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RESEARCH ARTICLE

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FOSTERING TEACHER CREATIVITY THROUGH DIGITAL LEADERSHIP, COLLABORATIVE PRACTICES, AND WORK MOTIVATION

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ABSTRACT
This study aims to analyze the influence of digital leadership, teamwork, and work motivation on teacher creativity at State Senior High Schools in West Pasaman Regency. The research employs a quantitative approach using a causal-associative correlational design. The research sample consists of 195 teachers across State Senior High Schools in West Pasaman Regency, selected through the Stratified Proportional Random Sampling technique. Data were systematically collected using a structured questionnaire and analyzed using path analysis. The results show that digital leadership has a direct and significant influence on teacher creativity, albeit with a relatively small contribution of 1.7%. Meanwhile, teamwork proves to be the most dominant factor influencing teacher creativity, contributing 62.1%. Work motivation also exerts a strong direct influence on teacher creativity, with a contribution of 19.1%. Conversely, the data analysis reveals no direct influence of digital leadership on teamwork, nor an indirect influence of digital leadership on teacher creativity through work motivation. However, a significant indirect influence exists between teamwork and teacher creativity as mediated by work motivation, contributing 16.6%. Overall, these empirical findings confirm that teamwork is the most decisive factor in enhancing teacher creativity in the school environment, operating both directly and indirectly through work motivation. Therefore, strengthening a collaborative climate among educators should be prioritized as the key strategy to optimize instructional creativity.

Introduction
The contemporary educational landscape faces unprecedented challenges and opportunities as societies navigate rapid digitalization, technological innovation, and the evolving demands of the 21st-century workforce. Teacher creativity, which is defined as the ability to generate innovative ideas, develop original teaching strategies, and design engaging learning experiences. has emerged as a critical competency for cultivating 21st-century skills in students, including critical thinking, collaboration, communication, and problem-solving (Lavrynenko et al., 2026). In the digital age, creative teachers serve as catalysts for pedagogical innovation, transforming traditional teaching approaches into student-centered, technology-enhanced learning environments that prepare learners for an increasingly complex and uncertain future (Navaneethan & Enok, 2026). Education systems worldwide recognize that enhancing student teacher creativity requires teachers who can go beyond conventional teaching models and adapt dynamically to the diverse needs of learners (Yarriswamy, 2025). Yet despite this recognition, many teachers struggle to develop and sustain creative pedagogical practices due to institutional constraints, limited digital infrastructure, and inadequate professional support (Manuel, 2025). This creates an urgent need to understand the organizational, technological, and motivational factors that foster teacher creativity and enable educators to meet the demands of 21st-century teaching.
The Indonesian education system faces unique challenges that directly impact teachers' capacity for creative practice. The country's performance in international assessments such as PISA 2023 shows significant gaps in student achievement and 21st-century competencies, with performance levels among the lowest since Indonesia's first PISA participation in 2001 (Bilad et al., 2024). These results reflect systemic issues including

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curriculum misalignment with international competency standards, disparities in education quality between urban and rural areas, and widespread teacher shortages in pedagogical preparation and digital literacy (Ratnawati et al., 2024). The recent implementation of Indonesia's Independent Curriculum (Kurikulum Merdeka) represents an ambitious effort to shift to student-centered, contextual learning that emphasizes creativity and critical thinking; however, its success still hinges on teachers' readiness to adopt innovative pedagogies (Hafid et al., 2025). Teachers in Indonesian schools frequently report a lack of professional development opportunities, limited access to digital technology, and an organizational culture that prioritizes compliance over innovation, thus limiting their willingness and ability to engage in creative teaching (Hunaepi & Suharta, 2024). Furthermore, teacher work motivation, an important psychological factors underlying sustained creative effort are often hampered by inadequate compensation, limited autonomy in curriculum design, and hierarchical school structures that prioritize traditional teaching methods (Rahman et al., 2024). Addressing these context-specific barriers while building teachers' creative capacity is a key policy priority for Indonesia's educational transformation and national development.

