

Encouraging Teacher Innovation: The Role of Organizational Support, Self-Management, and Trust as reviewed from SITOREM analysis

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Abstract:

This study aims to analyze the influence of organizational support, self-management, and trust on innovation in vocational high school (SMK) teachers. This study employed a mixed methods approach with a sequential explanatory design. The qualitative phase involved structured interviews to explore teachers' perceptions and practices, followed by a quantitative phase through a survey of private vocational high school teachers. Data analysis was conducted using the POP-SDM (Modeling and Optimization of Strengthening Management Resources) approach combined with SITOREM analysis. The results indicate that organizational support, self-management, and trust have a positive and significant effect on teacher innovation. Furthermore, SITOREM analysis identified priority indicators that need immediate improvement: compliance with regulations, interpersonal trust, independence, self-development, and the ability to implement and develop ideas. The implications of this study emphasize the importance of strengthening school policies that support leadership, improving teacher self-management, and building a climate of trust to encourage sustainable teacher innovation in addressing the challenges of educational transformation.

Keywords: *Organizational Support, Self-Management, Trust, Teacher Innovation*

Abstrak:

Penelitian ini bertujuan untuk menganalisis pengaruh dukungan organisasi, manajemen diri, dan kepercayaan terhadap inovasi guru Sekolah Menengah Kejuruan (SMK). Penelitian ini menggunakan pendekatan mixed methods dengan desain sequential explanatory, di mana tahap kualitatif dilakukan melalui wawancara terstruktur untuk menggali persepsi dan praktik guru, kemudian dilanjutkan dengan tahap kuantitatif melalui survei pada guru SMK swasta. Analisis data dilakukan menggunakan pendekatan POP-SDM (Pemodelan dan Optimasi Penguatan Sumber Daya Manajemen) yang dikombinasikan dengan analisis SITOREM. Hasil penelitian menunjukkan bahwa dukungan organisasi, manajemen diri, dan kepercayaan berpengaruh positif dan signifikan terhadap inovasi guru. Selain itu, analisis SITOREM mengidentifikasi indikator prioritas yang perlu segera ditingkatkan, yaitu kepatuhan terhadap aturan, kepercayaan interpersonal, kemandirian, pengembangan diri, serta kemampuan mengimplementasikan dan mengembangkan ide. Implikasi penelitian ini menegaskan pentingnya penguatan kebijakan sekolah yang berorientasi pada dukungan kepemimpinan, peningkatan manajemen diri guru, serta pembangunan iklim kepercayaan guna mendorong inovasi guru yang berkelanjutan dalam menghadapi tantangan transformasi pendidikan.

Kunci: *Dukungan Organisasi, Manajemen Diri, Kepercayaan, Inovasi Guru*

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INTRODUCTION

The quality of education is a strategic issue with broad implications for national development, particularly in responding to increasingly competitive global challenges. High-quality education is reflected not only in academic achievement but also in the ability to generate innovation relevant to contemporary needs. This is crucial because innovation is a key driver of human resource competitiveness at both national and international levels (Awode & Oduola, 2025; Mohammad Shafiee et al., 2024). Empirical evidence from the Programme for International Student Assessment (PISA) indicates that Indonesia continues to rank relatively low, placing 62nd out of 72 countries in 2015 and declining to 70th out of 78 countries in 2018. Furthermore, the Global Innovation Index (GII) ranked Indonesia 85th in 2019 and 2020, and 87th in 2021. These findings reflect that both educational quality and innovation capacity remain limited and require systematic improvement. Therefore, investigating the factors influencing innovation, particularly at the teacher level, is essential to address these challenges.

Theoretically, teacher innovation is influenced by both external and internal factors that interact dynamically. Organizational Support Theory posits that individuals tend to perform better when they perceive adequate support from their organization, such as access to resources, professional development opportunities, and recognition (Khofsah, 2025; Rahman, 2026; Shoha, 2026). Meanwhile, self-management refers to an individual's ability to regulate time, emotions, motivation, and personal development, which contributes to consistency in innovative practices. Trust Theory emphasizes the importance of positive interpersonal relationships in creating a collaborative and psychologically safe work environment. These three variables are conceptually linked to teacher innovation, as innovation involves not only generating ideas but also implementing them within a supportive environment. This study employs a mixed-methods approach, integrating qualitative insights from teachers' experiences with quantitative analysis to empirically examine relationships among variables.

