



How Self-Efficacy Drives Innovative Work Behavior: Evidence from Indonesian Higher Education with Knowledge Sharing as a Mediator

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Abstract

Innovative work behavior (IWB) is an important dimension for higher education institutions in facing global demands. This study examines the effect of self-efficacy on innovative work behavior with knowledge sharing as a mediating variable in 129 lecturers at state vocational colleges with public service agencies in Central Java, Indonesia. A quantitative survey method was employed to collect primary data, which were subsequently analyzed using PLS-SEM. The results showed that self-efficacy significantly influenced knowledge sharing and IWB, and knowledge sharing significantly influenced IWB. In addition, knowledge sharing was proven to partially mediate the relationship between self-efficacy and IWB, with the direct effect remaining significant. These findings indicate that lecturers' self-confidence contributes directly to innovative behavior. However, its influence can also occur if accompanied by knowledge sharing activities in an academic environment. This study extends Social Cognitive Theory by demonstrating how the environmental component of triadic reciprocal causation operates through knowledge exchange at a public service vocational college in Central Java, Indonesia. This suggests that the burden of the Tridharma (three pillars) and the culture of academic collectivism shape the dynamics between personal confidence and innovative output.

Bagaimana Efikasi Diri Mendorong Perilaku Kerja Inovatif: Bukti dari Perguruan Tinggi Indonesia dengan Berbagi Pengetahuan sebagai Mediator

Abstrak

Innovative work behavior merupakan dimensi penting bagi perguruan tinggi dalam menghadapi tuntutan global. Penelitian ini menguji pengaruh self-efficacy terhadap innovative work behavior (IWB) dengan knowledge sharing sebagai variabel mediasi pada 129 dosen perguruan tinggi negeri vokasi berbadan layanan umum di Jawa tengah, Indonesia. Metode survei kuantitatif digunakan untuk memperoleh data primer yang dianalisis menggunakan PLS-SEM. Hasil penelitian menunjukkan bahwa self-efficacy berpengaruh signifikan terhadap knowledge sharing dan innovative work behavior, serta knowledge sharing berpengaruh signifikan terhadap innovative work behavior. Selain itu, knowledge sharing terbukti memediasi secara parsial hubungan self-efficacy dan innovative work behavior, dengan efek langsung yang tetap signifikan. Temuan ini menunjukkan bahwa kepercayaan diri dosen berkontribusi langsung terhadap perilaku inovatif. Namun, pengaruhnya dapat pula terjadi jika disertai dengan kegiatan berbagi pengetahuan dalam lingkungan akademis. Penelitian ini memperluas Social Cognitive Theory dengan menunjukkan bagaimana komponen lingkungan dari triadic reciprocal causation beroperasi melalui pertukaran pengetahuan di perguruan tinggi negeri vokasi berbadan layanan umum di Jawa tengah, Indonesia. Hal ini memberi makna bahwa beban tridharma dan budaya kolektivisme akademik membentuk dinamika antara keyakinan personal dan output inovatif.

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INTRODUCTION

Universities are required to continue adapting and innovating to remain relevant in the global education ecosystem. Universities are expected to provide broad access for students to develop the applied skills they desire and need to enter the world of work. Therefore, the role of lecturers as innovation champions in higher education is essential. The concept of innovative work behavior (IWB) refers to the process of creating, promoting, and implementing new ideas in the work environment (Janssen, 2003). In the context of lecturers, IWB is reflected through learning innovation, collaborative research, and comprehensive solution-based service. Messmann et al. (2022), who explored IWB in non-profit school in the Netherlands, stated that further research on the topic of IWB can be conducted in primary, vocational, and tertiary education organizations to broaden understanding of IWB. Research by Abbas and Wu (2021) and Halawa et al. (2023) offers similar suggestions for exploring IWB more broadly across various work sectors, such as public vocational universities.

One of the psychological factors that plays a significant role in IWB is self-efficacy, which is an individual's belief in their ability to complete tasks (Bandura, 1986). Previous research has revealed that self-efficacy can shape proactive behavior and goal-orientation (Yakin & Erdil, 2012). However, the results of research on the relationship between self-efficacy and IWB still show inconsistencies. Some studies found a significant effect (Budur et al., 2023), while others found no direct effect (Fan & Beh, 2024). This inconsistency suggests the presence of a psychosocial mechanism that mediates the relationship between self-efficacy and IWB.

Cutting-edge empirical evidence suggests that the relationship between self-efficacy and IWB is not necessarily direct,

but rather works through specific psychosocial mechanisms. Studies in the context of universities in developing countries indicate that internal factors, such as self-efficacy, in combination with contextual factors, including social interaction and the academic work environment significantly influence the IWB of lecturers. Research by Islam et al. (2025) found that self-efficacy plays a significant role in improving academic performance, but the effect becomes stronger when lecturers engage in innovative activities and intrinsic motivation. These findings confirm that academic individual self-confidence needs social channels to be realized into innovative behaviors that have a real impact.

The knowledge management literature identifies knowledge sharing as an essential factor in the formation of innovation (Wang & Wang, 2012). In the academic context, knowledge sharing occurs through research collaboration, scientific discussions, exchange of teaching practices, and professional communication. Several recent studies confirm that knowledge sharing can improve the innovation capabilities of individuals and organizations (Fang et al., 2024; Negi et al., 2025). Research also shows that psychological factors such as self-efficacy can drive knowledge-sharing behaviors (Salehi & Rouhi, 2023).

