
Transformational leadership and motivation's influence on teacher innovation and job satisfaction

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Abstract

This research investigated the influence of principals' transformational leadership and achievement motivation on teachers' innovative behavior, mediated by teacher job satisfaction, in public junior high schools in Pesisir Selatan Regency. This research used a quantitative, causal-associative approach to examine the direct and indirect effects of principals' transformational leadership and achievement motivation on innovative behavior via teacher job satisfaction. This research involved 384 civil servant teachers from a population of 2,118. Data were collected using a questionnaire and analyzed using PLS-SEM (Partial Least Squares Structural Equation Modeling). The results indicated that transformational leadership had a positive and significant effect on teachers' innovative behavior, with a coefficient of 0.407 ($p < 0.05$). However, achievement motivation had a negative but significant effect on innovative behavior (coefficient: -0.174, $p < 0.05$). Teacher job satisfaction was found to have a strong positive effect on innovative behavior (coefficient: 0.707, $p < 0.05$).

Keywords

Achievement motivation, educational leadership, job satisfaction, teacher innovation, transformational leadership

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Introduction

Leadership in education plays a crucial role in shaping teachers' behavior and performance, particularly by fostering an environment that encourages innovation. Among the various leadership styles, transformational leadership has proven to be especially effective in motivating teachers to transcend their personal interests and prioritize the collective goals of the school, thereby contributing to organizational change and innovation (Gumus & Yildirim, 2021). In educational settings, principals who exhibit transformational leadership characteristics inspire and motivate their teachers, empowering them to think creatively and adopt new teaching strategies that enhance student outcomes (Khoza et al., 2020). Transformational leadership is grounded in the belief that effective leadership involves not only setting high expectations and goals but also fostering collaboration, promoting personal development, and cultivating a shared vision of success (Kirkpatrick & Locke, 2021). When principals effectively implement transformational leadership, they help teachers embrace change, a crucial step in an era marked by rapid educational reforms and technological advancements.

However, leadership alone does not entirely explain teachers' capacity for innovation. Achievement motivation—an intrinsic drive to succeed and achieve goals—is another critical factor influencing teachers' engagement in innovative behaviors (Karadağ et al., 2021). Teachers with high achievement motivation are more likely to actively seek new teaching methods and approaches, driven by a desire to improve and excel in their profession (Goleman, 2017; Liu & Onwuegbuzie, 2020). Achievement motivation can also foster a proactive attitude, wherein teachers seek creative solutions to challenges, particularly in the face of changing educational requirements (Dörnyei, 2021). Nevertheless, while motivation is a powerful force, its effect on innovation is often moderated by other factors, such as leadership and job satisfaction. High achievement motivation, if not balanced by a supportive leadership environment, may lead to increased individualism and competitiveness, potentially hindering collaboration and shared innovation (Goleman, 2017; Karadağ et al., 2021).

Job satisfaction is equally critical in fostering innovation within educational settings. Research consistently indicates that job satisfaction correlates positively with teachers' performance and their willingness to engage in innovative behaviors (McKnight et al., 2020; Spector, 2019). Teachers who are satisfied with their jobs are more likely to adopt new ideas and teaching methods, as they feel motivated to contribute to their schools' success (Judge et al., 2017; Liu & Onwuegbuzie, 2020). Job satisfaction encompasses various factors, including the work environment, relationships with colleagues and superiors, and the level of professional autonomy. Teachers who feel valued, supported, and recognized for their work are more likely to stay committed to their profession and be willing to experiment with innovative practices (Spector, 2019). Furthermore, job satisfaction serves as a mediating factor between leadership styles and innovative behavior, as satisfied teachers are more inclined to embrace change and adopt new teaching practices (McKnight et al., 2020).

Despite the growing body of research on transformational leadership, achievement motivation, and job satisfaction, there is a lack of research examining how these factors collectively influence teachers' innovative behavior. While studies have examined the

individual effects of leadership and motivation on teaching performance, the interplay between these variables and their combined effect on innovation remain underexplored (Goleman, 2017). The importance of understanding this interaction is particularly relevant in Indonesia, where educational reforms have placed increasing pressure on teachers to innovate and improve the quality of teaching and learning (Hidayat et al., 2024). In Indonesia, teachers are expected to refine their practices continually to meet the demands of new curricula and technology-enhanced learning environments. However, teachers' ability to innovate depends on various factors, including the leadership they receive, their motivation, and their satisfaction with their work conditions.