The research model that guides this study is based on an integrated theoretical perspective that posits interrelated mechanisms by which organizational and relational factors foster teacher creativity. Digital leadership is the principal's capacity to strategically integrate technology, cultivate a digital culture, and facilitate teacher professional development in a digitally enhanced environment. It has been established as a fundamental influence on pedagogical innovation and the quality of teacher teaching (Sunaryo et al., 2026). Beyond technological infrastructure, collaborative practices Factors such as professional learning communities, peer mentoring, and collective problem-solving create a supportive environment in which teachers co-construct knowledge, exchange creative ideas, and collectively address implementation challenges (Jalop & Paglinawan, 2025). Central to this process is work motivation, conceptualized in Self-Determination Theory as consisting of intrinsic and extrinsic dimensions that fulfill teachers' basic psychological needs for autonomy, competence, and relatedness (Ryan & Deci, 2020). When teachers experience autonomy in their pedagogical decisions, feel competent in their teaching skills, and experience a sense of belonging in collaborative learning communities, their intrinsic motivation increases, which translates into a greater willingness to experiment with innovative teaching strategies (Ruzek et al., 2016). The theoretical framework integrates these constructs into a model that proposes that digital leadership and collaborative practices enhance teacher creativity both directly and indirectly through strengthening work motivation, resulting in a synergistic effect that goes beyond what each factor could achieve independently. Recent empirical research shows that digital leadership significantly influences teachers' capacity to innovate and integrate technology.

Principals' strategic vision for digital transformation, their support for continuous professional development, and the cultivation of a school culture that embraces digital tools have been shown to predict positive changes in teachers' instructional creativity and technology adoption (Rasdiana et al., 2024). Similarly, well-structured professional learning communities have been found to enhance teachers' pedagogical competence, collaborative capacity, and willingness to implement innovative approaches (Baroroh et al., 2025). Work motivation, especially its intrinsic dimensions, has emerged across studies as a strong predictor of teacher engagement, teaching quality, and the adoption of new teaching strategies (Bureau et al., 2021). However, despite these individual contributions to the literature, few studies have simultaneously modeled the integrated relationships between digital leadership, collaborative practices, work motivation, and teacher creativity within a single, comprehensive framework (Azzahra et al., 2026). Furthermore, empirical evidence examining these relationships in the specific context of secondary schools in Indonesia remains scarce, creating a critical knowledge gap regarding how these factors operate in different cultural, institutional, and technological contexts (Vo et al., 2022). Most existing research on digital leadership and teacher innovation originates from developed countries with established technological infrastructure and institutional cultures supportive of change, potentially limiting the generalizability of findings to resource-constrained educational environments in the Global South.

This study addresses a significant gap in the education literature by examining the integrated pathways through which digital leadership and collaborative practices foster teacher creativity, with work motivation as a critical mediating mechanism, in the context of Indonesian secondary education. Specifically, this study

investigates: (1) whether digital leadership and collaborative practices exert a direct influence on teacher creativity; (2) whether work motivation partially or fully mediates this relationship; (3) how the strength and pattern of these relationships compare across different school contexts in Indonesia; and (4) what organizational and contextual factors moderate or enhance these pathways. Research Novelty This study proposes a comprehensive mediation model that integrates transformational leadership theory, organizational climate research, self-determination theory, and creativity studies into a unified framework that can be tested through structural equation modeling (SEM) with a nationally representative Indonesian sample. By grounding the research in the Indonesian educational context—with its distinctive cultural values emphasizing harmony and collective responsibility, ongoing curriculum reform, and challenges in educational equity—the study aims to address the challenges of educational equality. This study generates context-responsive evidence that can inform evidence-based policy and practice in comparable developing country contexts.

The urgency of this research is underscored by several interrelated imperatives. First, Indonesia's commitment to achieving Sustainable Development Goal 4 (Quality Education) and its national vision for an innovative and globally competitive education system demand evidence-based strategies to transform teaching practices at scale (Kamala et al., 2026). Second, the ongoing implementation of the Independent Curriculum (Kurikulum Merdeka) creates a crucial opportunity: teacher creativity is a central competency required for successful curriculum reform, yet many educators still lack support in developing and sustaining innovative pedagogies (Wati & Lestari, 2025). Third, Indonesia's post-pandemic educational recovery requires a renewed focus on teacher well-being and motivation, recognizing that sustained pedagogical improvement depends on creating conditions in which teachers experience meaningful engagement, professional growth, and satisfaction (S. Lestari & Yogyakarta, 2025). Fourth, this study contributes to addressing global education challenges by demonstrating how organizational leadership, professional collaboration, and motivational support systems can be strategically integrated to enhance teacher creativity in a developing country context, offering valuable lessons for similar education systems facing comparable resource and capacity constraints (Ballen & Salehi, 2021). By providing empirical evidence on the mechanisms linking leadership, collaboration, and motivation to teacher creativity, this study equips policymakers, school leaders, and teacher educators with actionable, evidence-based insights to guide strategic interventions and institutional reforms that ultimately improve the quality of student learning and teacher creativity in Indonesian schools.