This study is different from previous studies that generally examined the direct relationship of self-efficacy to IWB (Budur et al., 2023; Islam et al., 2024; Saif et al., 2024). This study offers conceptual by positioning knowledge sharing as a psychosocial mechanism that transforms self-efficacy into IWB in the context of public service vocational higher education in Central Java, Indonesia. Knowledge sharing is a factor that can mediate lecturers' self-efficacy and IWB. The psychological conditions required to complete tasks, considered capable of being a center of innovation and requiring the role of

colleagues for discussion make knowledge sharing behavior. This will influence the indirect effects of self-efficacy and IWB.

In particular, this study confirms that self-efficacy is latent and not sufficient to produce IWB without being facilitated by the process of knowledge exchange in an academic environment of public service vocational higher education institutions. Thus, this research contributes to expand the literature of IWB by clarifying how and why self-efficacy works through knowledge-sharing-based social mechanisms, especially the context of higher education in Indonesia. Singh et al. (2021) found that knowledge sharing behaviors facilitate employees' ability to utilize knowledge and generate innovative outcomes, suggesting that this pattern may operate similarly in the broader Indonesian academic setting.

This research offers a contribution by positioning knowledge sharing as the psychosocial mechanism that explains how lecturers' self-confidence can be transformed into IWB by integrating Social Cognitive Theory and Knowledge-Based View in the context of higher education in Indonesia. This study expands the theoretical understanding that individual innovation in academic organizations is not solely the result of internal psychological factors but is formed through social processes based on knowledge exchange. The context of higher education in Indonesia has unique characteristics characterized by the burden of the tridharma, academic bureaucratic structure, and a strong culture of collectivism.

Within collectivist cultures, social interaction, collaboration, and knowledge exchange among individuals play a crucial role in supporting organizational performance (Hofstede, 2001). This condition is associated with lecturers on individual capabilities and actively engage in academic social networks that facilitate knowledge sharing and scholarly collaboration. Con-

sistent with Social Capital Theory, strong social relationships enable access to broader and more relevant knowledge resources that support innovation (Nahapiet & Ghoshal, 1998). Prior research indicates that knowledge sharing practices within organizations enhance individuals' ability to understand work-related problems and generate innovative solutions (Singh et al., 2021). Knowledge sharing can be viewed as a crucial social mechanism linking interpersonal interaction with the development of innovative work behavior, in the context of Indonesian higher education.

Social Cognitive Theory and Knowledge-Based View Integration

Social Cognitive Theory (SCT), put forward by Albert Bandura (1986), explains psychosocial functioning through the concept of triadic reciprocal causation (Bandura, 1999). This concept describes the interdependent relationship between three factors: personal factors (cognitive beliefs, expectations, self-evaluative processes), behavioral factors (actions, choices, verbal statements), and environmental factors (social context, organizational structures, situational constraints). These factors influence each other bidirectionally, meaning that behavior emerges from the continuous interaction among personal, behavioral, and environmental elements.

Within this triadic framework, self-efficacy occupies a central role as a personal factor. Individuals with high self-efficacy are more likely to set challenging goals, persist through obstacles, and engage in exploratory behaviors (Bandura, 1986). However, the theory explicitly recognizes that personal beliefs require environmental channels to manifest as observable behavior. This is where the Knowledge-Based View (KBV) provides a complementary perspective. KBV posits that knowledge is the most strategically significant resource of the firm, and that competitive advanta-

ge arises from the integration and application of specialized knowledge held by individuals (Kogut & Zander, 1992; Grant, 1996). In knowledge-based organizations such as universities, knowledge sharing serves as the primary mechanism through which individual knowledge is integrated into collective organizational capabilities.

The integration of SCT and KBV in this study is specified as follows. In Bandura's triadic model, environmental factors determine the conditions under which personal beliefs translate into behavior. In KBV, knowledge sharing represents the organizational process through which individual knowledge becomes a collective resource (Nonaka, 1994). By integrating these perspectives, this study proposes that knowledge sharing functions simultaneously as the environmental mechanism (in SCT terms) and the knowledge integration process (in KBV terms) that links self-efficacy with innovative work behavior.

The primary theoretical contribution of this integration lies in specifying the role of knowledge sharing, which has not been explicitly articulated in either perspective. In Social Cognitive Theory, environmental factors are conceptualized broadly without identifying the specific mechanisms that translate personal beliefs into behavior. Meanwhile, the Knowledge-Based View emphasizes knowledge integration but does not explicitly connect it with individual psychological drivers. The findings of this study suggest that knowledge sharing is not merely an organizational routine, but a concrete environmental mechanism that explains how individual beliefs are transformed into innovative behavior. Thus, this study bridges the gap between psychological and knowledge-based explanations of innovative work behavior.

Specifically, lecturers with high self-efficacy are more likely to engage in knowledge exchange because they trust their

expertise and feel confident contributing to academic discourse. This process enriches their cognitive resources through the recombination of knowledge, enabling the generation, promotion, and implementation of novel ideas. Mechanistically, self-efficacy motivates engagement in knowledge sharing, which enhances cognitive capacity through knowledge integration, ultimately increasing innovative behavior. Empirical evidence supports this mechanism, as knowledge sharing has been shown to mediate the relationship between self-efficacy and innovative work behavior (Islam et al., 2024).

