitment becomes a key factor in ensuring the effectiveness of educational processes. Teacher commitment reflects an individual's dedication, responsibility, and willingness to perform professional duties consistently and responsibly (Low et al., 2022).

However, empirical evidence suggests that teacher commitment remains a challenge in many educational settings. A study by Murza et al. (2025) found that teacher commitment in several junior high schools was relatively low, as evidenced by inconsistent attendance, lack of responsibility, and limited engagement in improving student achievement. These problems suggest that a range of internal and external factors influences teachers' professional attitudes. Without strong commitment, the quality of teaching and learning processes may decline, ultimately affecting student outcomes.

One key factor influencing teacher commitment is instructional leadership. Instructional leadership is the role of school principals in guiding and improving teaching and learning. Effective instructional leadership involves setting clear goals, supervising instruction, and supporting teachers' professional development (Hallinger, 2011). When principals actively engage in instructional activities, they create a supportive environment that encourages teachers to perform their duties more effectively. Permadani (2021) also states that ineffective leadership can lead to a decline in teacher commitment, particularly when school leaders fail to adapt to educational changes and provide clear direction.

In addition to leadership, pedagogical competence is another important factor that influences teacher commitment. Pedagogical competence refers to a teacher's ability to design, implement, and evaluate learning effectively (Hill-Jackson & Craig, 2023). Teachers with strong pedagogical competence are better able to manage classroom activities, address diverse student needs, and create engaging learning experiences. Nurhidayat et al. (2024) highlight that pedagogical competence includes mastery of teaching methods, use of technology, and understanding of student characteristics. These competencies enable teachers to perform their roles more effectively, thereby strengthening their professional commitment.

Despite the recognized importance of instructional leadership and pedagogical competence, previous studies have often examined these factors separately. There is limited research on their combined influence on teacher commitment, particularly in the context of

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Indonesian junior high schools. This gap calls into question a more comprehensive approach that considers both organizational and individual factors simultaneously.

Therefore, this study aims to examine the influence of instructional leadership and pedagogical competence on teacher commitment in public junior high schools in West Pasaman Regency. By analyzing both variables simultaneously, this study is expected to provide a more comprehensive understanding of the factors that shape teacher commitment. The findings of this study are expected to contribute to the development of educational leadership practices and teacher professional development programs, particularly in improving the quality of education in Indonesia.

Literature Review

Instructional leadership and teacher commitment

Instructional leadership has been widely recognized as a critical factor in improving educational quality and teacher performance. Unlike traditional administrative leadership, instructional leadership emphasizes the role of school leaders in guiding teaching and learning processes. Principals who practice instructional leadership are actively involved in curriculum planning, classroom supervision, and professional development activities (He et al., 2024). This leadership approach creates a supportive environment where teachers feel guided, valued, and motivated to perform their duties effectively.

Several studies have shown that instructional leadership contributes significantly to teacher commitment. When school leaders provide clear direction, constructive feedback, and opportunities for professional growth, teachers are more likely to develop a sense of responsibility and dedication toward their work (Murphy & Louis, 2018). In this context, commitment is not only reflected in teachers' attendance or compliance but also in their willingness to innovate, collaborate, and continuously improve their teaching practices. Effective instructional leadership also fosters trust and open communication, which strengthens teachers' emotional attachment to the institution (Wang'ombe, 2023).

However, the effectiveness of instructional leadership may vary depending on how it is implemented. Leadership that is overly controlling or bureaucratic can reduce teacher autonomy and negatively affect motivation, resulting in lower job satisfaction and higher turnover among educators. Therefore, successful instructional leadership requires a balance between guidance and professional trust. In many developing educational contexts, including Indonesia, the role of instructional leadership is still evolving, and its impact on teacher commitment requires further empirical investigation. This study contributes to this area by examining how instructional leadership operates within a specific school context and how it influences teachers' professional attitudes and engagement.

Pedagogical competence and teacher professionalism

Pedagogical competence refers to a teacher's ability to manage the learning process effectively, including understanding student characteristics, designing instructional strategies, implementing teaching methods, and conducting evaluations. It is one of the core

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competencies that determines the quality of teaching and learning in the classroom. Teachers with strong pedagogical competence are better equipped to create meaningful learning experiences that engage students and support their academic development (Sudargini & Purwanto, 2020).