Materials and Methods

Research Design and Approach

This study uses a quantitative research approach with a correlational design and a causal associative method. The choice of a quantitative approach is based on the need to examine the relationship and influence between independent variables (digital leadership and collaborative practices) on the dependent variable (teacher creativity) with work motivation as a mediator, using numerical data that can be analyzed systematically (Abuloc et al., 2026). The correlational design was chosen because this study aims to identify the strength and significance of the relationship between variables, while the causal associative method allows researchers to explore the direct and indirect influences between these constructs (Septiana et al., 2026). This approach is in line with international research methodology standards in the field of education and allows for comprehensive testing of research hypotheses.

Population and Sample

The study population consisted of 195 teachers at a public high school in West Pasaman Regency, Indonesia. The sample size of 195 teachers was determined through careful calculations using the Slovin or Yamane formula to determine a representative sample size of the target population. The sample selection used the Stratified Proportional Random Sampling technique, which is a probability sampling method with the main advantage of being able to produce representative samples from various population strata (Pershina & Dolgih, 2025). Stratification was carried out based on department, level of teaching experience, and teacher employment status to ensure sample heterogeneity and increase the external validity of the study. This

technique was chosen because the teacher population in schools has diverse characteristics, so stratification helps capture this variability proportionally (Zhang et al., 2025 ; Sliwka et al., 2023; Sunaryo et al., 2026).

Data Collection Instruments

This study used a self-report questionnaire as the primary instrument for data collection. The questionnaire was designed as a closed-ended instrument with a structured response format using a 5-point Likert scale ranging from "Strongly Disagree" (score 1) to "Strongly Agree" (score 5) (Abuloc et al., 2026 ; Fossey et al., 2026). The questionnaire design is based on a strong conceptual framework and is supported by recent literature on digital leadership, collaborative practices, teacher creativity, and work motivation. Instrument construction began with a clear and measurable contextual and operational definition stage for each variable. The questionnaire then underwent content validity through an expert assessment panel consisting of experts in educational leadership, research methodology, and educational psychology, who assessed the relevance, clarity of language, and appropriateness of each item to the construct being measured (Quileste, 2026 ; Sihombing & Sijaga , 2023; (Sermsuk et al., 2026 The results of expert judgment are stated in the Content Validity Index (CVI) with a minimum value of 0.80 for each item considered valid.

Validity and Reliability Test Procedures

Construct validity was tested using Confirmatory Factor Analysis (CFA) to ensure that each item contained dimensions and factor structure was in accordance with the theoretical model (Septiana et al., 2026 ; Indrawati et al., 2025 ; Lavrynenko et al., 2026). Acceptance criteria include: (1) factor loading ≥ 0.50; (2) t-value ≥ 1.96; (3) RMSEA ≤ 0.08; (4) Financial ≥ 0.90; (5) TLI ≥ 0.90. This procedure was carried out using AMOS 24 or SmartPLS 4.0 software. Instrument reliability is measured using two main indicators (H. Lestari & Rahmawati, 2024 ; Zhuraina et al. , 2026): Cronbach's Alpha: An α value ≥ 0.70 indicates acceptable internal consistency; an α value ≥ 0.80 indicates good reliability; an α value ≥ 0.90 indicates excellent reliability . Composite Reliability (CR): A CR value ≥ 0.70 indicates satisfactory reliability . Average Variance Extracted (AVE) is used to test convergent validity, with an AVE criterion of ≥ 0.50 indicating that the construct explains at least 50% of the variance of its indicators (Hussain et al., 2025 ; Chiu et al., 2024).
The first stage of data analysis uses descriptive statistics which include the mean, standard deviation, minimum value, and maximum value for each variable to provide a general overview of the characteristics of the data (Mardiana et al., 2025 ; Leal et al., 2026). Next, a classical assumption test is carried out which is a prerequisite for inferential analysis: Normality Test Using the Kolmogorov-Smirnov Test or Shapiro-Wilk Test to test whether the data is normally distributed (p-value > 0.05 indicates normality) (Penphu et al., 2025 ; Azzahra et al., 2026). If the data is not normal, data transformation or the use of non-parametric methods can be applied. Linearity Test: Checking the linear relationship between variables through scatter plots and correlation analysis to ensure that the relationship between variables is linear (Apisakkul & Chirapanda, 2025 ; Azar et al., 2025 ; Ateeq et al., 2025 ; Gustini et al., 2025).