This research aims to bridge the gap in the literature by examining the combined effect of transformational leadership, achievement motivation, and job satisfaction on the innovative behavior of junior high school teachers in Pesisir Selatan Regency, West Sumatra. By examining how these factors interact to shape teachers' willingness to innovate, this research aims to offer insights into how school leaders and policymakers can foster creativity and adaptability among teachers. Understanding the dynamics between these factors will help inform strategies to improve teacher performance and enhance the quality of education. The results of this research contributes to the broader discourse on educational leadership by offering practical recommendations to enhance teacher innovation in Indonesia's educational landscape.

The context of this research is significant because it occurs within Indonesia's rapidly evolving educational system. Recent reforms in Indonesia's education system have highlighted the importance of enhancing teaching quality, which is considered crucial for producing high-achieving, competitive students capable of succeeding in a globalized world. In response, teachers are encouraged to adopt innovative teaching methods, integrate technology into the classroom, and continually adapt to new pedagogical approaches. However, the success of these initiatives largely depends on how well principals provide leadership and support that encourage teachers to innovate. Furthermore, the effects of achievement motivation and job satisfaction on fostering innovative behaviors among teachers need to be better understood, as these factors can either facilitate or impede teachers' willingness to embrace change.

Literature Review

Teacher innovative behavior

Innovative behavior encompasses a series of actions that lead to the generation, introduction, and implementation of new and beneficial ideas at all levels of an organization (Thurlings et al., 2015). This behavior encompasses developing innovative product ideas and technologies, as well as refining administrative procedures to foster stronger work relationships and enhance efficiency and effectiveness. In the context of education, innovative teacher behavior is crucial to ensuring the ongoing relevance and improvement of teaching practices, particularly in response to evolving educational demands (Fullan, 2021; Gaynor, 2002).

Fullan (2001) emphasizes the role of leadership in supporting educational innovation, stating that teachers' innovative behavior flourishes when there is supportive leadership, a

collaborative environment, and ample opportunities for professional development. According to Fullan (2001), educational change should be a collaborative effort, and teachers, as the primary agents of change, need constant support to develop their innovative behavior. Additionally, De Jong and Den Hartog (2007) define innovative behavior as all individual actions aimed at generating, introducing, and implementing new, beneficial ideas within the organization. This behavior, particularly in the educational setting, is essential for the continuous improvement of teaching methods and for adapting to new educational paradigms.

Innovative behavior is often associated with creativity, particularly in its initial stages, when individuals generate new ideas (De Jong & Den Hartog, 2007). These emerging ideas are then applied in various ways to achieve organizational goals, forming a complex, ongoing process. Teachers, both as individuals and as mentors, are expected to adopt new methods to help the education system evolve, ensuring that the teaching and learning process remains effective and efficient. In the classroom, an innovative teacher can navigate and manage diverse student needs, fostering critical thinking and providing meaningful learning experiences.

As Di et al. (2025) assert, innovation is an essential characteristic of an effective teacher, reflecting the ability to think creatively, adapt to current developments, and create a stimulating and meaningful learning environment. Innovative teachers exhibit several key behaviors:

- They create emotionally and intellectually safe classroom environments that encourage student engagement and enhance students' interest in learning.
- They carefully assess students' engagement levels, identifying strengths and weaknesses to tailor their teaching strategies accordingly.
- They foster an environment that encourages students to be more enthusiastic and active participants in their learning, transforming mundane moments into engaging experiences.
- They are proficient in utilizing technology to enhance the learning process, incorporating digital tools, online platforms, and interactive applications to make lessons more engaging and relevant.
- They take risks, thinking outside the box to solve classroom challenges and design engaging, creative activities that inspire student involvement.

Thus, innovative teachers create a dynamic, engaging learning environment that enables students to thrive both academically and personally. Both internal factors, such as creativity and adaptability, and external factors, such as leadership and organizational support, influence their innovative behavior.