Research consistently indicates that pedagogical competence is closely related to teacher professionalism and commitment. Teachers with strong instructional skills tend to have greater confidence in their abilities, which positively influences their motivation and dedication to teaching (Baier et al., 2019). They are more likely to adopt innovative teaching methods, integrate technology, and respond to diverse student needs. In contrast, teachers with limited pedagogical competence may struggle to manage classrooms effectively, leading to lower job satisfaction and reduced commitment.

Despite its importance, pedagogical competence is not solely an individual attribute but is influenced by external factors such as training, institutional support, and leadership. Professional development programs, mentoring, and collaborative learning environments play a crucial role in enhancing teachers' pedagogical skills (Duisenbayev et al., 2024). The Indonesian context emphasizes efforts to improve pedagogical competence through teacher certification and continuous professional development initiatives. However, challenges remain in ensuring consistent implementation across schools, such as varying levels of support from school administrations and differences in resource availability, which can hinder the effectiveness of these professional development programs. Therefore, examining the relationship between pedagogical competence and teacher commitment offers valuable insights into sustainable improvements in teacher quality.

The relationship between instructional leadership, pedagogical competence, and teacher commitment

According to Türk and Korkmaz (2022), teacher commitment incorporates various components in its definition and particularly includes the emotional connection to the profession and the school, seriousness, and the sense of responsibility related to the profession. Both internal and external components of teacher commitment incorporate the emotional and rational response to the profession and school and the level of responsibility, which significantly affects teaching quality and efficiency.

The previous studies have looked at the role of instructional leadership and pedagogical competence as separate phenomena related to teacher's commitment. Instructional leadership is generally considered an external driver that shapes the working environment, while pedagogical competence represents an internal capacity that enables teachers to perform effectively (Gading, 2024). However, the relationship between these two factors is interdependent. Effective leadership can enhance pedagogical competence by providing guidance, feedback, and professional development opportunities. Simultaneously, proficient educators are more likely to respond favorably to leadership initiatives and exhibit higher levels of commitment.

This study adopts a more integrative perspective by examining the combined influence of instructional leadership and pedagogical competence on teacher commitment. Such an approach provides a more comprehensive understanding of how organizational and individual

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factors interact in shaping teacher behavior. In the context of public junior high schools, where resources and support systems may vary, exploring this relationship is particularly important because it can reveal how different levels of support impact teacher commitment and ultimately affect student outcomes, such as student engagement, academic performance, and overall school climate. The findings are expected to contribute to both theory and practice by emphasizing the necessity to align leadership practices with teacher competence development to foster strong teacher commitment.

Research design, site, and participants

This study employed a quantitative causal-associative research design to examine the influence of instructional leadership and pedagogical competence on teacher commitment. This design was chosen to identify both the relationships and causal effects among the variables under investigation (Fraenkel et al., 2012).

The study was conducted in public junior high schools in West Pasaman Regency, Indonesia. The population consisted of 241 civil servant (PNS) teachers. A sample of 72 teachers was selected using proportional stratified random sampling, ensuring that each school was represented in proportion to its size. The sample size was determined using an appropriate sampling formula to ensure the representativeness and reliability of the data.

Research instrument

Data were collected using a structured questionnaire based on a Likert scale model. The instrument included five response options: Always (A), Often (O), Sometimes (S), Rarely (R), and Never (N). The questionnaire was designed as a closed-ended instrument, allowing respondents to select one answer that best represented their perception.

The instrument measured three main variables: instructional leadership, pedagogical competence, and teacher commitment. Each variable was represented by several indicators derived from relevant theoretical frameworks. Prior to data collection, the instrument was tested for validity and reliability to ensure its accuracy and consistency. The validity test confirmed that all items were appropriate for measuring the intended constructs, while the reliability test indicated that the instrument met acceptable reliability standards.

Data collection procedure

Data collection was conducted after the research instrument had been validated and declared reliable. Prior to distribution, the researcher coordinated with school principals to obtain permission and ensure that the data collection process would not interfere with teaching and learning activities. The selected respondents were informed about the purpose of the study and were assured that their responses would be kept confidential and used solely for academic purposes. This step was important to build trust and encourage honest responses from participants.