Innovative Work Behavior (IWB)

IWB is a creative behavior that can generate innovations that are useful in the long-term development of the organization (Halawa et al., 2023). IWB is included in the organization's efforts to create novelties that can be useful and provide results for the organization. In an organization, IWB is related to the process of applying new ideas and ideas in organizational settings to achieve preset goals and increase organizational effectiveness (Amabile & Pratt, 2016). The indicators in IWB, according to Musenze and Mayende (2023), are Idea generation, Idea promotion, and Idea realization.

Self-Efficacy

Self-efficacy is defined as an individual's confidence in the ability to complete a given task or realize the expected results (Khoa, 2023). The confidence possessed by human resources will increase motivation in achieving the best results in completing tasks and obligations. The higher the individual's confidence in their ability to complete assignments or do something, the higher the individual's self-efficacy (Sulistiowati & Komari, 2020). There are three indicators of self-efficacy according to Siregar et al. (2022), including magnitude, strength, and generality.

Knowledge Sharing

Knowledge sharing is described as the ability of individuals to convey, distribute, and disseminate knowledge between individuals in an organization (Chaudhary et al., 2023). So that the process of disseminating knowledge occurs in the work environment between human resources in an organization. Lee et al. (2020) explain knowledge sharing as an interaction that occurs between workers in disseminating experience, knowledge, and abilities in an organization. Kmiecik (2021) explained that the indicators of knowledge sharing are knowledge donating and knowledge collecting.

Recent literature consistently places knowledge sharing as an important antecedent of IWB. A theoretical review by Xu and Wei (2023) confirms that knowledge exchange not only increases the cognitive capacity of individuals but also strengthens the intellectual capital that forms the foundation of employees' innovative behavior. In the context of knowledge-based organizations, individuals who actively share knowledge have a higher tendency to generate, promote, and implement new ideas. Thus, knowledge sharing serves as a catalyst that connects individual psychological resources with innovative outputs in the workplace.

Hypothesis Development

The Influence of Self-Efficacy on Innovative Work Behavior

Within the framework of Social Cognitive Theory, self-efficacy is conceptualized as a personal belief that shapes how individuals set goals, sustain effort, and respond to challenges (Bandura, 1986). Individuals with higher self-efficacy are more likely to take initiative, experiment with new approaches, and engage in exploratory behaviors that serve as critical precursors to innovative work behavior (Gkontelos et al., 2023). Mechanistically, confidence in one's capabilities reduces

perceived risks of failure and increases the willingness to experiment with novel ideas, thereby enhancing the likelihood of innovation in the workplace.

Budur et al. (2023) found that self-efficacy significantly predicts innovative work behavior in higher education institutions, while Hameli (2025) confirmed that self-efficacy serves as a key psychological pathway linking organizational support to innovative behavior. However, Fan and Beh (2024) reported that this direct relationship is not always consistent, suggesting that the strength of the self-efficacy–innovative work behavior link may depend on contextual conditions. Based on this theoretical rationale and empirical evidence, the following hypothesis is proposed:

H1: Self-efficacy has a significant positive effect on innovative work behavior

The Influence of Self-Efficacy on Knowledge Sharing

From the SCT perspective, individuals who believe in their competence are more inclined to share their expertise because they trust the value of their own knowledge contributions. Previous research by Yang and Xu (2021) states that self-efficacy has a positive and significant influence on knowledge sharing behavior, meaning that belief in one's ability can encourage the practice of sharing knowledge with others in the work environment, either implicitly through discussions, opinion presentations, or meetings, or explicitly through seminars and hands-on practice. Peng et al. (2023) further showed that employees in an organization with high self-efficacy are more likely to engage in knowledge exchange behaviors. In the KBV framework, such individual-level confidence drives the willingness to contribute to the organization's knowledge base, because self-efficacious individuals perceive their knowledge as valuable and worth disseminating. Mechanistically, self-efficacy increases individuals' confidence in the

value of their knowledge, which reduces the perceived risk of sharing and enhances their willingness to engage in knowledge exchange activities. Thus, self-efficacy is expected to be an important antecedent for the practice of knowledge sharing within the scope of the organization. The hypothesis is formulated as follows:

H2: Self-efficacy has a significant positive effect on knowledge sharing

The Influence of Knowledge Sharing on Innovative Work Behavior

Knowledge sharing is not only an interaction between individuals in the work environment through the dissemination of knowledge, but also an opportunity that arises for individuals to learn from each other's knowledge (Danish et al., 2014). The knowledge shared will increase the knowledge and capabilities of employees in the work environment. This new information helps individuals to analyze problems from various perspectives so that new methods can be produced as solutions to existing problems while increasing the creativity of individual thinking (Singh et al., 2021). The KBV perspective explains this mechanism: when individual knowledge is integrated through sharing processes, the resulting collective knowledge pool creates conditions for novel combinations and innovative applications (Grant, 1996). A number of empirical studies have strengthened this relationship. Saif et al. (2024) research on higher education institutions shows that a culture of knowledge sharing strengthens IWB, and Khan et al. (2023) demonstrated that knowledge sharing can strengthen the relationship between leadership characteristics and IWB through increasing individual creative self-efficacy. Thus, knowledge sharing is expected to significantly affect IWB:

H3: Knowledge sharing has a significant positive influence on innovative work behavior