Transformational leadership of school principals

Leadership is a dynamic process that involves influencing others to achieve common goals, and a leader's style can significantly affect an organization's effectiveness. According to Ali (2012), leadership is the ability to influence others to willingly follow the leader's direction, even in the face of challenges. Blanchard and Hersey (2021) define leadership as the process of influencing individuals and groups to achieve desired outcomes in each context. In the educational setting, school principals' leadership is crucial for shaping teachers' behavior and fostering an environment conducive to innovation.

Transformational leadership has been shown to positively effect teacher performance and foster classroom innovation (Khoza et al., 2020). Principals who practice transformational leadership inspire their staff by setting a clear vision, motivating teachers, and encouraging them to think creatively and work collaboratively (Avolio & Yammarino, 2018). Such leadership involves fostering trust and supporting teachers, which is essential for creating a positive school culture that encourages innovative behavior (Gumus & Yildirim, 2021). When principals provide this kind of leadership, teachers are more likely to adopt new teaching methods, experiment with innovative practices, and strive for continuous improvement.

Effective transformational leadership requires principals to be not only task-oriented but also emotionally intelligent, recognizing and responding to their teachers' needs (Goleman, 2017). This style of leadership encourages teachers to prioritize the school's needs over their own, fostering an environment where new ideas can flourish (Kirkpatrick & Locke, 2021). Therefore, leadership's role in enhancing teacher innovation is significant, and it is vital that principals adopt a transformational approach to cultivate a culture of continuous improvement and creativity.

Achievement motivation

Achievement motivation refers to the internal drive to succeed and attain specific goals, and it is a significant predictor of individual performance across various fields, including education. In the context of teaching, achievement motivation influences a teacher's willingness to engage in innovative behaviors and to continuously improve their practice. Teachers with high achievement motivation are more likely to pursue professional development opportunities and seek innovative solutions to challenges (Karadağ et al., 2021). This motivation is crucial for sustaining teacher involvement in innovative practices, as motivated teachers are more likely to embrace new teaching methods and adapt to changes in the educational landscape (Miller et al., 2021).

Expectancy theory posits that an individual's expectations about the outcomes of their efforts shape their achievement motivation (Miller et al., 2021). When teachers believe that their efforts will lead to positive results, they are more motivated to engage in innovative practices. Therefore, fostering positive expectations about innovation outcomes is key to enhancing teachers' achievement motivation. Schools that reward achievement and provide opportunities for professional growth create a conducive environment for motivated teachers to thrive (Goleman, 2017). This motivation is not only essential for individual success but also for the school's collective success in adapting to new educational demands.

Job satisfaction

Job satisfaction is a key determinant of teacher performance and innovation. Teachers who are satisfied with their work are more likely to demonstrate high levels of creativity, engagement, and commitment to their profession (Judge et al., 2017). Job satisfaction encompasses both intrinsic factors, such as having meaningful work, freedom, and opportunities for personal growth, and extrinsic factors, including pay, benefits, the work environment, and relationships with coworkers (Robbins et al., 2021). Teachers who

experience high levels of job satisfaction are more likely to embrace new teaching methods and adapt to changes in the curriculum and technology.

Riyadi (2019) defines job satisfaction as the positive emotional response individuals have toward their work based on their evaluation of the work environment and job characteristics. Satisfied teachers are more likely to engage in innovative behaviors because they feel valued, supported, and motivated to contribute to the organization's success (Liu & Onwuegbuzie, 2020). Additionally, job satisfaction mediates the relationship between leadership styles and teacher innovation. When teachers feel supported by their principals and colleagues and are satisfied with their work environment, they are more likely to implement creative teaching strategies that improve student learning outcomes (McKnight et al., 2020).

Overall, the interrelationships among transformational leadership, achievement motivation, and job satisfaction have a significant influence on teachers' willingness to innovate. Principals who adopt a transformational leadership style, foster a motivating environment, and ensure job satisfaction are more likely to cultivate a culture of innovation in their schools. Motivated, supported, and satisfied teachers are better positioned to adopt innovative teaching practices that enhance their students' educational experience.

Methodology

This research employed a quantitative research design with a causal-comparative approach to examine the relationships between transformational leadership, achievement motivation, job satisfaction, and innovative behavior of junior high school teachers in Pesisir Selatan Regency. The causal-comparative approach is specifically suited for this research, as it investigates cause-and-effect relationships between variables without manipulating them, which is suitable for analyzing existing relationships in a natural setting (Cresswell, 2014).