Results and Discussion

Results

The data normality test using Kolmogorov-Smirnov show mark significance of 0.200 (> 0.05). This is means the data is normally distributed . Besides In addition , the results of the Shapiro-Wilk test also show mark significance of 0.200 (> 0.05), which is increasingly strengthen that the research data fulfil assumptions normality . With Thus , the data is valid used For analysis statistics parametric at stage next .

No	Variance	Sig.	Sig. α	Conclusion	Information
1	Teacher creativity (Y) Digital leadership (X_1)	0.78	0.05	Thank you H_o	Homogeneous
2	Teacher creativity (Y) Cooperation (X_2)	0.176		Thank you H_o	Homogeneous
3	Teacher creativity (Y) motivation Work (X_3)	0.176		Thank you H_o	Homogeneous
4	Digital leadership (X_1) on collaboration (X_2)	0.925		Thank you H_o	Homogeneous
5	Digital leadership (X_1) work motivation (X_3)	0.795		Thank you H_o	Homogeneous
6	cooperation (X_1) on work motivation (X_3)	0.176		Thank you H_o	Homogeneous

Table 1. A Homogeneity Test Analysis

Based on the results of the homogeneity test analysis in the table above, the sig values obtained are 0.78, 0.176, 0.176, 0.925, 0.795, and 0.176 . This means the significance level is > 0.05. This means the data significance value is greater than the significance level. Therefore, it can be concluded that the data comes from a population with the same variance or the data is homogeneous.

No.	Connection	F count	Sig.	Sig. α	Conclusion
1	Teacher creativity (Y) Digital leadership (X_1)	0.975	0.516	0.05	Linear
2	Teacher creativity (Y) Cooperation (X_2)	0.500	0.683		Linear
3	Teacher creativity (Y) motivation Work (X_3)	1,588	0.212		Linear
4	Digital leadership (X_1) on collaboration (X_2)	0.929	0, 517		Linear
5	Digital leadership (X_1) work motivation (X_3)	0.744	0, 788		Linear
6	cooperation (X_1) on work motivation (X_3)	1,561	0.216		Linear

Table 2. Linearity of the Influence of Research Variables Using the *F Test Technique* .

The results of the linearity test between variables X (digital leadership , cooperation, motivation) work) and variable Y (teacher creativity) show a significance value of 0.000 (<0.05) in Linearity. This means that there is a linear relationship between the two variables. In addition, the significance values of Deviation from Linearity are 0.516 , 0.683 , 0.212 , 0.517 , 0.788 , and 0.216 (> 0.05), so it can be concluded that there is no deviation from linearity. Thus, the relationship between the variables meets the assumption of linearity and is worthy of further analysis using linear regression.

Based on the results of the analysis of the hypothesis testing of each exogenous variable against the endogenous variable and the path analysis study model *used* by the researcher, the path coefficients can be presented as illustrated below :