The Mediating Role of Knowledge Sharing

Building on the integrative SCT-KBV framework outlined earlier, the present study posits that knowledge sharing serves as a mediating mechanism between self-efficacy and IWB. The logic is as follows: self-efficacy, as a personal factor in the triadic model, drives individuals to engage in knowledge sharing (the environmental mechanism), which in turn provides the cognitive and social resources necessary for innovative behavior. The knowledge gained as a result of the exchange process is associated with employees to find and create new ideas and innovations that are useful for the organization (Sulistiowati & Komari, 2020). In the process of innovation, knowledge and information are the basis for the creation of innovation. Islam et al. (2024) showed empirically that knowledge sharing mediates the relationship between occupational self-efficacy and IWB, and Khan et al. (2023) found that knowledge sharing transmits the effect of individual capabilities to innovative outputs through enhanced creative self-efficacy. This evidence suggests that knowledge sharing serves as a relevant psychosocial mechanism to explain how self-confidence is channeled into innovative behaviors. This mediating mechanism reflects a dual-pathway process in which self-efficacy influences innovative work behavior both directly and indirectly through knowledge sharing, consistent with the triadic reciprocal causation logic of SCT. Therefore, the hypothesis proposed is:

H4: Knowledge sharing mediates the influence of self-efficacy on innovative work behavior

METHOD

This research uses a survey-based quantitative approach with a cross-sectional design. The target population comprises

ses lecturers at State vocational colleges with public service agencies in Central Java, Indonesia with a minimum service period of one year, ensuring that respondents have sufficient experience to reflect on their knowledge-sharing and innovative behaviors in the academic work environment.

The number of respondents in this study is 129 university lecturers. Respondents have diverse academic backgrounds, ranging from expert assistants to professors, with varying tenures. This study uses proportional random sampling with key persons as the sampling technique. Key persons at each institution (typically academic leaders or departmental heads) were asked to distribute questionnaires proportionally to lecturers across different faculties and ranks. This technique was chosen to ensure representation across institutional types and academic ranks, while maintaining random selection within each stratum to minimize sample selection bias and improve the generalization of research results.

Data were collected through an online questionnaire distributed over a four-month period. Based on the minimum sample size calculation, at least 120 respondents were required for this study. However, during the data collection period, a total of 129 valid responses were obtained and included in the analysis. All respondents provided informed consent prior to participation, were assured of confidentiality and anonymity, and were informed that participation was voluntary with the right to withdraw at any time.

The research instrument used a Likert scale of 1–5. The variable of self-efficacy was measured using 7 indicators adapted from Siregar et al. (2022), encompassing the dimensions of magnitude (perceived level of task difficulty that can be handled), strength (conviction in one's own capabilities), and generality (breadth of self-efficacy across situations). Know-

ledge sharing was measured using 8 indicators adapted from Kmiecik (2021), covering knowledge donating (willingness to share one's own knowledge) and knowledge collecting (actively seeking knowledge from colleagues). IWB was measured using 9 indicators adapted from Musenze and Mayende (2023), comprising idea generation, idea promotion, and idea realization.

Regarding sample size adequacy, PLS-SEM is considered suitable for relatively small sample sizes compared to covariance-based SEM. Hair et al. (2014) recommend that the minimum sample size should be five to ten times the number of indicators or the largest number of structural paths directed at a particular construct in the model. In this study, a total of 24 measurement items were used across all constructs. Therefore, applying the five-times indicator rule results in a minimum sample size of 120 respondents. The sample size of 129 respondents in this study exceeds this threshold.

Additionally, based on the ten-times rule of structural paths. The maximum number of paths directed at the innovative work behavior construct is two, from self-efficacy and knowledge sharing. Yielding a minimum requirement of 20 respondents, which is also satisfied. Furthermore, following Cohen's (1992) G*Power 3.1 analysis guidelines for a medium effect size ($f^2 = 0.15$), a significance level of 0.05, and statistical power of 0.80 with two predictors, a minimum sample of approximately 68 respondents is required. Therefore, the sample size in this study is considered adequate for PLS-SEM analysis.

Data analysis was carried out using PLS-SEM on the SmartPLS 3 application. The evaluation of the outer model showed an outer loading value > 0.70 , AVE > 0.50 , Cronbach's alpha and composite reliability > 0.70 , so that the instrument was declared valid and reliable (Abdillah & Hartono, 2015). The inner model test

was carried out through R^2 , Q^2 , effect size analysis, and hypothesis testing through bootstrapping (5,000 subsamples) to test the direct and indirect influences. Mediation was assessed using the specific indirect effect with bias-corrected confidence intervals, and the Variance Accounted For (VAF) was calculated to determine the type of mediation following the procedure recommended by Hair et al. (2014). Since this study relies on self-reported cross-sectional data, common method bias may be a concern (Podsakoff et al., 2003). To minimize this issue, procedural remedies such as ensuring respondent anonymity and reducing evaluation apprehension were applied.

RESULT AND DISCUSSION

Outer Model

In this study, the researcher used an outer reflective construct model that was evaluated to measure the validity of the instrument through the convergent and discriminant validity of each indicator, as well as composite reliability and cronbach's alpha to measure the reliability of the instrument.

Convergent Validity Test

The validity of the convergence can be measured using the rule of thumb, namely outer loading > 0.7 and Average Variance Extracted (AVE) > 0.5 (Ferdinand, 2014). If these values are met, then it can be said that the research model has met the convergent validity. The output results of outer loadings can be seen that all constructs with reflective indicators have an outer loadings value of > 0.7 . That is, all items have a convergent or valid validity. Based on Table 1, all latent variables have an AVE value > 0.5 . That is, all items have a convergent or valid validity.