Despite various educational reforms, including the implementation of the *Merdeka Belajar* policy, the realization of teacher innovation remains constrained in practice. Ideally, teachers are expected to design creative, adaptive, and contextually relevant learning experiences aligned with technological advancements and industry demands. However, a significant gap exists between these expectations and the actual conditions in schools. Many teachers face limited organizational support, including insufficient training, inadequate facilities, and a lack of recognition for innovative efforts (Hefniy & Alwahedi, 2025; Holidi, 2025; Manshur, 2026). In addition, inadequate self-management skills hinder teachers' ability to manage time effectively and engage in continuous professional development. Low levels of trust, both toward school leadership and among

colleagues, further impede collaboration and discourage risk-taking in instructional innovation. Consequently, the learning process often becomes monotonous and less effective in fostering students' creativity and critical thinking skills.

Previous studies have consistently demonstrated that organizational support, self-management, and trust significantly influence individual innovation, particularly in educational settings. Institutional support for integrating technology enhances teachers' capacity for innovation in instructional practices (Hikmah & Mudarris, 2026; Kusumawati, 2025). Similarly, the critical role of educational institutions in fostering teacher innovation through supportive policies and professional development initiatives (Edu, 2025; Rahmawati & Al-Rashid, 2025). highlighted that teachers play a strategic role in achieving educational goals, making innovation a crucial component of effective teaching. Furthermore, the self-management contributes to increased creativity, persistence, and willingness to take calculated risks in innovation processes (Maisuroh & Aisyah, 2024; Syafiih, 2025). Collectively, these studies indicate a positive relationship between internal and external factors and teacher innovation, suggesting that both personal competencies and organizational environments are essential determinants.

However, existing studies present several limitations that warrant further investigation. Many studies predominantly rely on quantitative approaches, which may not fully capture the complexity of teachers' lived experiences in the development of innovation. Additionally, research that simultaneously examines organizational support, self-management, and trust within a single integrated framework remains limited, particularly in the context of vocational education. Few studies have also focused on identifying priority indicators that require immediate improvement to enhance innovation effectively. This indicates a clear research gap that necessitates a more comprehensive and integrative approach. Therefore, this study addresses these limitations by employing a mixed-methods design, enabling both in-depth qualitative exploration and robust quantitative analysis to better understand the dynamics that influence teacher innovation.

Based on the aforementioned discussion, the novelty of this study lies in the integration of a mixed methods approach to analyze the influence of organizational support, self-management, and trust on vocational high school (SMK) teacher innovation, as well as the application of the POP-SDM model combined with SITOREM analysis to identify priority improvement indicators. The main research problem focuses on how these variables influence teacher innovation and which aspects should be prioritized for improvement to promote sustainable innovation. The proposed hypotheses state that organizational support, self-management, and trust have a positive and significant effect on teacher innovation. It is argued that higher levels of organizational support, effective self-management, and strong trust within the work environment will enhance teachers' capacity and willingness to innovate. This study is expected to contribute theoretically to the development of the educational innovation literature and, practically, to inform policymakers in designing strategies to improve teacher quality and sustain innovation.

RESEARCH METHODS

This study employed a mixed-methods design, specifically a sequential explanatory approach, integrating qualitative and quantitative methods to provide a more comprehensive understanding of the research problem (Kutscher & Parey, 2024; Takona, 2024). The selection of this design was based on the need to first explore in depth the perceptions and practices related to organizational support, self-management, and trust, and subsequently test the relationships among these variables empirically. The qualitative phase served as an initial exploration to construct a conceptual framework and formulate research hypotheses, while the quantitative phase was used to validate and generalize the findings. This combination allows for a more holistic analysis, as qualitative data provide contextual insights, whereas quantitative data offer measurable and statistically tested relationships among variables.

The study was conducted in private vocational high schools (SMK) located in Bekasi Regency. This location was selected for its role as a hub of rapidly developing educational institutions facing increasing demands for innovation in line with industrial and technological advancements. The qualitative phase involved five private SMKs, with 30 informants purposively selected to obtain rich, relevant information through structured interviews. The quantitative phase was conducted in nine accredited private SMKs across five sub-districts in Bekasi Regency, with a population of 180 permanent foundation teachers. The sample consisted of 124 respondents, determined using the Taro Yamane formula with a 5% margin of error. A multistage random sampling technique, followed by proportional random sampling, was used to ensure representativeness and minimize sampling bias.

Data collection techniques in this study included structured interviews and questionnaires. Structured interviews were utilized in the qualitative phase to explore teachers' perceptions and experiences regarding organizational support, self-management, trust, and their influence on innovation. The results of this phase were used to develop research instruments for the quantitative phase. Questionnaires were then distributed to the selected respondents to collect numerical data on the research variables. The use of these complementary data collection methods ensured the depth and breadth of information, enabling a more robust understanding of the research phenomena.