The questionnaires were distributed directly to the selected teachers during school hours. Respondents were given clear instructions on how to complete the questionnaire, including

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explanations of each response option to minimize misunderstanding. Adequate time was provided for respondents to carefully read and answer each item, ensuring that their responses accurately reflected their perceptions and experiences. The researcher remained available during the process to clarify any questions or concerns raised by participants.

To ensure data completeness, the researcher checked each returned questionnaire before leaving the research site. Incomplete or unclear responses were immediately confirmed with the respondents when possible. After all questionnaires were collected, the data were coded systematically and entered into a data processing program for analysis. This careful and structured data collection process was intended to enhance the accuracy, reliability, and overall quality of the research findings.

Data Analysis

Data analysis was performed using Statistical Package for the Social Sciences (SPSS). The analysis began with descriptive statistics to summarize the data. Before conducting hypothesis testing, several prerequisite tests were performed to ensure the data were suitable for regression analysis.

The normality test was conducted using the Kolmogorov-Smirnov method to determine whether the data were normally distributed. The homogeneity test was applied to assess the equality of variance across groups. In addition, multicollinearity was assessed using tolerance and Variance Inflation Factor (VIF) values to ensure that there was no strong correlation among the independent variables.

Hypothesis testing was carried out using simple linear regression to examine the partial effects of each independent variable on teacher commitment and multiple linear regression to analyze the simultaneous influence of instructional leadership and pedagogical competence on teacher commitment.

Findings

This section presents the results of data analysis conducted to examine the influence of instructional leadership and pedagogical competence on teacher commitment. The findings are organized systematically, beginning with descriptive statistics to provide an overview of the condition of each variable, followed by prerequisite tests to ensure that the data meet the assumptions required for regression analysis. These tests include normality, homogeneity, multicollinearity, and linearity assessments. Ensuring that these assumptions are satisfied is essential to guarantee the validity and reliability of the statistical results.

After confirming that the data meet all necessary assumptions, the analysis proceeds with hypothesis testing using both simple and multiple regression techniques. The purpose of this stage is to identify the partial and simultaneous effects of the independent variables on teacher commitment. The findings are presented using tables to enhance clarity and facilitate interpretation, followed by descriptive explanations to provide deeper insight into the results. Through this structured approach, the study aims to offer a comprehensive understanding of how instructional leadership and pedagogical competence contribute to shaping teacher commitment in the context of public junior high schools.

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Table 1. *Descriptive analysis of variables*

Variables	Score (%)	Category
Teacher Commitment (Y)	85.95%	High
Instructional Leadership (X1)	87.08%	Good
Pedagogical Competence (X2)	88.04%	Good

The table above shows that all research variables fall within good to high categories, indicating a generally positive condition in the observed schools. Teacher commitment is categorized as high, reflecting that teachers demonstrate strong responsibility, engagement, and dedication in performing their professional duties. This suggests that teachers are actively involved in instructional activities and contribute meaningfully to school development. Instructional leadership is categorized as good, indicating that school principals have performed their leadership roles effectively, particularly in guiding teaching and learning processes. However, there is still room for improvement to reach an excellent level, particularly in areas such as enhancing teacher training programs and increasing collaboration among staff. Similarly, pedagogical competence is also categorized as good, suggesting that teachers possess adequate skills in managing classroom learning, although further development is still necessary. Overall, these findings indicate that a supportive educational environment exists, where both leadership and competence contribute positively to teacher commitment.

Table 2. *Normality test*

Variables	Sig. Value	Criterion	Result
Teacher commitment (y)	0.165	> 0.05	Normal
Instructional leadership (x1)	0.200	> 0.05	Normal
Pedagogical competence (x2)	0.135	> 0.05	Normal

The results indicate that all variables have significance values greater than 0.05, confirming that the data are normally distributed. This means that the data follow a symmetrical pattern and do not show extreme deviations, which could potentially affect the accuracy of statistical analysis. Normality is an important requirement in regression analysis because it ensures that the estimation results are unbiased and reliable. The consistent distribution across all variables also reflects that respondents provided balanced and stable responses. This strengthens the validity of the dataset and supports further analysis without the need for transformation. Therefore, the normality assumption has been satisfied, allowing the study to proceed to the next stage of analysis.

