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STRATEGIES TO INCREASE TEACHING CREATIVITY: THE INFLUENCE OF SELF-EFFICACY, MOTIVATION AND KNOWLEDGE SHARING AMONG POLICE EDUCATORS

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Abstract

This study aims to test the influence of self-efficacy, knowledge sharing, and motivation on the creativity of educators in the National Police educational institutions. The research method used was a cross-sectional survey with 248 certified educators. Data analysis uses structural equation modeling techniques with a partial least squares approach. The findings show that self-efficacy significantly increases teaching creativity with a relatively low effect. In addition, self-efficacy also positively affects knowledge sharing, which contributes to increased teaching creativity, although these two relationships vary. Educator motivation is also significant in increasing teaching creativity and knowledge sharing, with a moderate effect measure.

Keywords: Creativity of Police Educators, Teaching Creativity, Police Educators, Knowledge Sharing, Motivation.

1. INTRODUCTION

Educators' creativity in teaching is one important aspect that determines the quality and effectiveness of the learning process. Creative educators can create an interesting and dynamic learning atmosphere (Szmidt & Majewska-Owczarek, 2020). In addition, creative educators can increase student engagement and facilitate deeper student understanding (Parra & García, 2022). In formal education environments, including in National Police institutions, teaching creativity is becoming increasingly relevant in the face of complex learning challenges and the need to produce adaptive and innovative graduates (Damanik & Widodo, 2024).

However, various studies show that creativity in teaching often faces various obstacles (Kim et al., 2019; Parra & García, 2022; Tamsah, 2021). One of the main problems educators face is low self-efficacy, which is confidence in one's ability to succeed in specific tasks (Bandura, 1998). Low self-efficacy can hinder teachers from exploring and applying innovative teaching methods, limiting their creative potential (Klaeijsen et al., 2018). In addition to self-efficacy, knowledge sharing among educators also plays an essential role in supporting teaching creativity (Pirita, 2022).

Knowledge sharing allows teachers to share ideas, experiences, and strategies to improve their competence and creativity (Lane et al., 2022a). However, this knowledge-sharing practice is often not optimized in the educational environment (Castaneda & Cuellar, 2021), including in the National Police.





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In addition to self-efficacy and knowledge sharing, educator motivation also plays an essential role in increasing educators' creativity in teaching. Educator motivation, both intrinsic and extrinsic motivation, is also a key factor influencing teaching creativity (Horng et al., 2005). Intrinsic motivation refers to internal motivations that make educators feel satisfied and inspired to carry out their tasks (Martín-Núñez et al., 2023), while extrinsic motivation relates to motivations from external factors, such as appreciation or recognition (David et al., 2020). These two types of motivation can influence educators to strive to be creative in teaching (Venketsamy & Lew, 2024).

Although the importance of self-efficacy, knowledge-sharing, and motivation for teaching creativity has been recognized, research examining the influence of self-efficacy, knowledge-sharing, and motivation on educators' creativity in teaching still needs to be completed. This study aims to fill this gap by investigating the influence of self-efficacy on teaching creativity through knowledge sharing and motivation mechanisms (both intrinsic and extrinsic) among educators in the National Police. This research is vital in the theoretical aspect, which can contribute to a deeper understanding of the factors that affect teaching creativity and the interaction between self-efficacy, knowledge sharing, and motivation. Practically, the findings of this study can provide insights for the development of more effective training programs and education policies within the National Police so that it can improve the quality of education and training provided.

1. 1 The relationship between self-efficacy and teaching creativity

Empirical research consistently supports a positive association between self-efficacy and teaching creativity (Aryani et al., 2024; X. Liu et al., 2024; Park, 2023). Teachers with high self-efficacy are likelier to use creative and adaptive teaching strategies. In the educational environment of the National Police, the role of self-efficacy in increasing teaching creativity is also relevant, considering the unique challenges faced in educating and training prospective police officers. In conclusion, self-efficacy plays a crucial role in facilitating teaching creativity. Teachers with high self-confidence in their abilities tend to be more innovative, motivated, and resistant to failure. Educators with high self-efficacy are more likely to be willing to try new approaches that will contribute to a more creative and effective teaching environment.