Data analysis was conducted using the POP-SDM (Modeling and Optimization of Management Resource Strengthening) model combined with the SITOREM (Scientific Identification Theory to Conduct Operational Research in Education Management) analysis (Aryee & Apronti Tetteh, 2024; Petropoulos et al., 2024). The POP-SDM model was used to examine the relationships among variables and test research hypotheses, while SITOREM analysis was applied to identify priority indicators for improvement and those that should be maintained. The prioritization process was based on three criteria: (1) the strength of relationships between variables derived from hypothesis testing; (2) expert judgment regarding the priority of indicators; and (3) empirical indicator values

obtained from respondents' data. Additionally, SITOREM incorporates weighting criteria, including cost, benefit, urgency, and importance, to determine strategic recommendations. To ensure data validity, this study applied triangulation techniques by comparing qualitative and quantitative findings, as well as conducting instrument validation and reliability testing in the quantitative phase.

RESULTS AND DISCUSSION

Results

Analysis of Research Variable Indicators

Indicator analysis of each research variable is obtained by calculating the average score of respondents' answers for each indicator of each independent variable and dependent variable. This is to obtain an overview of the actual condition of the research indicators from the perspective of the research subjects. With the mathematical equation, the average indicator score for each variable is:

$$\begin{aligned} \text{Score } \bar{V}\text{-ind} &= \\ &= \sum_{r=1}^n \bar{V}_{x(i-n)} = \frac{1}{nr} \left(\sum_{r=1}^n V_{x(i-n)} \right) \end{aligned}$$

Information:

$V_{x(i-n)}$ = value of indicator score (i) on variable (x).

x = variables (independent, dependent, moderating, mediating (intervening)).

i = indicators 1 to n

r = respondents 1 to n\

nr = number of respondents

Assessment of Indicator Weights for Each Research Variable

Expert judgment in the weighting analysis of each indicator is calculated based on the criteria of "cost, benefit, urgency, and importance" for each indicator against the variable being assessed. The weighting analysis of each indicator is calculated based on expert judgment based on the criteria of "Cost, Benefit, Urgency, and Importance" for each indicator against its variable, as follows: The "Cost" aspect, which refers to the effort, cost, time, or other resources required for the indicator. The higher the "cost" of an indicator, the greater its role within a variable.

The "Benefit" aspect, which refers to the contribution, benefit, or utility the indicator provides to the variable. The higher the "benefit" of an indicator, the greater its role within a variable.

The "Urgency" aspect, which refers to the extent to which the indicator is needed, driven, or urged within a variable. The greater the "urgency" of an indicator, the greater its role within the variable.

The "Importance" aspect, which refers to the level of importance an indicator places on the variable being measured or constructed. The higher the "importance" of an indicator, the greater its role.

The mathematical equation for assessing CBUI weighting by experts is formulated as follows:

$$\bar{W}_{\text{Exprt } W_{(i-n)}} = \frac{\sum_{j=1}^n \text{xpert } W_{x(i-n)}}{n_j} = \frac{1}{n_j} \left[\sum_{j=1}^n \left[\frac{C+B+U+I}{\sum_{i=1}^n \{C+B+U+I\}} \right]_{x(i-n)} \times 100\% \right]$$

Information:

Exprt = expert

W_{x(i-n)} = the total weight of CBUI (Cost; Benefit; Urgency; Importance) for each indicator (i) on variable (x).

j = expert judgment (expert judgment) 1 to n

n_j = number of expert judgments

The results of the expert's average CBUI weighting calculation can be seen in Appendix 7, the Summary Table of Expert CBUI Weighting Assessments. A higher CBUI weighting indicates a strong level of importance or urgency for the indicator relative to its variable. Therefore, if an indicator has an average score below 4.0 but is rated high by the experts, the CBUI weighting is likely to be prioritized for treatment.

The following is the average indicator weighting assessment form completed by two experts, as shown in the table below:

Table 1. Assessment of the Weight of Teacher Innovation Variable Indicators

No	Indicator	Assessment Aspects				Total	Weight (%)
		C	B	U	I		
1	Finding Ideas	3	4	4	4	15	20,5%
2	Implementing Ideas	3	4	4	5	16	22%
3	Developing Ideas	2	4	4	5	15	20,5%
4	Evaluating Ideas	3	3	3	4	13	18%
5	Sharing Ideas	3	3	4	4	14	19%
Total Expert Score						73	100

Table 2. Assessment of the Weight of Organizational Support Variable Indicators

No	Indicator	Assessment Aspects				Total	Weight (%)
		C	B	U	I		
1	Providing justice (Fairness)	3	3	4	4	14	25
2	Supervisor Support	3	4	4	4	15	27
3	Organizational Rewards	3	3	4	4	14	25
4	Job Conditions	3	3	3	4	13	23
Total Expert Score						56	100