The figure 1 presents the results of both the measurement model (outer model) and the structural model (inner model) using PLS-SEM. In the measurement model, all indicators across the constructs demonstrate outer loading values above 0.70, indicating good convergent validity in representing their respective constructs (Hair et al., 2014). The indicators of self-efficacy (SE1–SE7), knowledge sharing (KS1–KS8), and innovative work behavior (IWB1–IWB9) all meet the required validity criteria and are therefore suitable for further analysis.

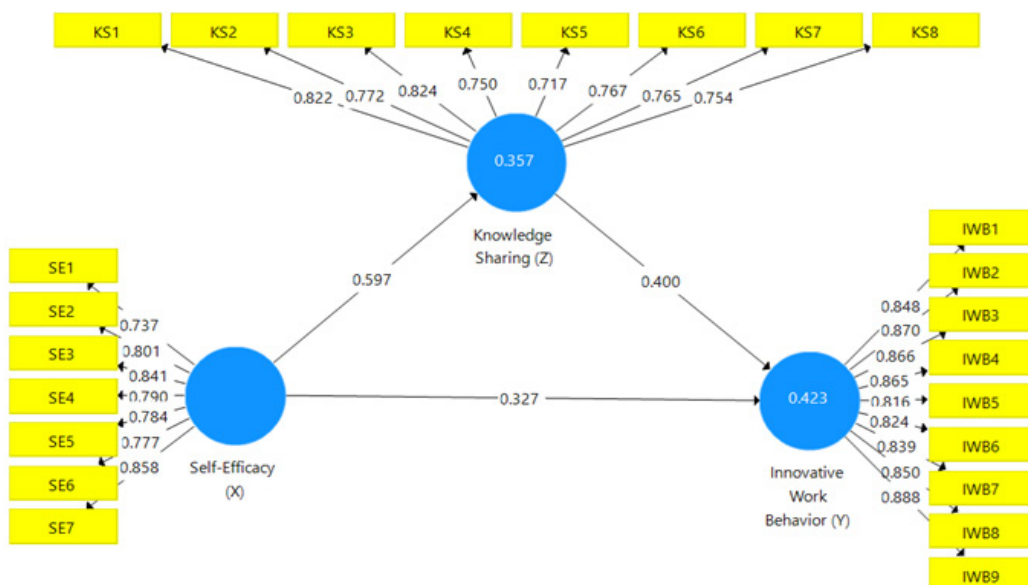


Figure 1. PLS Outer Model Path Diagram
Source: Processed Data (2025)

In the structural model, the path coefficients indicate that self-efficacy has a positive effect on knowledge sharing with a coefficient of 0.597, suggesting that higher levels of self-efficacy are associated with a greater tendency to engage in knowledge sharing. Furthermore, self-efficacy has a direct effect on innovative work behavior with a coefficient of 0.327, while knowledge sharing also positively influences innovative work behavior with a coefficient of 0.400.

The coefficient of determination (R^2) shows that knowledge sharing has a value of 0.357, while innovative work behavior has a value of 0.423, both of which fall within the moderate category. The model has adequate explanatory power in explaining the endogenous variables. Overall, these findings suggest that self-efficacy influences innovative work behavior both directly and indirectly through knowledge sharing as a mediating mechanism.

Table 1. AVE Value

Variable	AVE Value	Description
Self-Efficacy	0.639	Valid
Knowledge Sharing	0.596	Valid
IWB	0.960	Valid

Source: Processed Data (2025)

Discriminant Validity Test

The validity of the discriminant can be measured using a comparison between loading and cross-loading factors. If the value between loading > the value of the cross-loading factor, then the indicator meets the discriminatory validity. The validity of the discriminant construct can be seen from the comparison of the root value of AVE with the correlation coefficient. If the root of AVE > coefficient with other variables, then the construct is declared valid or can be seen from the cross-loading value (Abdillah & Hartono, 2015). The validity of the discriminant can be measured

using the rule of thumb, namely, the root value of AVE > the correlation of latent variables, and the cross-loading factor > 0.70 in a single variable. The value of outer loadings is greater than the value of cross loadings, or the correlation of the construct with the measurement item is greater than that of other constructs. This means that all items have a discriminatory or valid validity.

Based on Table 2, it can be seen that the root value of AVE is greater than the value of the construct with other constructs. This means that all items have a discriminatory or valid validity.

Table 2. AVE Root Values

Variable	AVE Value	AVE Root Values
Self-Efficacy	0.639	0.799
Knowledge Sharing	0.596	0.772
IWB	0.726	0.852

Source: Processed Data (2025)

Reliability Test

The reliability test in PLS can be analyzed using two techniques, namely cronbach's alpha and composite reliability. An instrument can be said to be reliable if it meets the rule of thumb, which has a composite reliability value of > 0.70 and a cronbach's alpha > 0.70 (Abdillah & Har-

tono, 2015).

Based on table 3, it can be seen that all latent variables have a Cronbach's alpha value of > 0.7 and a composite reliability value of > 0.7. This means that all items of reliable statements are consistent and accurate measuring tools.

Table 3. Cronbach's Alpha and Composite Reliability

Variable	Cronbach's Alpha	Composite Reliability	Description
Self-Efficacy	0.905	0.925	Reliable
Knowledge Sharing	0.903	0.922	Reliable
IWB	0.953	0.960	Reliable

Source: Processed Data (2025)

Inner Model

The GoF index is a test of the compatibility between certain observation results (observation frequency) and frequencies obtained based on their expected values (theoretical frequency). The criteria for the GoF index were 0.1 (small), 0.25 (medium), and 0.36 (large) (Hair et al., 2014). Based on calculations, it can be seen that the GoF value in this research model is > 0.36 , which is 0.504 (large). This means that there is a correspondence between the observed values and the expected values in this research model.