Hypothesis 1 (H1). Self-efficacy has a positive effect on teaching creativity

1. 2 Relationship between self-efficacy and knowledge sharing

Self-efficacy plays an essential role in influencing the practice of knowledge sharing among teachers. Teachers with high self-efficacy tend to be more confident in sharing their knowledge and experience. This confidence arises from the belief in their abilities and the values they bring to collective discussions (Bandura, 2009). Research by Li, (2018) shows that high self-efficacy increases involvement in knowledge-sharing activities.

Meanwhile, sharing knowledge will enrich the learning environment and encourage more productive collaboration. In addition, Liang, (2019) emphasized that teachers with high self-





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efficacy are more active in sharing innovative ideas and more open to receiving feedback and learning from the experiences of others. Thus, self-efficacy is the primary driver in creating a dynamic knowledge-sharing culture and supporting continuous professional development.

Hypothesis 2 (H2). Self-efficacy has a positive effect on knowledge sharing.

1. 3 The relationship between knowledge sharing and teaching creativity

Knowledge sharing is an essential practice in the educational environment that can significantly increase teachers' creativity in teaching. Through knowledge sharing, teachers can exchange ideas, strategies, and experiences that enrich their insights and encourage innovative teaching methods (Khan et al., 2022; T. V. T. Nguyen et al., 2024; Turnbull et al., 2010).

Empirical research shows that teacher interaction and collaboration make it possible to combine different perspectives and approaches, creating more effective creative solutions for teaching challenges. In addition, an environment that supports knowledge sharing increases teachers' confidence in trying new approaches and pedagogical experiments. Thus, knowledge sharing strengthens individual competencies and builds a collaborative culture that encourages collective creativity, which is essential for dynamic and student-centered learning.

Hypothesis 3 (H3). Knowledge sharing has a positive effect on teaching creativity.

1. 4 Relationship between teaching motivation and creativity

Intrinsic and extrinsic motivation play an important role in encouraging teachers' creativity in teaching (Baer, 2020). Intrinsic motivation is an internal drive, and satisfaction and passion for teaching have been shown to increase teachers' willingness to experiment and develop innovative teaching methods (Pritzker & Runco, 2020).

Intrinsically motivated teachers tend to be more proactive in finding new ways to make learning more engaging and effective (Yuan, 2019). On the other hand, extrinsic motivation, triggered by external factors such as rewards, recognition, and incentives, can also stimulate teachers' creativity by providing an additional boost to achieving higher teaching standards (David et al., 2020).

According to Venketsamy & Lew, (2024), a combination of intrinsic and extrinsic motivation can create a more supportive environment for pedagogical innovation. Thus, both intrinsic and extrinsic motivation can synergistically increase teaching creativity, which is essential to improve the quality of education and student learning experience

Hypothesis 4 (H4). Motivation has a positive effect on teaching creativity

1. 5 Relationship between motivation and knowledge-sharing

Intrinsic and extrinsic motivation significantly influence the practice of knowledge sharing (T.-M. Nguyen et al., 2019). Intrinsic motivations, such as satisfaction and enjoyment in sharing knowledge, encourage teachers to participate in discussions and collaborations that enrich collective insight (Zhang et al., 2021).





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Meanwhile, extrinsic motivations, such as awards and recognition from peers or institutions, also encourage teachers to be more open in sharing ideas and strategies (Arthur & Bradley, 2023). Research by W. Liu et al., (2019) shows that when teachers feel motivated by internal and external impulses, they are more likely to share knowledge actively and effectively. Thus, motivation acts as a catalyst that strengthens the knowledge-sharing culture, which ultimately contributes to increasing competence and innovation in the educational environment.

Hypothesis 5 (H5). Motivation has a positive effect on knowledge-sharing

1. 6 The role of knowledge-sharing mediation

Knowledge sharing plays a significant role as a mediator in the relationship between self-efficacy and teachers' creativity in teaching. Teachers with high self-efficacy tend to be more actively motivated in sharing knowledge and pedagogical ideas with peers (Pfitzner-Eden, 2016). Teachers actively sharing knowledge can enrich their educational community's collective knowledge and innovative practices (Bandura, 2009).

Research by Charteris et al., (2021) shows that an environment that supports knowledge sharing encourages collaboration and the exchange of ideas, which inspires creativity in teaching. In addition, Lane et al., (2022b) found that teachers who engage in knowledge-sharing feel more motivated to try new and creative teaching methods.