Table 3. Self-Management Variable Indicator Weight Assessment

No	Indicator	Assessment Aspects				Total	Weight (%)
		C	B	U	I		
1	Timing	3	4	4	5	16	22
2	Emotional Control	3	4	4	4	15	20
3	Stress Management	3	3	4	4	14	19
4	Self-development	3	3	3	4	13	19
5	Independence	3	4	4	4	15	20
Total Expert Score						73	100

Table 4. Trust Variable Indicator Weight Assessment

No	Indicator	Assessment Aspects				Total	Weight (%)
		C	B	U	I		
1	Adhere to a set of values	3	3	4	4	14	20
2	Obey the rules and trust others	3	4	3	4	14	20
3	Care for subordinates	3	3	3	4	13	18
4	Respect subordinates and be able to develop the organization.	3	4	4	4	15	22
5	Have social sensitivity	3	4	3	4	14	20
Total Expert Score						70	100

The results presented in Table 1 indicate that among the teacher innovation indicators, implementing ideas has the highest weight (22%), highlighting that the practical application of ideas is the most critical aspect of innovation. This suggests that innovation is not merely about generating or conceptualizing ideas, but more importantly, about transforming them into actionable practices that impact teaching and learning processes. Meanwhile, finding ideas and developing ideas each account for 20.5%, reflecting their equally significant roles in initiating and refining innovative practices. The indicator "sharing ideas" (19%) emphasizes the importance of collaboration and knowledge dissemination among teachers, while "evaluating ideas" has the lowest weight (18%), though it still represents a meaningful component. In Table 2, supervisor support emerges as the most dominant indicator (27%), underscoring the crucial role of leadership in fostering organizational support. Indicators such as fairness and organizational rewards (25% each) further reinforce the importance of equitable treatment and recognition systems, while job conditions (23%) remain important but comparatively less influential.

Furthermore, Table 3 demonstrates that timing is the most prominent indicator of self-management, with a weight of 22%, indicating that effective time management is fundamental to individual performance. This is followed by emotional control and independence (20% each), which highlight the importance of emotional regulation and the ability to work autonomously. Meanwhile, stress management and self-development each receive a weight of 19%, suggesting that although these aspects are slightly less prioritized, they remain essential components of self-management. Overall, the distribution of weights across the three tables reflects a balanced yet prioritized structure, where implementation, leadership support, and time management emerge as key determinants. These findings imply that strengthening these dominant indicators can significantly enhance teacher innovation, organizational effectiveness, and individual self-regulation in educational settings.

Analysis of Indicator Classification Determination

After obtaining the average research results for each indicator and its respective weight (%), the next step is to analyze the classification of the indicators within the research variables. This classification aims to group the indicators into two main categories:

Indicators that require immediate attention and improvement (indicated by high weighting but low average scores), and Indicators that deserve to be

maintained or even further developed (indicated by high weighting and high average scores).

Table 5. Determination of Indicator Classification for Teacher Innovation

No.	Indicator	Expert Assessment Weight	Average Research Result Score	Indicator Ranking within a variable
1	Finding Ideas	20,5	4,43	(20,5%) (4,43) Maintained or developed
2	Implementing Ideas	22	3,95	(22%) (3,95) Priority for immediate repair
3	Developing Ideas	20,5	3,97	(20,5%) (3,97) Priority for immediate repair
4	Evaluating Ideas	18	4,25	(18%) (4,25) Maintained or developed
5	Sharing Ideas	19	4,15	(19%) (4,15) Maintained or developed

Table 6. Determination of Indicator Classification for Organizational Support

No.	Indicator	Expert Assessment Weight	Average Research Result Score	Indicator Ranking within a variable
1	Providing justice (Fairness)	25	4,38	(25%) (4,38) Maintained or developed
2	Supervisor Support	27	4,51	(27%) (4,51) Maintained or developed
3	Organizational Rewards	25	4,26	(25%) (4,26) Maintained or developed
4	Job Conditions	23	4,26	(23%) (4,26) Maintained or developed

Table 7. Determination of Indicator Classification for Self-Management

No.	Indicator	Expert Assessment Weight	Average Research Result Score	Indicator Ranking within a variable
1	Timing	22	4,02	(22%) (4,02) Maintained or developed
2	Emotional Control	20	3,83	(20%) (3,83) Priority for immediate repair
3	Stress Management	19	4,17	(19%) (4,17) Maintained or developed
4	Self-development	19	3,85	(19%) (3,85) Priority for immediate repair
5	Independence	20	3,84	(20%) (3,84) Priority for immediate repair