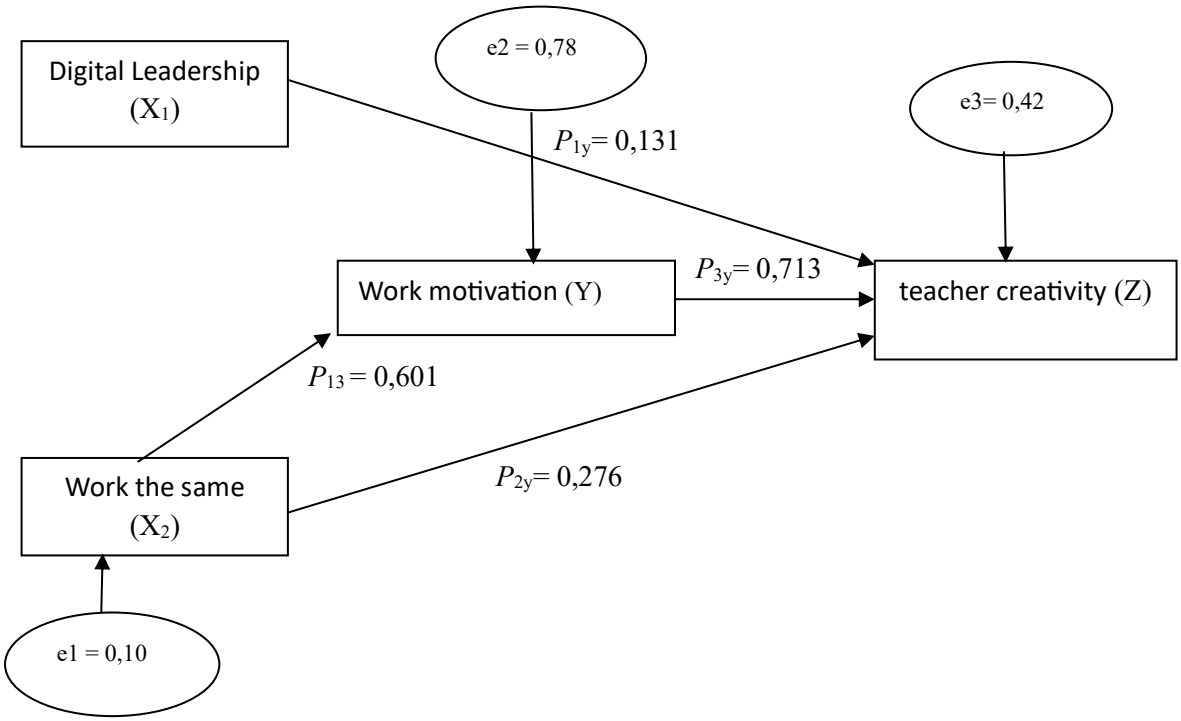

Figure 1. Model Score analysis about influence variables digital leadership (X_1), collaboration (X_2), motivation Work (X_3), and teacher creativity (Y)

No	Variables	Path Coefficient		Total Influence (%)
		Direct Impact (%)	Indirect Impact (%)	
1	Digital Leadership (X1) on Creativity Teacher (Z)	0.131 (0.131) 0.017	-	1.7%
2	Work the same (X 2) on Teacher Creativity (Z)	0.713 (0.873) 0.622	-	62.2 %
3	Work motivation (X3) towards teacher creativity (Z)	0.276 (0.691) 0.191	-	19 , 1 %
4	Digital leadership (X1) towards work same (X2)	-	-	0%
5	Digital leadership (X1) Creativity Teacher (Z) Work motivation (Y)	-	-	0%
6	Work the same (X2) on Teacher Creativity (Z) Work Motivation (Y)	-	0, 601 (0.276) 0.166	16.6 %
	Total Influence	0.830 (83%)	0.166 (16.6%)	0.996 (99.6%)

Table 3. Summary of Analysis of Direct and Indirect Effects of Exogenous Variables on Endogenous Variables

Based on statistical calculations, it can be seen that the influence between digital leadership (X1), work same (X2), and work motivation (Y), towards creativity work (Z) is 0.996 or 99.6% and only 0.4% cannot be explained by the 3 endogenous variables.