The results of the study by Runhaar & Sanders, (2016) show that self-efficacy increases the frequency and quality of knowledge sharing, contributing to increased creativity. Thus, knowledge sharing mediates the influence of self-efficacy on creativity, creating a positive cycle that strengthens teachers' ability and willingness to teach innovatively and effectively.

Hypothesis 6 (H6) Knowledge sharing positively mediates the influence of self-efficacy and teaching creativity.

Hypothesis 6a (H6a). Knowledge sharing positively mediates the influence of teaching motivation and creativity.

2. MATERIALS AND METHOD

In this study, a quantitative approach uses the cross-sectional method. This research involves certified educators in the educational environment of the National Police. Based on the sample size calculator (Soper, 2024), 248 respondents with a small effect power of 80% and a significant level of 5% are needed.

Respondents came from 9 educational units within the National Police. The demographics of respondents are presented in Table 1; most respondents were from the Brimob Pusdik which was 31%, and the lowest was from the Lantas Pusdik, which 4%. The majority have more than ten years of teaching experience (41%), the majority are 41-50 years old (43.1%), and the last education of the majority is bachelor (49.2%). Pada penelitian ini dengan pendekatan kuantitatif menggunakan metode cross sectional. Penelitian ini melibatkan pendidik bersertifikat di lingkungan pendidikan Polri. Berdasarkan kalkulator





Table 1: Demographic Profile of the Samples (n = 248).

Variables	frequency	percent		
Schools				
Diklat Reserse	18	7		
Pusdik Binmas	24	10		
Pusdik Sabhara	38	15		
Pusdik Intelkam	26	11		
Pusdik Lantas	10	4		
Pusdik Polair	20	8		
Pusdik Brimob	77	31		
Pusdik Administrasi	16	6		
Sebasa	19	8		
Age				
<30	52	20,9		
31-40	38	15,4		
41-50	107	43,1		
51-58	51	20,6		
Experience				
<2 years	56	23		
2-5 years	42	17		
6-10 years	47	19		
>10 years	103	41		
Education Level				
High school	54	21,8		
Diploma	6	2,4		
Bachelor	122	49,2		
Master	68	27,4		
Doctoral	6	2,4		

All indicator items use five Likert scales, 1 = "Strongly disagree" and 5 = "Strongly agree". Teaching creativity (TC) has five items of statement modified from (Karwowski et al., 2007; Tamsah, 2021), educators were asked about their perceptions of their various abilities in teaching. While knowledge sharing (KS) has five items modified from Jatnika, (2019), educators are given questions about their perception of knowledge sharing (KS) activities. Selfefficacy (SE) has four indicators adapted from (Bandura, 1998; Usher & Morris, 2023); educators were asked about their perceptions of their confidence in teaching. Meanwhile, the motivation variable consists of nine indicators modified from Criado-Del Rey et al., (2024). Modeling of structural equations uses the partial least squares (PLS) approach to test the hypothesis model. PLS-SEM is a multivariate non-parametric method to estimate pathway models involving latent variables (Avkiran, 2018). This study reveals the relationship between self-efficacy, motivation, knowledge sharing, and educators' creativity in teaching. The analysis process is done by testing the measurement model and the structural model and testing the goodness and fit of the model simultaneously (Hair et al., 2019). Testing the measurement model to determine the consistency of internal reliability (composite reliability), convergent validity (loading factor, AVE), and validity of discrimination (Fornell and Lacker, crossloading, HTMT). Testing of structural models to test the influence between variables. The



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strength of the model was assessed by observing the determination coefficient (Rsquare) and path coefficient (\beta value) (Hair Jr et al., 2023). The bootstrapping method with 5000 samples is used to generate standard errors and t-values to confirm the significance of the structural path. The path coefficient (β) shows the change value in the endogenous variable for each exogenous variable.

3. RESULTS

3. 1 Measurement Model Assessment. Constructs

3.1.1 Composite reliability

Based on the results of the data analysis presented in Table 1, outer loading, composite reliability, and AVE values, the results show that the composite reliability score of all constructs is valid (knowledge sharing=0.961; Motivation = 0.977; self-efficacy = 0.889 and teaching creativity = 0.947) because it exceeded the recommended criteria of 0.7 (Hair et al., 2019). In addition, the value of the outer loadings is at least 0.7, which is less than 0.7 items removed from the model (MOT4, MOT5, TC5). So, all the tested constructs have high internal reliability consistency. Then, the following analysis tests the convergent validity of the construct by analyzing the outer loading and AVE value. Sarstedt et al., (2022) state that a construct has sufficient convergent validity if the AVE value is more than 0.5. Table 2 shows that all constructs have an AVE value of more than 0.5 (knowledge sharing=0.860, motivation=0.858, self-efficacy=0.667, teaching creativity=0.819). Based on this, all constructs in the tested model have sufficient convergent validity.