Table 8. Determination of Indicator Classification for Trust

No.	Indicator	Expert Assessment Weight	Average Research Result Score	Indicator Ranking within a variable
1	Adhere to a set of values	20	4,42	(20%) (4,42) Maintained or developed
2	Obeys the rules and trusts others	20	3,89	(20%) (3,89) Priority for immediate repair
3	Care for subordinates	18	3,98	(18%) (3,98) Priority for immediate repair
4	Respect subordinates and be able to develop the organization.	22	4,16	(22%) (4,16) Maintained or developed
5	Have social sensitivity	20	4,22	(20%) (4,22) Maintained or developed

The results presented in Tables 5 and 6 demonstrate the classification of indicators based on expert weighting and average empirical scores. In Table 5, within the teacher innovation variable, implementing ideas (22%; 3.95) and developing ideas (20.5%; 3.97) are categorized as priorities for immediate improvement, indicating that although these indicators are considered highly important by experts, their current performance remains relatively low. In contrast, finding ideas (20.5%; 4.43), evaluating ideas (18%; 4.25), and sharing ideas (19%; 4.15) are classified as maintained or developed, reflecting satisfactory performance levels aligned with their importance. This suggests that teachers are relatively strong at generating, assessing, and disseminating ideas, but require support in translating and refining them into practical innovations. Meanwhile, Table 6 shows that all indicators of organizational support fairness (25%; 4.38), supervisor support (27%; 4.51), organizational rewards (25%; 4.26), and job conditions (23%; 4.26) fall into the maintained or developed category, indicating a consistently strong organizational environment that effectively supports teachers.

Furthermore, Tables 7 and 8 reveal more varied patterns across self-management and trust variables. In Table 7, emotional control (20%; 3.83), self-development (19%; 3.85), and independence (20%; 3.84) are identified as priorities for immediate repair, highlighting gaps in teachers' internal regulation and personal growth despite their recognized importance. Conversely, timing (22%; 4.02) and stress management (19%; 4.17) are categorized as maintained or developed, suggesting relatively better performance in managing time and handling pressure. In Table 8, within the trust variable, obeying rules and trusting others (20%; 3.89) and caring for subordinates (18%; 3.98) require immediate improvement, indicating weaknesses in interpersonal trust and relational dynamics. Meanwhile, adherence to values (20%; 4.42), respect for subordinates and organizational development (22%; 4.16), and social sensitivity (20%; 4.22) are maintained or developed, reflecting a generally positive foundation of trust. Overall, these findings emphasize the need for targeted interventions in specific indicators while sustaining already strong dimensions.

The analysis of the indicator classifications in this study resulted in the grouping of indicators into two main categories. First, the group of indicators

requiring immediate improvement due to their high weighting but low average scores. Second, the group of indicators deemed necessary to maintain or even improve, as they not only have high weighting but also demonstrate good scores.

The determination of these indicator groups is based on the ranking of each indicator within each variable, which is then visualized in a constellation as depicted in the illustration below.