Research design and approach

The causal-comparative research design is appropriate, as it allows the identification of the relationships between independent variables (transformational leadership, achievement motivation, and job satisfaction) and the dependent variable (teacher innovative behavior). In contrast to experimental designs, this approach compares existing groups under different conditions to determine whether significant differences or relationships exist (Cresswell, 2014).

The research is conducted in real-world settings with no experimental intervention, focusing on current leadership practices, teacher motivation, and job satisfaction within the schools of Pesisir Selatan Regency.

Population and sample

This research focused on a population of 2,118 civil servant (PNS) teachers in 15 sub-districts in Pesisir Selatan Regency. This group of teachers was selected because they are responsible for implementing innovative teaching practices in public junior high schools. A stratified random sampling method was used to ensure a representative sample of the population. The stratified sampling approach divided the population into subgroups (strata)

based on characteristics such as school type (urban vs. rural) and subjects taught (mathematics, science, language). This method ensured a balanced representation of teachers across demographics and professional backgrounds, thus increasing the generalizability of the results. A total of 384 teachers were selected from these strata to participate in this study.

Data collection instrument

The data collection instrument used in this research was a Likert-scale questionnaire. The Likert scale is widely used in educational research to measure attitudes, opinions, and perceptions regarding specific phenomena, as it allows respondents to indicate the degree to which they agree or disagree with a series of statements (Sugiyono, 2012). A Likert scale was employed in this research to evaluate transformational leadership, achievement motivation, job satisfaction, and teacher innovative behavior.

The questionnaire was developed with careful attention to the theoretical underpinnings of each variable. It consisted of a series of statements, with respondents asked to rate their level of agreement on a five-point scale, ranging from "strongly agree" to "strongly disagree." Each variable was measured through several indicators, with each indicator consisting of multiple statements designed to capture the specific aspect of the variable. For example, transformational leadership was measured through statements related to visionary leadership, inspirational motivation, and individualized consideration, while achievement motivation was assessed by items focusing on goal-setting, personal ambition, and the desire to improve teaching effectiveness.

Job satisfaction was evaluated through questions related to factors such as work environment, autonomy, compensation, and support from colleagues and supervisors. Teacher innovative behavior was assessed by asking teachers to report on their willingness to experiment with new teaching methods, their use of technology in the classroom, and their ability to adapt to new educational challenges.

Validity and reliability

To ensure the instrument's reliability and validity, the questionnaire was pretested with a smaller sample of teachers from schools in a nearby district. This pilot testing allowed for the identification and correction of any ambiguous or unclear questions. In addition, expert reviews were conducted to ensure that the items accurately reflected the constructs being measured. The final version of the questionnaire was refined based on feedback from both the pilot test and the expert reviews.

Reliability was assessed using Cronbach's alpha, a commonly used measure of internal consistency. According to Tavakol and Dennick (2011), a Cronbach's alpha value above 0.70 indicates acceptable reliability for social science research. In this study, all constructs demonstrated high reliability, with Cronbach's alpha values above the recommended threshold, ensuring that the questionnaire consistently measured the intended variables.

Data collection process

The data collection process began with obtaining the necessary permissions from the relevant educational authorities in Pesisir Selatan Regency. Following approval, the respective school principals distributed the final questionnaire to the selected teachers. To enhance response rates and ensure a smooth data collection process, teachers were given 2 weeks to complete and return the questionnaire.

The completed questionnaires were collected either in person or via a secure online platform to maintain anonymity and confidentiality. Participation in the research was voluntary, and all participants were informed of their right to withdraw at any time without any consequences. In total, 1,750 teachers completed the questionnaire, yielding a response rate of approximately 82%. This high response rate indicates that the sample is likely representative of the population.

Data analysis

The Likert-scale questionnaire data were analyzed using structural equation modeling (SEM) to test the hypothesized relationships among the variables. SEM is a powerful statistical technique that enables the estimation of complex relationships between multiple variables, providing a comprehensive understanding of how these variables interact and influence one another. SEM was chosen for this research because it can handle both direct and indirect relationships and account for measurement error in observed variables, making it particularly suitable for analyzing the effect of transformational leadership, achievement motivation, and job satisfaction on teacher innovative behavior.