Effect Size (F^2)

If the value of F^2 is > 0 , it provides evidence that the model has a sufficient effect size on the latent variable. On the other hand, if the value of F^2 is obtained $<$

0, it provides evidence that the model does not have enough effect size on the latent variable. The categories or parameters of F^2 are 0.02 (small), 0.15 (medium), 0.35 (large) (Ferdinand, 2014).

Based on Table 4, it can be seen that the greatest influence is found in the self-efficacy variable in knowledge sharing. This means that the self-efficacy variable has a significant impact on the knowledge sharing variable of 0.554. The smallest influence was found in the self-efficacy variable in the IWB variable. This means that the self-efficacy variable has a small influence on the IWB variable of 0.119. The average effect size value in this research model is 0.283. This means that the amount of influence between variables in this study is included in the medium category.

Table 4. Effect Size

	Effect Size	Category
Self-Efficacy $\rightarrow$ IWB	0.119	small
Self-Efficacy $\rightarrow$ Knowledge Sharing	0.554	large
Knowledge Sharing $\rightarrow$ IWB	0.178	medium
Average	0.283	medium

Source: Processed Data (2025)

Predictive Relevance (Q^2)

If a Q^2 value is obtained > 0 , it provides evidence that the research model has predictive relevance. On the other hand, if a Q^2 value is obtained < 0 , it provides evidence that the research model does not have predictive relevance. The categories or parameters of Q^2 are 0.02 (weak), 0.15 (moderate), 0.35 (strong) (Ferdinand, 2014).

Based on Table 5, the knowledge sharing variable has a predictive relevance value (Q^2) > 0 , which is 0.202, and the IWB variable has a predictive relevance

value (Q^2) > 0 , which is 0.300. The predictive relevance value for the knowledge sharing variable was $0.202 > 0.15$, referring to the self-efficacy variable that had predictive relevance for the knowledge sharing variable with a medium category. Furthermore, the predictive relevance value for IWB variables was $0.300 > 0.15$, referring to the self-efficacy and knowledge sharing variables that had predictive relevance for IWB variables in the medium category. This means that the model in this study can predict the values of the original data, or this study has good observation value.

Table 5. Predictive Relevance (Q^2)

Variable	SSO	SSE	$Q^2 = (1-SSE/SSO)$
Knowledge Sharing	1032.000	823.430	0.202
IWB	1161.000	812.596	0.300

Source: Processed Data (2025)

R-Square (R^2) Values

The Rule of Thumb value of R^2 in the structural model is 0.67 (good); 0.33 (moderate); and 0.19 (weak).

Based on the structural model analysis, the coefficient of determination (R^2) Table 6 indicates that the knowledge sharing variable has an R^2 value of 0.357, meaning that 35.7% of the variance in

knowledge sharing is explained by the predictor variable in the model, namely self-efficacy. Meanwhile, the innovative work behavior (IWB) variable has an R^2 value of 0.423, indicating that 42.3% of the variance in innovative work behavior is explained simultaneously by self-efficacy and knowledge sharing.

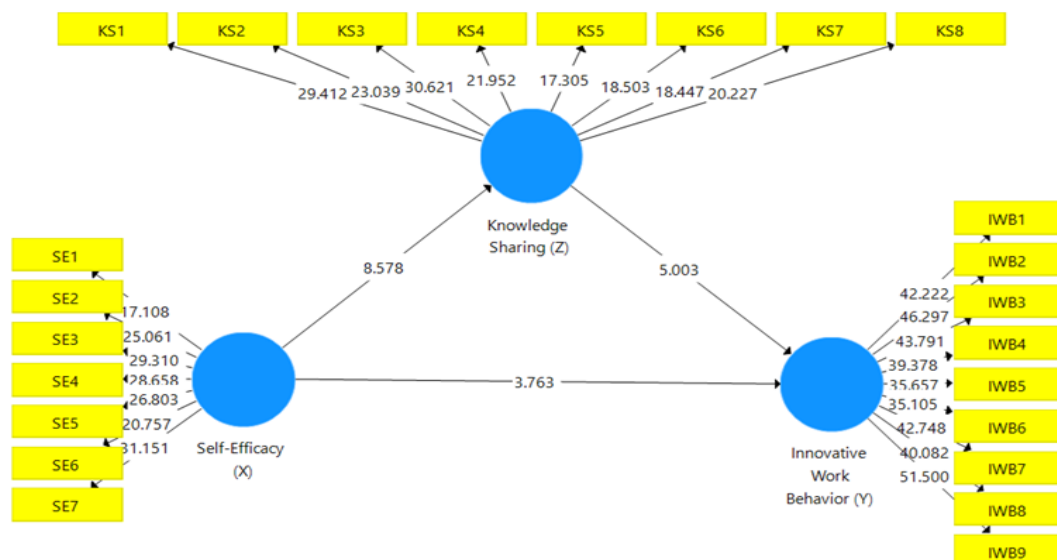
Table 6. R-Square (R^2)

Variable	R Square (R^2)
Knowledge Sharing	0.357
IWB	0.423

Source: Processed Data (2025)

According to the criteria proposed by Hair et al. (2014), R^2 values of 0.67, 0.33, and 0.19 are categorized as substantial, moderate, and weak, respectively. Therefore, the R^2 values for knowledge sharing (0.357) and innovative work behavior

(0.423) fall within the moderate category. This suggests that the model has adequate explanatory power in explaining the endogenous variables, although other factors outside the model may also contribute to explaining these constructs.