Table 3. *Homogeneity test*

Variables tested	Sig. Value	Result
X1 & x2 → y	0.616	Homogeneous

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The homogeneity test shows a significance value of 0.616, which is higher than the required threshold of 0.05. This indicates that the data have equal variance across groups, meaning that the variability of teacher commitment is consistent across different levels of instructional leadership and pedagogical competence. Homogeneity is essential in ensuring that comparisons and regression analysis are valid and not influenced by unequal data distribution. The result suggests that the dataset is stable and reliable for further analysis. Therefore, the assumption of homogeneity has been fulfilled, supporting the use of parametric statistical methods in this study.

Table 4. *Multicollinearity test*

Variables	Tolerance	Vif	Result
Instructional leadership (x1)	0.971	1.029	No multicollinearity
Pedagogical competence (x2)	0.971	1.029	No multicollinearity

The results indicate that both independent variables have tolerance values above 0.10 and VIF values below 10. This confirms that there is no multicollinearity between instructional leadership and pedagogical competence. This is important because multicollinearity can distort regression results and reduce the accuracy of interpretation. The absence of multicollinearity indicates that each variable contributes independently to explaining teacher commitment. This strengthens the validity of the regression model and ensures that the analysis results are reliable.

Table 5. *Linearity test*

Relationships	Sig. Value	Result
X1 → y	0.812	Linear
X2 → y	0.432	Linear

The results show that both relationships are linear, as indicated by significance values greater than 0.05. This means that increases in instructional leadership and pedagogical competence are associated with proportional increases in teacher commitment. The linearity assumption is important because it ensures that regression analysis can accurately model the relationship between variables. These results confirm that both independent variables are appropriate predictors of teacher commitment.

Table 6. *Effect of instructional leadership on teacher commitment*

Indicators	Value
Determination (R^2)	0.520
Contribution	52%
Significance	0.000

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The findings indicate that instructional leadership significantly influences teacher commitment, contributing 52% to its variance. This demonstrates that leadership practices play a dominant role in shaping teacher attitudes and professional engagement. Effective leadership, such as providing direction, supervision, and support, encourages teachers to be more committed to their work. This highlights the importance of strengthening leadership capacity in schools.

Table 7. *Effect of pedagogical competence on teacher commitment*

Indicators	Value
Determination (R^2)	0.365
Contribution	36.5%
Significance	0.000

Pedagogical competence also has a significant influence on teacher commitment, contributing 36.5%. This indicates that teachers who have strong teaching skills are more confident and motivated, leading to higher commitment. Improving pedagogical competence through training and development is therefore essential.

Table 8. *Simultaneous effect of variables*

Indicators	Value
Determination (R^2)	0.615
Contribution	61.5%
Significance	0.000

The combined influence of instructional leadership and pedagogical competence explains 61.5% of teacher commitment. This shows that both factors work together to strengthen teacher commitment, highlighting the importance of integrating leadership and competence development.

Discussions

The influence of instructional leadership on teacher commitment

The findings of this study indicate that instructional leadership has a significant and dominant influence on teacher commitment, accounting for 52% of its variance. This result highlights the critical role of school principals in shaping teachers' professional attitudes and engagement. Instructional leadership, which focuses on improving teaching and learning processes, enables principals to provide direction, supervision, and support that directly impact teacher performance. Teachers are more likely to feel supported and motivated to do their jobs when principals are involved in developing the curriculum, supervising classrooms, and continuing their own education.

This finding is consistent with previous studies emphasizing that instructional leadership fosters a positive school climate and enhances teacher commitment (Hallinger, 2011;

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Robinson et al., 2008). Teachers who perceive strong leadership are more likely to develop a sense of responsibility and belonging toward their institution. However, this study also suggests that leadership effectiveness depends not only on administrative control but also on the ability to build collaboration and trust within the school environment. In line with Leithwood and Jantzi (2005), effective leadership should balance direction with teacher empowerment.

In addition, instructional leadership contributes to creating a shared vision that aligns teachers' individual goals with institutional objectives. When teachers are involved in decision-making processes, they are more likely to feel valued and committed to achieving school targets. This participatory approach strengthens collective responsibility and fosters a sense of ownership among teachers. Moreover, principals who provide continuous feedback and recognize teachers' achievements can enhance motivation and job satisfaction. Conversely, a lack of instructional focus in leadership may lead to reduced teacher engagement and lower commitment levels. Therefore, strengthening instructional leadership through training, mentoring, and policy support is essential to ensure sustainable improvements in teacher commitment and overall school performance.