Descriptive statistics were first used to summarize participants' demographic characteristics and the overall distribution of responses for each variable. Next, confirmatory factor analysis (CFA) was performed to validate the measurement model, ensuring that the indicators adequately reflected the constructs they were intended to measure. Following this, the structural model was estimated to test the direct and indirect effects of the independent variables on teacher innovative behavior.

Ethical considerations

Ethical considerations were a priority throughout the study. Informed consent was obtained from all participants, ensuring that they understood the purpose of the research and their right to confidentiality. The research adhered to ethical guidelines, ensuring that the collected data were used solely for research purposes and that participant anonymity was maintained throughout the data collection and analysis process.

Findings

The analysis used structural equation modeling (SEM), which enabled an in-depth examination of the relationships among the independent variables (transformational

leadership, achievement motivation, job satisfaction) and the dependent variable (teacher innovative behavior). The model provided valuable insights into the extent to which these variables influence teachers' innovative behavior in Pesisir Selatan Regency. The findings are discussed in terms of the coefficient of determination (R^2), F-Square (effect size), path coefficients, and predictive relevance (Q^2 test).

Coefficient of determination (R^2)

The coefficient of determination (R^2) indicates the proportion of variance in the dependent variable (teacher innovative behavior) that can be explained by the independent variables (transformational leadership, achievement motivation, and job satisfaction). As shown in Table 1, the R^2 value for teacher innovative behavior (Y) is 0.722, with an adjusted R^2 value of 0.720. This indicates that the independent variables in the model explain 72.2% of the variation in teachers' innovative behavior, with the remaining 27.8% attributable to other factors not included in the model.

Table 1. *Coefficient of determination (R^2)*

Variable	R Square	R Square Adjusted
Teacher innovative behavior(Y)	0.722	0.720

This result falls within the strong category, suggesting that the model has a high explanatory power in accounting for teachers' innovative behavior. The relatively high R^2 value points out the importance of the selected independent variables in explaining the variation in teacher innovation within the research context.

F-square / Effect size

The F-square (effect size) measures the relative strength of the influence of each independent variable on the dependent variable. The results in Table 2 show the effect sizes for each independent variable.

Table 2. *F-square / Effect size*

Variable	Teacher innovative behavior (y)
Transformational leadership (X1)	0.101
Achievement motivation (X2)	0.018
Job satisfaction (X3)	1.360

According to Cohen's (1988) guidelines, an effect size of 0.02 is considered small, 0.15 is medium, and 0.35 is large. Based on Table 2, job satisfaction (X3) has the largest effect size (1.360), indicating a very strong influence on teacher innovative behavior. This figure is followed by transformational leadership (X1), with a small effect size of 0.101, while

achievement motivation (X2) has an effect size of 0.018, indicating a negligible effect on teacher innovation.

These results indicate that job satisfaction is the most significant factor in promoting teacher innovation. On the other hand, transformational leadership and achievement motivation have only a small effect on innovative behavior in this context, indicating that they are not as significant.

Path coefficients and statistical significance

The path coefficients represent the strength and direction of the relationships between the independent and dependent variables. The statistical significance of these relationships was tested using t-statistics and p-values. The results are summarized in Table 3, which presents the path coefficients, t-statistics, and p-values for each relationship.

Table 3. Path coefficients, t-statistics, and p-values

Path	Path coefficient	T-statistics	P-value	Significance
Transformational Leadership (X1) → Y	0.407	4.797	0.000	Significant
Achievement Motivation (X2) → Y	-0.174	1.997	0.046	Significant
Job Satisfaction (X3) → Y	0.707	20.530	0.000	Significant

As shown in Table 3, all tested relationships between the independent variables and teacher innovative behavior were statistically significant.