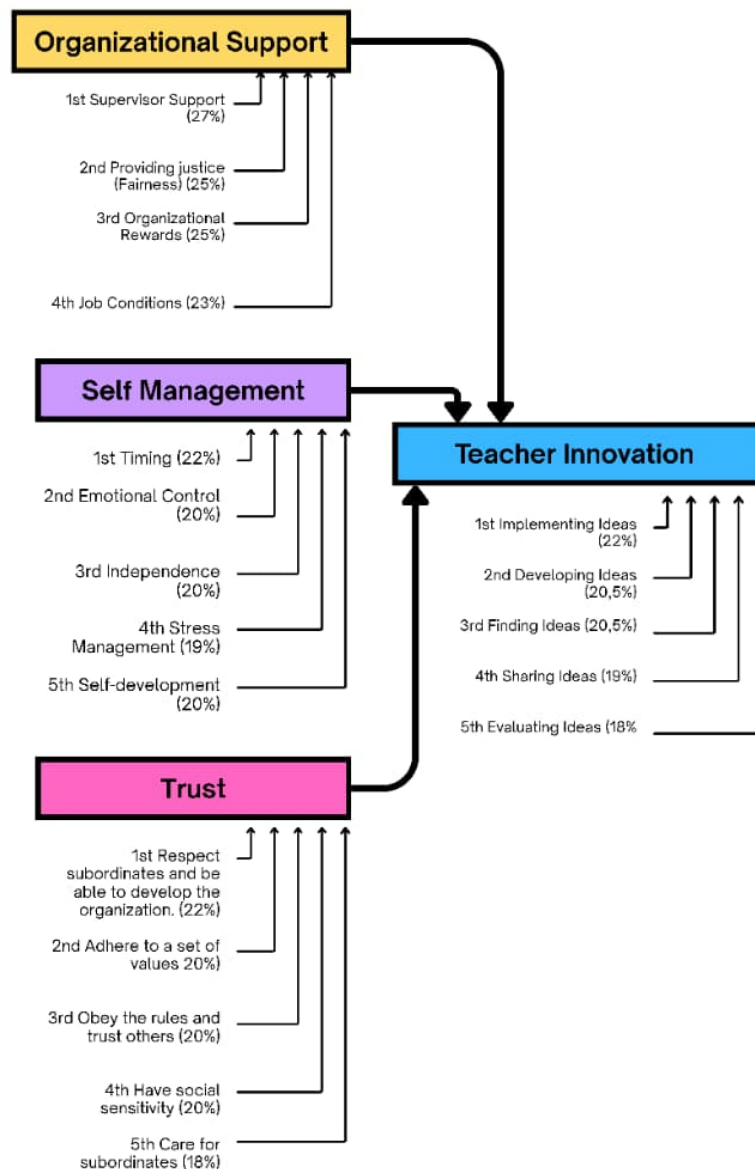


Figure 1. SITOREM Analysis Constellation

The indicator classification analysis yielded two main groups: indicators requiring immediate attention for improvement, and indicators worthy of maintenance or future development. This analysis process was conducted using the same approach as in the previous table and applied consistently across all variables in the study. Based on the ranking of each indicator within its respective variable, priority actions can be systematically determined, both to improve weak indicators and to strengthen those that have already demonstrated positive performance.

Furthermore, this analysis is visually summarized in Figure 1, which illustrates the overall results of the SITOREM method. The figure provides a clearer representation of the distribution and prioritization of indicators, distinguishing those that require immediate intervention from those that should be maintained or further developed. By presenting the findings in a visual format, Figure 1 facilitates a more comprehensive understanding of the strategic focus required to enhance each variable's effectiveness in the study.

Table 9. SITOREM Analysis Recapitulation

Teacher Innovation		
Early Indicators	Indicators After Expert Assessment	Indicator Value
1. Finding Ideas	1 st Implementing Ideas (22%)	3,95
2. Implementing Ideas	2 nd Developing Ideas (20,5%)	3,97
3. Developing Ideas	3 rd Finding Ideas (20,5%)	4,43
4. Evaluating Ideas	4 th Sharing Ideas (19%)	4,15
5. Sharing Ideas	5 th Evaluating Ideas (18%)	4,25
Organizational Support (X1) β_{y1} =0,406 Ranking 1		
Early Indicators	Indicators After Expert Assessment	Indicator Value
1. Providing justice (Fairness)	1 st Supervisor Support (27%)	4,51
2. Supervisor Support	2 nd Providing justice (Fairness) (25%)	4,38
3. Organizational Rewards	3 rd Organizational Rewards (25%)	4,26
4. Job Conditions	4 th Job Conditions (23%)	4,26
Self Management (X4) β_{y4} =0,340 Ranking 3		
Early Indicators	Indicators After Expert Assessment	Indicator Value
1. Timing	1 st Timing (22%)	4,17
2. Emotional Control	2 nd Emotional Control (20%)	4,02
3. Stress Management	3 rd Independence (20%)	3,85
4. Self-development	4 th Stress Management (19%)	3,84
5. Independence	5 th Self-development (20%)	3,83
Trust (X5) β_{y5} =0,358 Ranking 2		
Early Indicators	Indicators After Expert Assessment	Indicator Value
1. Adhere to a set of values	1 st Respect subordinates and be able to develop the organization. (22%)	4,16
2. Obey the rules and trust others	2 nd Adhere to a set of values 20%)	4,42
3. Care for subordinates	3 rd Obey the rules and trust others (20%)	3,89
4. Respect subordinates and be able to develop the organization.	4 th Have social sensitivity (20%)	4,22
5. Have social sensitivity	5 th Care for subordinates (18%)	3,98

Table 10. SITOREM Analysis Results

Priority Order of Indicators to be Improved	Sequence of Indicators Maintained and Developed
1 st Obey the rules and trust others	1. Supervisor Support
2 nd Care for subordinates	2. Providing justice (Fairness)
1 st Self-development	3. Organizational Rewards
2 nd Stress Management	4. Job Conditions
3 rd Independence	5. Adhere to a set of values
1 st Developing Ideas	6. Have social sensitivity

2 nd Implementing Ideas	7. Respect subordinates and be able to develop the organization.
	8. Timing
	9. Emotional Control
	10. Finding Ideas
	11. Sharing Ideas
	12. Evaluating Ideas