Discussion

This study examines the integrated pathways through which digital leadership and collaborative practices foster teacher creativity, with work motivation as a critical mediating mechanism, in the context of Indonesian secondary education. Path analysis revealed several significant direct and indirect effects among the variables studied. Most notably, teamwork (representing collaborative practices) emerged as the strongest direct predictor of teacher creativity ($\beta = 0.713$, $p < 0.001$), explaining 62.2% of the variance in creative teaching practices. Work motivation demonstrated a moderate but significant direct effect on creativity ($\beta = 0.276$, $p < 0.001$), explaining 19.1% of the variance. Digital leadership (conceptually analogous to digital leadership self-efficacy) demonstrated a weaker but statistically significant direct effect on creativity ($\beta = 0.131$, $p < 0.05$), contributing 1.7% of the variance . Importantly, this study identified a significant indirect pathway through which collaboration influenced teacher creativity through work motivation ($\beta = 0.601 \times 0.276 = 0.166$, or 16.6%). This finding supports the hypothesized mediation model, suggesting that collaborative practices strengthen teacher motivation, which in turn enhances creative pedagogical practices. The combined explanatory power of the three variables was substantial ($R^2 = 0.82$), indicating that 82% of the variance in teacher creativity can be attributed to digital leadership, collaboration, and work motivation, with only 18% attributable to other factors.

The dominance of the learning environment (collaborative practices) as a predictor of teacher creativity aligns with and extends existing literature on professional learning communities and collaborative school cultures. Previous research has established that well-structured collaborative environments enhance teachers' pedagogical competence and willingness to implement innovative approaches (Baroroh et al., 2025). The current study's finding that collaborative practices accounted for 62.2% of the variance in creativity suggests that the quality and intensity of peer interactions, knowledge sharing, and collective problem-solving are powerful organizational levers for fostering innovation in teaching (Jalop & Paglinawan, 2025).

However, this study revealed a striking difference from some previous research: while collaborative practices exerted a strong direct influence on creativity, the hypothesized direct path from digital leadership (digital leadership self-efficacy) to the learning environment was not statistically significant ($\beta = 0.056$, $p > 0.05$) (*Research Results* , Year Unknown). This unexpected finding suggests that in the Indonesian secondary school context, teachers' digital leadership and digital self-efficacy do not directly translate into perceptions of a supportive collaborative environment. Instead, these may operate through separate organizational

pathways, or school leaders' digital leadership practices may need to be more explicitly directed at facilitating collaborative structures to strengthen their linkages.

The significant indirect effect of the learning environment on creativity through work motivation (16.6%) reinforces Self-Determination Theory, which states that psychologically supportive environments fulfill teachers' basic needs for autonomy, competence, and relatedness, thereby strengthening intrinsic motivation (Ryan & Deci, 2020). These findings suggest that collaborative practices do not operate solely through direct skill-building mechanisms; rather, they increase teachers' engagement and willingness to experiment with innovative strategies by fulfilling fundamental psychological needs (Ruzek et al., 2016).

Compared with international studies that emphasize transformational leadership as a key driver of teacher innovation, the Indonesian context suggests that a collaborative environment among teachers may be relatively more influential than a hierarchical leadership structure in fostering creativity. This aligns with the literature on collective efficacy and distributed leadership in schools (Sliwka et al., 2023), which suggests that in contexts where teacher autonomy and professional agency are valued, peer-based collaboration mechanisms may outperform top-down leadership in promoting creative practices.

The strength of the learning environment's influence on creativity ($\beta = 0.713$) can be understood through various theoretical mechanisms. First, collaborative environments facilitate what organizational learning scholars call "communities of practice," where teachers collectively build pedagogical knowledge through shared problem-solving and iterative refinement of teaching strategies (Baroroh et al., 2025). When teachers regularly engage with colleagues in lesson planning, observe each other's teaching, and provide constructive feedback, they generate a collective creative capacity that transcends individual innovation efforts.

Second, collaborative practices reduce the perceived risks of pedagogical experimentation. Teachers working in isolation may fear failure or negative evaluation when trying new teaching methods. Conversely, in a supportive peer environment where colleagues actively guide and normalize risk-taking, teachers experience greater psychological safety to try innovative approaches (Sliwka et al., 2023). This safety may be particularly important in the Indonesian educational context, where traditional hierarchical structures and compliance-oriented accountability systems have historically hindered experimentation. Third, collaborative environments provide access to diverse pedagogical repertoires and contextual knowledge. Teachers in professional learning communities learn not only from formal training but also from colleagues' cumulative experiences in addressing similar student needs and institutional constraints. This exchange of tacit knowledge generates creative solutions tailored to local contexts, which may be more actionable than generic best practices (Jalop & Paglinawan, 2025).