Table 2: PLS measurement model

Constructs	Item	Item deleted	Outer loadings	α	CR	AVE	Convergent Validity	\mathbb{R}^2
KS	KS1	KS5	0.928	0.946	0.961	0.860	Yes	0,731
	KS2		0.940					
	KS3		0.938					
	KS4		0.902					
MOT	MOT1	MOT4	0.938	0.972	0.977	0.858	Yes	-
	MOT2	MOT5	0.912					
	MOT3		0.909					
	MOT6		0.917					
	MOT7		0.930					
	MOT8		0.939					
	MOT9		0.937					
SE	SE1	-	0.851	0.834	0.889	0.667	Yes	-
	SE2		0.771					
	SE3		0.796					
	SE4		0.845					
TC	TC1	TC5	0.841	0.926	0.947	0.819	Yes	0,647
	TC2		0.903					
	TC3		0.954					
	TC4		0.918					

Note: KS= Knowledge sharing, MOT=Motivation, SE=Self-efficacy, TC=Teaching Creativity





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3.1.2 Discriminant validity

The validity of discrimination is evaluated by two main criteria: the Heterotrait-Monotrait Ratio (HTMT) and the Fornell and Larcker criteria. HTMT measures the extent to which the indicator distinguishes different constructs by examining the correlation between potentially overlapping constructs, where a low HTMT ratio indicates that different constructs are measured clearly and not mixed (Sarstedt et al., 2022). The construct is considered to have discriminatory validity if the HTMT value is below 0.90 (Henseler et al., 2015). Based on Table 2, all HTMT values of each construct are less than 0.90. Meanwhile, the Fornell and Larcker criteria ensure the validity of discrimination if the square root of the Average Variance Extracted (AVE) of each construct is greater than the correlation of that construct with other constructs (Fornell & Larcker, 1981), suggesting that the construct shares more variance with its indicator than with the indicators of other constructs. The Fornell and Larcker values on all constructs are more significant than the indicator Fornell and Larcker values of other constructs. Based on the analysis results, all construction indicators have sufficient discriminatory validity (see Table 3 and Table 4).

 Construct
 KS
 MOT
 SE

 KS
 MOT
 0.798

 MOT
 0.798
 0.812

 SE
 0.713
 0.812

 TC
 0.810
 0.737
 0.850

Table 3: HTMT Criterion

Table 4: Fornell Lacker Criterion

	KS	MOT	SE	TC
KS	0.927			
MOT	0.766	0.926		
SE	0.822	0.740	0.817	
TC	0.760	0.703	0.758	0.905

3. 2 Structural Model Assessment

Testing of the structural model with a bootstrapping procedure using 5000 re-sampling with the help of smartPLS version 4.1.0.0 to obtain the value of the path coefficient (β) using the path coefficient (β), the structural model as shown in Figure 1. Meanwhile, the fit model uses the effect of size (F^2)/upsilon v and predictive relevance (Q^2) (Cohen, 1988; Hair Jr et al., 2023; Henseler et al., 2015) through PLS algorithm analysis and blindfolding analysis. In addition, goodness of fit (GoF) is achieved through standardized root mean square residual (SRMR) and NFI (normed fit index) values. According to (Henseler et al., 2015), the SRMR value is <0.08, and the NFI is >0.9.

The proposed model has an SRMR of 0.048 (<0.08) and an NFI of 0.909 (>0.9), so it can be concluded that the proposed model has a good and fit model. In addition, to test the direct influence criteria by paying attention to the F2 value with weak (0.02<F2<0.15), moderate (0.15<F2<0.35) and strong (F2>0.35) (Hair Jr et al., 2023) and indirect influence by looking at





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the value of upsilon v with low criteria with a mediation coefficient value of 0.01 to 0.075, moderate criteria with a mediation coefficient value between 0.075 to 0.175 and a mediation coefficient of >0.175 with high criteria (Lachowicz et al., 2018).