**Figure 2.** Bootstrapping Model

Source: Processed Data (2025)

The figure 2 presents the results of the bootstrapping procedure in the PLS-SEM analysis. The values displayed on each path and indicator represent the t-statistics used to assess the significance of relationships among variables. Based on the bootstrapping results, all indicators across the constructs of self-efficacy, knowledge sharing, and innovative work behavior exhibit t-statistic values greater than 1.96, indicating that all indicators significantly reflect their respective constructs at the 5% significance level (Hair et al., 2014).

In the structural model, the relationship between self-efficacy and knowledge sharing shows a t-statistic value of 8.578, indicating a significant effect. The relationship between knowledge sharing and innovative work behavior is also significant, with a t-statistic value of 5.003. Furthermore, self-efficacy has a direct effect on innovative work behavior, with a t-statistic value of 3.763, which exceeds the critical threshold for significance.

Table 7. Direct Influence Path Coefficient Results

	Original Sample	T-Statistic	P-Value	Result
Self-Efficacy → IWB	0.327	3.767	0.000	Significant
Self-Efficacy → Knowledge Sharing	0.597	8.578	0.000	Significant
Knowledge Sharing → IWB	0.400	5.003	0.000	Significant

Source: Processed Data (2025)

Based on Table 7, the direct effect test results are as follows: The first hypothesis tests whether self-efficacy has a significant effect on IWB. The results showed that the original sample value was 0.327 and the t-statistic value was $3.767 > 1.64$ or the p-value was $0.000 < 0.050$. H1 was accepted, proving that self-efficacy had a significant effect on IWB.

The second hypothesis tests whether self-efficacy has a significant effect on knowledge sharing. The results showed that the original sample value was 0.597 and the t-statistic value was $8.578 > 1.64$ or the p-value was $0.000 < 0.050$. H2 was accepted, proving that self-efficacy has a significant effect on knowledge sharing.

The high t-statistic values observed for the indicators, particularly within the innovative work behavior construct (e.g., IWB9 = 51.500), indicate that these indicators strongly contribute to explaining the latent constructs. Overall, the bootstrapping results confirm that all hypothesized relationships in the model are statistically significant, thereby supporting all proposed hypotheses, including the mediating role of knowledge sharing in the relationship between self-efficacy and innovative work behavior.

Direct Hypothesis Test

Direct hypothesis test is an estimated value for the path relationship in a structural model obtained by the bootstrapping procedure through the path coefficient value. Direct hypothesis testing can be seen through t-statistical values and p-values. The limit of the t-statistical value is > 1.64 , and the p-value is < 0.05 .

The third hypothesis tests whether knowledge sharing has a significant effect on IWB. The results showed that the original sample value was 0.400 and the t-statistic value was $5.003 > 1.64$ or the p-value was $0.000 < 0.050$. So H3 was accepted, proving that knowledge sharing has a significant effect on IWB.

Indirect Hypothesis Test

An indirect hypothesis test is used to determine the indirect influence between variables or the presence of mediation in research. Indirect hypothesis tests can be seen through t-statistical values and p-values. The limit of the t-statistic value is > 1.64 , and the p-value is < 0.05 with signi-

ficance at the level of 5%. The following is the value of specific indirect effects to determine the effect of mediation.

Based on Table 8, the results of the indirect effect test are as follows that the fourth hypothesis tests whether knowledge sharing can mediate the effect of self-

efficacy on IWB. The results showed that the original sample value was 0.239 and the t-statistic value was $3.969 > 1.64$ or the p-value was $0.000 < 0.050$. H4 was accepted, proving that knowledge sharing can partially mediate the influence of self-efficacy on IWB.

Table 8. Specific Indirect Effect

	Original Sample	T-Statistic	P-Value	Results
Self-Efficacy → Knowledge Sharing → IWB	0.239	3.969	0.000	Significant

Source: Processed Data (2025)

The results of the statistical test show that self-efficacy β knowledge sharing is significant ($\beta=0,597$; $t=8,578$; $p<0,001$), self-efficacy β IWB is significant ($\beta=0,327$; $t=3,767$; $p<0,001$), knowledge sharing β IWB is significant ($\beta=0,400$; $t=5,003$; $p<0,001$). Mediation proved significant through the pathway self-efficacy β knowledge sharing β IWB ($\beta=0,239$; $t=3,969$; $p<0,001$), so that mediation is partial.

According to Hair et al. (2014), a VAF value between 20% and 80% indicates partial mediation. Since the direct effect of self-efficacy on IWB remains significant ($\beta=0.327$, $p<0.001$) even after the mediator is included in the model, and the VAF is 42.2%, the mediation is classified as partial, not full. This means that knowledge sharing explains a substantial portion (42.2%) of the total effect of self-efficacy on IWB, but self-efficacy also retains a meaningful direct pathway to innovative behavior that operates independently of knowledge sharing.

The results of the statistical analysis reveal that all hypothesized paths are significant: self-efficacy is positively associated with knowledge sharing ($\beta=0.597$, $t=8.578$, $p<0.001$), self-efficacy is positively associated with IWB ($\beta=0.327$, $t=3.767$, $p<0.001$), and knowledge sharing is positively associated with IWB ($\beta=0.400$, $t=5.003$, $p<0.001$). The indirect pathway from self-efficacy through knowledge sha-

ring to IWB is also significant ($\beta=0.239$, $t=3.969$, $p<0.001$), and the VAF of 42.2% indicates partial mediation.