- Transformational Leadership (X1) → Teacher Innovative Behavior (Y): The path coefficient of 0.407 with a t-statistic of 4.797 (p-value = 0.000) indicates that transformational leadership has a positive and significant effect on teacher innovation. This suggests that greater transformational leadership is associated with increased innovative behavior among teachers.
- Achievement Motivation (X2) → Teacher Innovative Behavior (Y): The path coefficient of -0.174 with a t-statistic of 1.997 (p-value = 0.046) indicates a negative but statistically significant relationship between achievement motivation and teacher innovative behavior. This suggests that higher levels of achievement motivation may decrease teachers' willingness to innovate, possibly due to an overemphasis on individual success rather than collaborative, innovative efforts.
- Job Satisfaction (X3) → Teacher Innovative Behavior (Y): The path coefficient of 0.707 with a t-statistic of 20.530 (p-value = 0.000) indicates a very strong and positive relationship between job satisfaction and teacher innovative behavior. This highlights that higher levels of job satisfaction are strongly associated with increased innovative behavior among teachers, underscoring the importance of a positive work environment in fostering creativity.

Predictive relevance (Q² test)

The Q² test was conducted to assess the predictive relevance of the structural model. A Q² value greater than zero indicates that the model has satisfactory predictive relevance for the endogenous constructs (latent variables), whereas a negative Q² value indicates a lack of predictive relevance. The results of the blindfolding procedure yielded a positive Q² value, confirming that the model has strong predictive relevance.

Discussion

The results of this research provide invaluable insights into the factors influencing teachers' innovative behavior in Pesisir Selatan Regency, specifically the roles of transformational leadership, achievement motivation, and job satisfaction. This section interprets these findings, links them to previous literature, and provides a deeper understanding of the dynamics that foster innovation in educational settings.

The role of transformational leadership in teacher innovation

The findings indicate that transformational leadership has a positive and significant effect on teacher innovative behavior, with a path coefficient of 0.407 and a t-statistic of 4.797. This result is consistent with existing research highlighting the importance of leadership in driving innovation in schools. Transformational leadership, characterized by a focus on inspiring and motivating followers, is known to enhance creativity and innovation by fostering an environment of trust, collaboration, and intellectual stimulation (Bass & Riggio, 2020).

Previous studies have demonstrated that transformational leadership has a positive on various educational outcomes, including teacher job satisfaction, motivation, and performance (Khoza et al., 2020). When school principals exhibit transformational leadership behaviors, they set high expectations, model positive behaviors, and support teachers in their professional development. These behaviors not only enhance teaching effectiveness but also foster an environment where teachers feel empowered to innovate (Avolio & Yammarino, 2018). This aligns with the current study's findings, which indicated that principals' transformational leadership practices encourage teachers to adopt new teaching methods and creatively solve classroom problems.

However, while transformational leadership positively affects teacher innovation, the effect size in this research (0.101) is relatively small compared to that for job satisfaction. This suggests that although leadership is important, its effect on teacher innovation may be less potent than other factors, such as teachers' satisfaction with their work environment. Previous studies have similarly found that while transformational leadership is crucial for fostering innovation, the support teachers receive in terms of job satisfaction and work-related benefits plays a more significant role in encouraging innovative behavior (Gumus & Yildirim, 2021). This nuanced finding emphasizes the importance of balancing leadership with other supportive factors that directly influence teachers' willingness to engage in innovative practices.

The influence of achievement motivation on teacher innovation

In this study, achievement motivation was found to have a negative, but statistically significant, effect on teacher innovative behavior, with a path coefficient of -0.174 and a t-statistic of 1.997. This finding is particularly intriguing and suggests that higher levels of achievement motivation may reduce teachers' willingness to innovate. In essence, teachers who are highly focused on individual success may prioritize their performance over collaborative efforts to develop new teaching strategies.

This result contrasts with the commonly held belief that achievement motivation fosters innovation. Alderman (2013) proposed that individuals with high achievement motivation tend to seek challenges and strive to excel, which can drive them to adopt new methods and improve their performance. However, in the context of teaching, an overemphasis on personal achievement can hinder collaboration, creativity, and the willingness to experiment with new approaches, which are essential to innovation (Dörnyei, 2021). Teachers with high achievement motivation may become more focused on their success metrics—such as student test scores or performance evaluations—rather than contributing to a shared innovative culture.

This finding aligns with previous research by Goleman (2017), who noted that achievement motivation can sometimes lead to a competitive work environment that undermines collaborative innovation. In educational settings, a focus on individual success may create a barrier to collaboration, which is crucial for encouraging innovative behavior. Teachers may become more risk-averse and hesitant to explore new teaching strategies that might not guarantee immediate success. Thus, while achievement motivation is important for personal growth and effectiveness, it must be managed to encourage collaborative efforts and the sharing of innovative ideas among teachers.