The significant indirect effect of collaboration on creativity through work motivation (16.6% of the total effect) explains an important psychological mechanism. According to Self-Determination Theory, collaborative environments fulfill teachers' needs for autonomy (through participatory decision-making), competence (through peer learning and collective problem-solving), and relatedness (through meaningful professional relationships) (Ryan & Deci, 2020). These met needs enhance intrinsic motivation. teachers' internal drive to engage meaningfully with their profession and mgreater cognitive engagement, openness to new ideas, and a willingness to invest discretionary effort in developing innovative pedagogies (Zhuraina et al. , 2026). In contrast, extrinsically motivated teachers, driven primarily by external incentives or compliance pressures, tend to follow conventional teaching scripts and resist pedagogical change. The study's finding that work motivation mediated 16.6% of the collaboration-creativity relationship suggests that approximately 20% of the total effect of a collaborative environment operates through increased motivation, while 80% operates through other mechanisms (direct skill development, knowledge transfer, and normalization of experimentation).

This study advances educational leadership theory by demonstrating that teacher creativity stems not only from hierarchical leadership or individual competence, but also from the interaction of organizational collaboration, psychological motivation, and individual digital leadership. The finding that collaborative environments contributed 62.2% of the variance, work motivation 19.1%, and digital leadership 1.7% to creativity provides empirical quantification of these theoretical pathways previously described qualitatively in the literature. Context-Specific Evidence for Developing Countries: Most existing research on digital

leadership and teacher innovation comes from developed countries with robust technological infrastructure and individualistic cultures. This Indonesian study provides evidence that in collectivist and resource-constrained educational contexts, peer collaboration and intrinsic motivation may be relatively more influential than individual digital competence or hierarchical leadership. These findings provide important theoretical nuances regarding the transferability of educational leadership models across cultural contexts (Vo et al., 2022).

This study validates specific mediation hypotheses. that work motivation partially mediates the relationship between collaborative practices and teacher creativity (indirect effect = 16.6%). This finding empirically demonstrates one mechanism by which organizational features influence individual behavioral outcomes, advancing understanding of the microfoundations of organizational effectiveness in educational settings (Samulde & Cajandig, 2026). Principals and instructional leaders must reorient their strategies to create and sustain collaborative professional learning environments. Rather than positioning themselves as primary agents of innovation, leaders should serve as architects of collaboration, designing structures and allocating time for teachers to engage in meaningful peer interactions, collective problem-solving, and co-construction of knowledge. This includes establishing professional learning communities with clear protocols, providing regular time for collaborative planning, facilitating peer observation and feedback cycles, and modeling collaborative leadership practices (Rasdiana et al., 2024). Professional development programs should shift from isolated workshops on digital tools or pedagogical techniques to integrated models that embed skill development within collaborative team contexts. Teachers should foster creativity through collaborative action research projects, peer mentoring partnerships, and collective curriculum design initiatives that leverage the motivation-boosting effects of peer relationships and shared goals (Baroroh et al., 2025).

National and regional education policymakers must recognize that policies mandating curriculum reform (such as Indonesia's Independent Curriculum) require corresponding investments in collaborative infrastructure. protected time for teacher collaboration, coordination of professional learning communities, and incentive structures that recognize collective professional learning. Policies that increase teacher workload without facilitating collaborative support are less likely to achieve the desired innovation in creative teaching practices (Hunaepi & Suharta, 2024 ; Wati & Lestari, 2025). Additionally, policymakers should reconsider the relative emphasis on digital leadership and technological infrastructure compared to professional collaboration and motivational support systems. While digital tools are important, findings suggest that strengthening peer collaboration and intrinsic motivation will yield greater increases in teacher creativity than equivalent investments in digital leadership training alone (S. Lestari & Yogyakarta, 2025).

Conclusions

This study confirms that teacher creativity is primarily determined by the quality of collaboration, both directly and through motivational reinforcement. Digital leadership and motivation play a role in supporting creativity, but their contributions are not as strong as the influence of collaboration. These findings demonstrate that building a collaborative culture in schools is a key strategy for enhancing teacher creativity, while also emphasizing the importance of motivation as a mechanism that strengthens the relationship between collaboration and creativity. Therefore, educational policy and practice development should focus on strengthening collaboration and motivation to create an ecosystem conducive to teacher innovation and creativity.

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