The results in Table 9 present the SITOREM analysis recapitulation, which integrates expert weighting and empirical scores to determine priority indicators within each variable. In the teacher innovation variable, implementing ideas (22%; 3.95) and developing ideas (20.5%; 3.97) emerge as top priorities despite their high importance, indicating a gap between expected and actual performance. Meanwhile, finding ideas (20.5%; 4.43), sharing ideas (19%; 4.15), and evaluating ideas (18%; 4.25) show relatively strong performance and are positioned as indicators to be maintained. For organizational support ($\beta = 0.406$; rank 1), supervisor support (27%; 4.51) ranks highest, followed by fairness (25%; 4.38), organizational rewards (25%; 4.26), and job conditions (23%; 4.26), all of which demonstrate strong and stable conditions. In the self-management variable ($\beta = 0.340$; rank 3), timing (22%; 4.17) and emotional control (20%; 4.02) are relatively strong, while independence (20%; 3.85), stress management (19%; 3.84), and self-development (19%; 3.83) indicate areas requiring improvement. For the trust variable ($\beta = 0.358$; rank 2), respect for subordinates and organizational development (22%; 4.16) and adherence to values (20%; 4.42) are strong indicators, whereas obeying rules and trusting others (20%; 3.89) and caring for subordinates (18%; 3.98) reflect weaker performance.

Furthermore, Table 10 summarizes the SITOREM analysis by classifying indicators into priority improvements and those to be maintained or developed. The highest priority for improvement includes obeying rules and trusting others and caring for subordinates within the trust variable, indicating critical issues in relational trust and interpersonal dynamics. In the self-management domain, self-development, stress management, and independence are identified as urgent areas for enhancement, highlighting the need to strengthen teachers' internal capacities and personal growth. Within teacher innovation, developing ideas and implementing ideas are also prioritized, reinforcing earlier findings that execution and refinement of ideas remain key challenges. On the other hand, indicators such as supervisor support, fairness, organizational rewards, and job conditions are categorized as maintained, reflecting a strong organizational foundation. Additional indicators like adherence to values, social sensitivity, respect for subordinates, timing, emotional control, finding ideas, sharing ideas, and evaluating ideas are also considered stable and should be continuously developed. Overall, these findings emphasize a strategic focus on improving weaker indicators while sustaining existing strengths to optimize teacher innovation.

Discussion

The results of this study indicate that organizational support has a direct and significant positive influence on teacher innovation, as evidenced by a path coefficient of 0.406. This finding confirms that the stronger teachers' perceptions of organizational support, the higher their level of innovative behavior in the

learning process. Based on the SITOREM analysis, strengthening organizational support requires systematic and sustainable efforts focusing on four key priority indicators: fairness, supervisory support, organizational rewards, and job conditions. These indicators are interrelated and collectively shape a work environment that fosters innovation. Fairness, for instance, plays a critical role in ensuring equal opportunities in performance appraisal, promotion, and professional development. When fairness is maintained, teachers develop a stronger sense of belonging and motivation to innovate. This is supported by Kim and Beehr (2022), who argue that organizational justice enhances affective commitment and creative engagement because employees feel valued and respected. In the educational context, transparent and competency-based evaluation systems, along with teacher involvement in decision-making processes, can strengthen perceptions of fairness and stimulate innovative initiatives.

Furthermore, supervisory support emerges as a crucial dimension of organizational support, where school leaders, particularly principals, act as central figures in shaping a supportive climate. Support in the form of mentoring, guidance, and provision of innovation-related resources significantly influences teachers' confidence and willingness to experiment with new teaching approaches. The supervisory support has a significant impact on innovative work behavior through increased trust and psychological empowerment (Hanafy et al., 2025; Vu et al., 2025). This implies that leadership practices that are participative and facilitative can enhance teachers' innovative capacity. In addition, organizational rewards play an important role in reinforcing innovative behavior. Providing recognition for innovation, such as awards for creative pedagogy or innovative teaching practices, can motivate teachers to continuously develop new ideas. Meanwhile, job conditions, including access to technology, flexible policies, and reduced administrative burdens, are essential in creating a conducive environment for innovation. Referring to the Job Demands–Resources (JD-R) theory developed by Bakker and de Vries, favorable working conditions function as job resources that increase work engagement and stimulate innovation (Hanafy et al., 2025; Vu et al., 2025). Therefore, strengthening these four indicators is essential for building a sustainable culture of innovation within schools.