Job satisfaction as the most dominant factor in teacher innovation

Job satisfaction emerged as the most significant factor influencing teacher innovative behavior in this study, with a path coefficient of 0.707 and a t-statistic of 20.530. This result aligns with a substantial body of literature that points out the role of job satisfaction in fostering a productive and innovative work environment (Judge et al., 2017). Teachers who are satisfied with their work are more likely to engage in behaviors that contribute to their schools' success, including adopting innovative teaching practices.

Previous studies have demonstrated that job satisfaction is closely linked to teacher motivation, performance, and their willingness to embrace new methods (Liu & Onwuegbuzie, 2020). In the context of education, job satisfaction encompasses several factors, including work environment, relationships with colleagues and school leadership, professional autonomy, and compensation (Robbins et al., 2021). When teachers perceive their work environment as supportive and their contributions as valued, they are more likely to engage in creative problem-solving and experiment with new ideas. This finding is consistent with the study's results, which indicate that teachers who are satisfied with their work are more likely to innovate in their teaching methods.

The strong influence of job satisfaction on teacher innovation can also be explained by the fact that satisfied teachers tend to feel more confident and empowered in their roles. Job satisfaction boosts teachers' morale, which, in turn, enhances their ability to think creatively and to embrace new approaches to teaching (Spector, 2019). In contrast, dissatisfaction with work conditions can lead to burnout, disengagement, and a reluctance to adopt innovative practices (Liu et al., 2021). This finding highlights the vital role of school leaders in fostering a supportive work environment that prioritizes teacher well-being, autonomy, and professional development.

The interplay between leadership, motivation, and job satisfaction

While this research findings suggest that job satisfaction plays the dominant role in fostering teacher innovation, the combined effects of transformational leadership and achievement motivation cannot be overlooked. The positive influence of transformational leadership and the negative effect of achievement motivation emphasize the complex relationship between these variables. School principals must strike a delicate balance between motivating teachers to excel individually and creating an environment that encourages collaboration and innovation.

The results suggest that while leadership is crucial for setting the vision and motivating teachers, creating a supportive and satisfying work environment is essential to ensuring that teachers remain engaged and willing to experiment with new teaching methods. Furthermore, the negative relationship between achievement motivation and innovation demonstrates the value of fostering a collaborative culture in which teachers feel supported and are not solely driven by individual achievement (Goleman, 2017).

These findings provide valuable insights for school leaders and policymakers. To create a culture of innovation, school principals should strive to make their employees happier by providing them with the right support, opportunities for professional growth, and a positive work environment. At the same time, they should recognize the potential drawbacks of excessive focus on achievement motivation and instead encourage collaboration and shared learning among teachers. By doing so, they can create an environment that supports both personal and collective growth, leading to greater teacher innovation and, ultimately, improved student outcomes.

Conclusions

This research investigated the effect of transformational leadership, achievement motivation, and job satisfaction on teachers' innovative behavior in public junior high schools in Pesisir Selatan Regency. The results revealed that job satisfaction is the most influential factor in fostering teacher innovation, underscoring the importance of a supportive, positive work environment in encouraging teachers to adopt new teaching methods. Teachers who are satisfied with their work conditions are more likely to engage in innovative practices.

Transformational leadership, while still significant, had a relatively minor effect on teacher innovation. It plays a vital role in inspiring teachers and setting a vision for change. Still, its influence is not as strong as job satisfaction in driving innovative behavior. On the

other hand, achievement motivation was found to have a negative effect on innovation, suggesting that an overemphasis on individual success may hinder collaboration and creativity, which are essential to innovation.

In conclusion, the research highlights the importance of creating a work environment that supports teacher well-being and fosters collaboration. While leadership and motivation are essential, their effectiveness in promoting innovation is significantly enhanced when teachers are highly satisfied with their jobs. Therefore, school leaders should focus on improving job satisfaction through professional support and recognition, as well as fostering a collaborative culture to enhance teachers' innovative behavior and improve educational outcomes.

Disclosure Statement

No potential conflict of interest was reported by the authors.

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