The influence of pedagogical competence on teacher commitment

The results also show that pedagogical competence significantly influences teacher commitment, contributing 36.5%. This indicates that teachers who possess strong instructional skills, including the ability to design, implement, and evaluate learning effectively, tend to demonstrate higher levels of commitment. Pedagogical competence enhances teachers' confidence in managing classroom activities and addressing diverse student needs, thereby increasing their professional satisfaction and engagement.

This finding aligns with the existing literature, which emphasizes the importance of teacher competence in shaping professional behavior (Darling-Hammond, 2017; Hill-Jackson & Craig, 2023). Teachers who are well-equipped with pedagogical knowledge are more likely to adopt innovative teaching strategies and create meaningful learning experiences, which can lead to improved student outcomes and foster a more dynamic classroom environment. However, the relatively lower contribution compared to instructional leadership suggests that competence alone may not be sufficient to maximize teacher commitment. External factors, such as leadership support and institutional environment, also play a crucial role. Furthermore, pedagogical competence plays an important role in enabling teachers to adapt to evolving educational demands, including integrating technology and student-centered learning approaches. Teachers who continuously develop their skills are better able to respond to diverse classroom challenges, which contributes to sustained commitment. According to Fairman et al. (2022), ongoing professional development is essential for maintaining high teaching standards and improving educational outcomes. In this context, collaborative learning among teachers, such as peer discussions and professional learning communities, can further strengthen pedagogical competence. Therefore, investment in teacher training programs and continuous professional development initiatives is crucial for enhancing both competence and commitment in the long term.

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The combined influence of instructional leadership and pedagogical competence

The findings reveal that instructional leadership and pedagogical competence jointly explain 61.5% of the variance in teacher commitment, indicating a strong combined effect. This suggests that the interaction between external organizational factors and internal individual capacities shapes teacher commitment. Instructional leadership provides the structural and motivational support needed for teachers, while pedagogical competence represents the professional skills required to perform effectively.

This result supports the perspective that teacher commitment cannot be explained by a single factor but rather by the integration of multiple influences (Day et al., 2007). Schools that successfully combine strong leadership with high teacher competence are more likely to create a productive and sustainable learning environment. In this context, leadership acts as a catalyst that enhances the impact of teacher competence.

Moreover, the interaction between leadership and competence reflects a dynamic process in which both elements reinforce each other. Effective leadership not only supports teachers but also creates opportunities for professional growth, thereby enhancing pedagogical competence. Conversely, competent teachers are better able to respond to leadership initiatives and contribute to school improvement efforts. This reciprocal relationship aligns with social constructivist perspectives, which emphasize collaboration and shared learning (Darling-Hammond et al., 2020). Therefore, improving teacher commitment requires an integrated strategy that simultaneously strengthens leadership practices and teacher competence. Policymakers and school leaders should focus on developing supportive environments that encourage continuous learning, collaboration, and innovation among teachers.

Conclusion

This study concludes that instructional leadership and pedagogical competence have a major impact on determining teacher commitment in public junior high schools in West Pasaman Regency. Instructional leadership was found to have a stronger influence, indicating that effective leadership practices—such as developing a shared vision, fostering collaboration, and supporting instructional improvement—are essential in enhancing teachers' professional engagement and responsibility. Pedagogical competence also contributes meaningfully, as teachers who possess strong instructional skills and the ability to design and evaluate learning effectively tend to demonstrate higher levels of commitment.

Furthermore, the combined influence of instructional leadership and pedagogical competence provides a more comprehensive explanation of teacher commitment, highlighting the importance of aligning organizational support with individual teacher capacity. These findings suggest that improving teacher commitment requires not only strengthening leadership practices but also continuously developing teachers' pedagogical skills through professional development programs.

However, this study is limited to a specific regional context and a relatively small sample, which may limit the generalizability of the findings. Future research is recommended to

explore additional variables and broader educational contexts to provide a more comprehensive understanding of factors influencing teacher commitment.

Disclosure Statement

No potential conflict of interest was reported by the authors.

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