The results of the path analysis are presented in Table 5. The findings of the study revealed that H1 Self-efficacy had a positive effect on the creativity of teaching (β =0.342, T-stat=3.593 and P-values = 0.000). Based on these results, it can be concluded that self-efficacy positively and significantly affects teaching creativity. The criterion for the effect of self-efficacy was relatively low, F2 = 0.098 (0.02<F2<0.15). H2: Self-efficacy affects knowledge sharing (β =0.567, T-stat=7.868 and P-values = 0.000), so it can be concluded that self-efficacy has a positive and significant effect on knowledge sharing.

The influence criterion is a high influence F2 = 0.535 (F2>0.35). H3: Knowledge sharing affected teaching creativity (β =0.324, T-stat=3.128 and P-values = 0.002). Based on these findings, knowledge sharing has a positive and significant effect on teaching creativity, with the influence criteria being classified as weak F2 = 0.080 (0.02<F2<0.15). H4: Motivation affected teaching creativity (β =0.202, T-stat=2.672 and P-values = 0.008). So, it is concluded that educator motivation positively and significantly affects teachers' creativity. The magnitude of the influence is F2=0.044 (0.02<F2<0.15), so it can be concluded that the influence of motivation in the weak influence criterion can be concluded. H5: Motivation affects the knowledge sharing of educators (β =0.349, T-stat=4.763 and P-values = 0.000), so the hypothesis is accepted that motivation has a positive and significant influence on educators' knowledge sharing.

The magnitude of the influence was classified as moderate (0.15<F2<0.35). H6: Self-efficacy has an effect on teaching creativity through educator knowledge-sharing activities that produce (β =0.183, T-stat=2.595 and P-values = 0.010), so it can be concluded that Self-efficacy has a positive and significant effect on teaching creativity through educator knowledge sharing activities. The magnitude of the mediation coefficient is 0.031, which is classified as a low criterion. Meanwhile, on H7, Motivation affects the creativity of educators in teaching through knowledge sharing that results (β =0.113, T-stat=3.011 and P-values = 0.003). So, it can be concluded that the hypothesis is accepted, with a low mediation effect (mediation coefficient 0.013).

Table 5: Results of structural analysis

Hipotesis	Relationship	β	T stat (O/STDEV)	P values	Effect size (F ² / upsilon v)	decision
H1	SE -> TC	0.342	3.593	0.000	0,098*	SU
H2	SE -> KS	0.564	7.868	0.000	0,535*	SU
Н3	KS -> TC	0.324	3.128	0.002	0,080*	SU
H4	MOT -> TC	0.202	2.672	0.008	0,044*	SU
H5	MOT -> KS	0.349	4.763	0.000	0,205*	SU
Н6	$SE \rightarrow KS \rightarrow TC$	0.183	2.595	0.010	0,031**	SU
H7	$MOT \rightarrow KS \rightarrow TC$	0.113	3.011	0.003	0,013**	SU

^{*=} effect size (F²⁾, **=effect size upsilon v





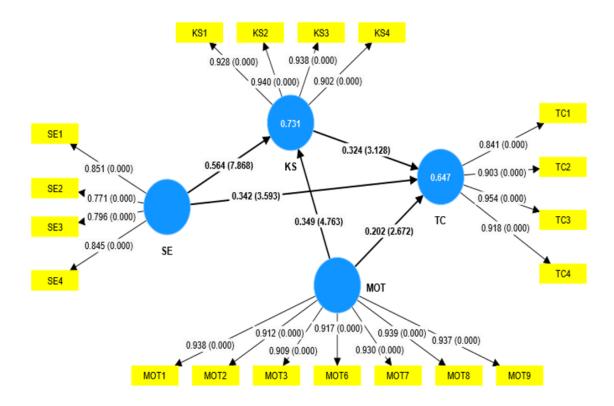


Figure 1: Structural Model

4. DISCUSSION

This study revealed several significant findings related to the influence of self-efficacy, knowledge sharing, and motivation on the teaching creativity of educators. The analysis results show that self-efficacy has a positive and significant influence on teaching creativity, although the magnitude of this influence is relatively low. This research aligns with Ma, (2022), who states that self-efficacy affects teachers' creativity in teaching languages. In addition, there was a relationship between self-efficacy and teacher creativity in influencing students' academic achievement.