These findings strengthen the integration of Social Cognitive Theory and the Knowledge-Based View in explaining innovative work behavior. In Social Cognitive Theory, behavior is shaped by the interaction between personal and environmental factors (Bandura, 1986). The results indicate that self-efficacy as a personal factor is associated with innovative work behavior, both directly and through knowledge sharing as an environmental mechanism. From the Knowledge-Based View perspective, organizations are seen as systems that depend on the integration of individual knowledge (Grant, 1996). The findings show that knowledge sharing functions as a knowledge integration process that connects individual beliefs with innovative outputs. This clarifies that innovation does not solely originate from individual capability, but also from knowledge exchange processes within the organization. The integration of these two theories indicates that knowledge sharing represents a concrete form of the environmental component within the triadic reciprocal causation framework. Knowledge sharing is a social activity and also a mechanism that enables the transformation of individual beliefs into innovative behavior.

In the context of public service vocational higher education institutions, these findings are particularly relevant. Vocational institutions emphasize practical learning, collaboration, and strong linkages with industry. The public service institutions system promotes flexibility and performance-oriented management. These conditions create a high demand for knowledge exchange among lecturers. Therefore, knowledge sharing becomes a critical mechanism in translating self-efficacy into innovative work behavior. The vocational academic environment requires an individual competence and knowledge-based social interaction. This supports the argument that innovation in vocational higher education is shaped by the interaction between psychological factors and knowledge-based social processes.

These results indicate that self-efficacy is associated with individuals' tendency to act proactively. However, this relationship should not be interpreted as causal due to the cross-sectional design of the study (Bandura, 1986). Rather, the findings suggest that the translation of self-efficacy into innovative outcomes is likely to depend on social and knowledge-based processes. Knowledge sharing appears to function as a key mechanism through which individual confidence can be expressed in practice (Islam et al., 2024).

This implies that lecturers with high levels of self-efficacy but low willingness to share knowledge may not fully realize their innovative potential. Conversely, those who actively engage in knowledge exchange are more likely to transform their personal beliefs into innovative work behavior. This interpretation is consistent with prior studies showing that knowledge sharing is positively associated with innovation in academic contexts (Budur et al., 2023; Fan & Beh, 2024; Fang et al., 2024). Furthermore, the findings align with Salehi and Rouhi (2023), who emphasize the important role of psychological factors in shaping knowledge-sharing behavior

among professionals.

The findings of this study show that the influence of self-efficacy on IWB becomes more meaningful when facilitated by knowledge sharing. The lecturers' confidence is latent and requires a social context in order to be realized into real innovative actions. These findings reinforce Social Cognitive Theory's argument that work behavior is not only determined by personal beliefs, but also by the dynamics of social interaction within the organization.

This study is in line with Hameli's (2025) study, which confirms that self-efficacy is the main psychological pathway that connects organizational support with IWB. In addition, research by Dogra and Parrey (2024) shows that modern work-context-based self-efficacy plays a significant role in shaping innovative behaviors, particularly when individuals are supported by adequate social and organizational mechanisms. Thus, the results of this study strengthen the argument that the IWB of lecturers is not only determined by personal beliefs, but also highly dependent on the quality of the knowledge-sharing process in the academic environment.

CONCLUSION AND RECOMMENDATION

This study shows that self-efficacy is positively associated with knowledge sharing and innovative work behavior. Knowledge sharing is also positively associated with innovative work behavior. The results indicate that knowledge sharing plays a partial mediating role. This means that self-efficacy operates through two pathways. The first pathway is direct. The second pathway occurs through knowledge-sharing processes.

These findings suggest that lecturers' self-confidence does not automatically lead to innovation. Self-confidence needs to be supported by knowledge-based social interaction. Lecturers with high self-efficacy

cy but low engagement in knowledge sharing may not fully realize their innovative potential. In contrast, lecturers who actively share knowledge are more likely to generate and implement innovative ideas.

From a theoretical perspective, this study strengthens Social Cognitive Theory. Innovative behavior is not shaped solely by personal factors. It is also influenced by the social environment. This study provides an empirical explanation of the environmental component in triadic reciprocal causation. Knowledge sharing functions as the mechanism that links individual beliefs with innovative behavior. This study also supports the Knowledge-Based View. Knowledge is treated as a primary source of innovation. Knowledge sharing becomes the basis for knowledge integration within organizations.

In the context of public service vocational higher education institutions, these findings are highly relevant. Vocational institutions emphasize practical learning and collaboration. This system promotes performance-oriented management. Tridharma obligations require academic productivity. These conditions increase the need for intensive knowledge exchange. Therefore, knowledge sharing becomes a critical mechanism for supporting lecturer innovation.

From a practical perspective, universities need to build a culture of knowledge sharing. Cross-department academic seminars should be strengthened. Mentoring programs should be developed. Digital collaboration platforms should be provided. Lecturer development programs should enhance self-efficacy. Training should also encourage knowledge-sharing practices. Reward systems should recognize knowledge-sharing contributions. Collaborative activities should be included in performance evaluation.

Future research is recommended to use longitudinal designs. This approach can provide a stronger understanding of relationships among variables. Future

studies may include additional outcomes such as individual performance (Babu et al., 2024) or organizational innovation climate. Multi-source data collection is also recommended to reduce common method bias.

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