In addition to organizational support, self-management was found to have a direct and significant positive influence on teacher innovation, with a path coefficient of 0.340. The SITOREM analysis reveals that while time management and stress management are relatively strong and should be maintained, other indicators such as emotional control, self-development, and independence require immediate improvement. This suggests that teachers generally possess the ability to manage their workload and cope with pressure, but still face challenges in regulating emotions, continuously developing themselves, and making independent professional decisions. These findings are consistent with the Job Demands–Resources (JD-R) theory proposed by Bakker and Demerouti, which emphasizes that personal resources, including time and stress management, play a critical role in fostering work engagement and innovation. Teachers who effectively manage their time and stress tend to be more productive and focused, enabling them to generate and implement innovative ideas in teaching.

The importance of self-management in fostering innovation is further supported by various theoretical perspectives. Effective time management (Smith, 2020), emotional regulation, and structured goal setting (Johnson, 2022) enable teachers to work more systematically and efficiently, providing the cognitive and emotional space necessary for creativity. Self-discipline (Lee, S., 2023) and the ability to maintain constructive social relationships (Garcia, M., 2024) contribute to professional stability and collaboration, which are essential for innovation. Moreover, stress management and self-care (Taylor, 2025), continuous professional development (Anderson, 2020), and psychological stability strengthen teachers' adaptability in responding to educational changes. Independence in decision-making and personal organization (Martinez, 2023) further create internal conditions that support creativity and innovation. Additional perspectives, such as self-leadership (Evans, 2023), conflict management (Roberts, 2022), adaptability (Nguyen, 2021), and technological competence (Kim, 2024), highlight the multifaceted nature of self-management as a foundation for innovation. The emphasizes that self-management enhances intrinsic motivation, while the identifies self-control as a key psychological resource for sustaining innovative efforts (Khan et al., 2025; Shengarh et al., 2024). Collectively, these theories demonstrate that self-management is a critical internal driver of teacher innovation.

In a professional context, the role of self-management becomes even more evident through its contribution to resilience and sustained innovation. highlight that effective energy regulation and focus enable teachers to consistently engage in innovative practices (Majid et al., 2025; Saheli, 2025). Emotional regulation (Pekrun, 2022), resilience (Goldstein & Brooks, 2022), and cognitive capacity (Bridgett, 2023) further reinforce the ability of teachers to design creative learning strategies and solve instructional problems. Gordon (2023) emphasizes that managing workload, stress, and emotions is essential for developing high-quality and innovative teaching practices. Similarly, Harvey and Brown (2024) argue that self-management is a universal competency required to navigate dynamic work environments, a condition highly relevant for vocational high school teachers who must continuously adapt to technological and curricular changes. However, the relatively low performance of self-development indicators suggests the need for targeted interventions, such as practice-based teacher professional development (TPD), lesson study, peer coaching, and innovation-sharing forums. These initiatives can enhance teachers' capacity for continuous learning and strengthen their innovative potential.

Furthermore, trust had a significant positive influence on teacher innovation, as indicated by a T-statistic of 4.480 and a p-value of 0.000, supporting a highly significant relationship at the 95% confidence level. The SITOREM analysis identifies that indicators such as adherence to rules, trust in others, and concern for colleagues still require improvement. In contrast, adherence to values, respect for others, organizational development, and social sensitivity are already strong and should be maintained. Low levels of interpersonal trust can hinder collaboration and reduce teachers' willingness to take risks in innovation. Li, Chen, and Zhang (2023) explain that a lack of trust reduces psychological safety

and limits social learning processes, both of which are essential for innovation. Therefore, strengthening trust can be achieved through transparent decision-making, consistent application of rules, and open communication. Additionally, fostering empathy and social support among teachers is crucial, as such factors significantly enhance creativity and innovation (Ma et al., 2025; West & Richter, 2024). Maintaining strong indicators, such as moral values and social sensitivity, is equally important, as highlighted by Mahmoud et al. (2024), who note that value-based organizations tend to sustain innovation more effectively. Overall, strengthening trust through participatory leadership, a collaborative culture, and supportive relationships will create an environment in which teachers feel psychologically safe, motivated, and empowered to innovate continuously.

CONCLUSION

This study highlights that teacher innovation is enhanced by integrating organizational support, self-management, and trust. The SITOREM analysis identifies seven key indicators for improvement, including compliance with rules, trust, care for subordinates, stress management, self-development, and idea implementation, while maintaining twelve other factors such as adherence to values, time management, and organizational rewards. The findings emphasize that innovation is driven not only by individual creativity but also by a supportive organizational system and a strong psychological foundation. The study contributes to the field by integrating mixed-methods with the POP-SDM model and SITOREM analysis, offering actionable recommendations for school leaders and policymakers. These include fostering open communication, providing professional development, and building a culture of trust. Limitations include the study's context within private vocational schools in Bekasi, which may limit generalizability, and potential bias in self-reported data. Future research should include a broader sample, longitudinal studies, and explore additional variables, such as leadership style and technological readiness.

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