Cayirdag, (2017) expressed the same thing: Teachers' and internal aspects of self-efficacy predict creativity in behavior coaching, while external aspects are not significant. More experienced teachers are more self-centered than student-focused. Self-efficacy also positively and significantly influenced knowledge sharing with high-influence criteria. This finding is in line with (Chae & Park, 2020; Li, 2018; Wang, 2016) that educators who have strong self-confidence are more likely to be active in sharing knowledge with peers. So that it can enrich teaching practices as a whole. Knowledge sharing has a positive and significant effect on teaching creativity (Da'as, 2022), although its influence is relatively weak. That is, sharing knowledge between educators helps increase creativity, but the influence is not as significant as other factors.





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Educator motivation has also been proven to positively and significantly influence teaching creativity, but the influence is relatively weak. The results of this study corroborate the research of Saputro et al., (2023) that motivation has a positive effect on the creativity of prospective teachers, in addition to motivation and self-efficacy play a role as mediators that significantly mediate the influence of social capital on the creative behavior of teaching prospective teachers. This shows that although motivation is essential, it is only strong enough to change educators' creativity with other significant supporting factors. On the other hand, motivation has a positive and significant influence on knowledge sharing with moderate influence criteria. This study corroborates the research of Lim et al., (2023) that utilitarian motivation is positively related to sharing knowledge both inside and outside the organization. This shows that motivated educators will more actively share their knowledge with their peers. High motivation can encourage teachers to find new and innovative ways to deliver subject matter, design exciting learning activities, and create a learning environment that promotes student creativity.

The results of other studies show that self-efficacy has a positive and significant influence on teaching creativity when mediated by knowledge sharing, although the mediation effect is relatively low. Self-efficacy is essential in fostering teaching creativity, mainly when mediated by knowledge sharing. Studies have shown that self-efficacy positively influences knowledge-sharing behavior at the individual and team levels (Li, 2018). In addition, teacher autonomy support, creative thinking, and metacognition significantly predict self-efficacy among teachers (Orakci & Durnali, 2023). In addition, the diversity of social bonds can influence creativity through creative self-efficacy, providing a motivational explanation for the relationship between social bonds and creativity (Gong et al., 2019). In addition, when supported by human resource management practices, self-efficacy can strengthen knowledge sharing among teachers. This emphasizes the importance of organizational support in increasing knowledge-sharing self-efficacy (Runhaar & Sanders, 2015).

Likewise, motivation affects the creativity of educators in teaching through knowledge sharing, but the effect of this mediation is also relatively low. Motivation is essential in increasing educators' creativity in teaching through knowledge sharing. Studies in various educational settings, such as elementary schools in China (Jiang, 2022), contemporary higher education in Indonesia (Hidayat et al., 2023), and lecturer teams in universities (Huo, 2013), have highlighted the importance of motivation in fostering creativity. Factors such as personal characteristics, teaching experience, and the role of technology affect educators' creativity levels. In addition, a critical framework for understanding the process of knowledge generation and innovation creation emphasizes the importance of motivation and knowledge sharing in enhancing creativity in teaching practice (Songkram & Chootongchai, 2020). Motivated educators are more likely to engage in innovative knowledge sharing that can create a more creative and effective teaching environment.

This study highlights the critical role of self-efficacy, knowledge sharing, and motivation in increasing educators' creativity in teaching in National Police educational institutions. Key findings suggest that self-efficacy significantly impacts teaching creativity, albeit with relatively low effects. In addition, self-efficacy significantly improved knowledge-sharing





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practices, which favored increased teaching creativity, although these two relationships had varying influences. Educator motivation was also identified as a crucial factor that contributed positively to teaching creativity and knowledge sharing, with a more moderate measure of effect. Practically, these findings emphasize the need for an educational environment in the National Police that supports increased self-efficacy and motivation among educators. This can be achieved by developing targeted professional programs and initiatives encouraging active knowledge-sharing among teaching staff. Thus, institutions can form more innovative and creative educators, which are expected to improve the overall quality of education.

For future research, it is recommended to adopt a longitudinal design to test the causal relationship between self-efficacy, motivation, knowledge sharing, and teaching creativity in more depth. It is also necessary to expand the research sample to include educators from various educational contexts to increase the generalization of findings. In addition, further studies may consider further exploration of additional mediation and moderation variables, such as organizational climate and leadership styles, to provide deeper insights into the factors that drive creative teaching practices in the National Police educational institutions and possibly other educational institutions as well.

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