Volume 17, Issue 2, 05 Juni 2026, Pages. 512-531

Jurnal Manajemen (Edisi Elektronik)

Sekolah Pascasarjana Universitas Ibn Khaldun Bogor

http://dx.doi.org/10.32832/jm-uika.v17i2.23659

How Self Awareness Bridges Growth Mindset, Innovative Leadership, Work Engagement Toward Innovative Work Behavior

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A R T I C L E I N F O

DOI: 10.32832/jmuika.v17i2.23659

Article history:

Received:
09 Mei 2026

Accepted:
23 Mei 2026

Available online:
05 Juni 2026

Keywords:
Growth mindset, innovative leadership, work engagement, self-awareness, innovative work behavior

A B S T R A C T

This study aimed to analyse the mediating role of self-awareness in the relationship between growth mindset, innovative leadership, and work engagement on innovative work behaviour among teachers and staff. The focus of the study was on how self-awareness could be a psychological mechanism that bridged these antecedent factors so that they were truly manifested in innovative work behaviour. The approach used was explanatory quantitative with primary data sources involving a population of teachers and staff at Madrasah Terpadu Kabupaten Jepara. Of the total population, 144 respondents participated by completing a structured questionnaire, so that the data obtained reflected the actual conditions in that environment. The results of the study indicated that growth mindset and work engagement had a significant influence on Innovative Work Behaviour, while innovative leadership did not have a direct influence. However, self-awareness had been proven to play an important mediating role in the overall relationship. These findings confirmed that self-awareness was a psychological bridge that could transform a growth mindset, innovative leadership, and work engagement into actual innovative work behaviour. This study contributed theoretically by expanding the understanding of mediation mechanisms in innovative work behaviour, particularly by positioning self-awareness as a psychological bridge connecting growth mindset, innovative leadership, and work engagement with innovative work behaviour. This study also provided scientific contributions by strengthening the integration between the Job Demands–Resources Model and Social Cognitive Theory, as well as introducing self-awareness as a mediation mechanism that had not been widely studied in the context of education.

INTRODUCTION

This research theme stems from a real phenomenon occurring at Madrasah Terpadu in Jepara Regency. Madrasah Terpadu in Jepara Regency was selected as the research site for several compelling reasons. First, it is the only state-integrated Islamic educational institution in Jepara Regency, formally bound by a Memorandum of Understanding (MoU) among three state madrasahs, namely MIN 2 Jepara, MTsN 1 Jepara, and MAN 1 Jepara. This integration makes Madrasah Terpadu a unique model of continuous Islamic-based education at the primary, junior secondary, and senior secondary levels within a single coordinated system. Second, as an integrated institution, teachers and staff across the three madrasahs are expected to share a unified vision and mission in advancing the quality of Islamic education in Jepara Regency. This shared institutional commitment creates a particularly relevant context for examining Innovative Work Behaviour (IWB), as the success of integrated educational reform depends heavily on the collective and individual initiative of its human resources.

Therefore, Madrasah Terpadu represents both a strategically important and empirically rich setting for investigating the psychological and contextual factors that drive IWB among teachers and staff. Prior to the conduct of this study, preliminary interviews were carried out three months in advance through face-to-face sessions with key stakeholders, namely the Principal and the Head of Administration of each madrasah MIN 2 Jepara, MTsN 1 Jepara, and MAN 1 Jepara. Through these interviews, it was revealed that the performance of teachers and staff in demonstrating Innovative Work Behavior (IWB) had not yet reached its optimal level. This is reflected in the fact that the "innovative teacher" award at MAN 1 Jepara tends to be given to the same individuals year after year. Such a condition indicates that the majority of teachers are not actively engaging in innovation, resulting in creativity and the renewal of teaching methods not being evenly distributed within the school environment. This phenomenon is important to investigate because, within the context of implementing the Merdeka Curriculum and the demands of the Society 5.0 era, teachers' IWB constitutes one of the key competencies that determines the quality of education. An innovative teacher is not only capable of creating new teaching methods but also acts as a catalyst in building an adaptive and creative educational ecosystem. Accordingly, this study is relevant for identifying psychological and contextual factors that may encourage teachers and staff to engage more actively in innovation, thus supporting the achievement of national education goals.

The implementation of the Merdeka Curriculum, which began in 2021, still requires attention and support from various parties. All education stakeholders are required to work together and complement each other in the process of implementing the curriculum (Badan Standar, Kurikulum et al., 2021). The urgency of this research is grounded in preliminary interviews conducted at Madrasah Terpadu Jepara, where principals had demanded teachers and staff to continuously innovate. However, the findings revealed that teachers lacked initiative in developing creative learning methods, underutilised educational technology, and showed

limited collaboration in designing innovative programmes. Moreover, new ideas were rarely implemented, routines were followed without improvisation, and risk-taking in trying new approaches remained low. These conditions underscore the critical need to investigate factors driving IWB in this institution. Therefore, it is necessary to conduct a more in-depth analysis of various factors that have the potential to make a positive contribution to improving the professional competence of teachers and employees. One indicator of good competence can be reflected in innovative behaviour demonstrated in work activities. (Pengalaman et al., 2018). Educational Institutions are required to become incubators of innovation that produce adaptive and creative graduates (Has et al., 2019). Theoretically, IWB among teachers and staff is a fundamental prerequisite for achieving this goal, as innovative teachers will create a learning ecosystem that encourages student creativity (J. De Jong & Hartog, 2010). In the context of education, IWB encompasses the ability to identify opportunities for improvement in learning, develop new teaching methods, promote innovative ideas to colleagues, and implement innovations systematically (Messmann, 2012). The urgency of this research is even more crucial considering the Regulation of "the Minister of Education, Culture, Research, and Technology of the Republic of Indonesia Number 56 of 2022 concerning Education Standards. Peraturan Menteri Pendidikan, Kebudayaan, Riset" (Peraturan Menteri Pendidikan, Kebudayaan, Riset, 2022) explicitly emphasises the importance of learning innovation to improve the quality of national education (Laeequddin et al., 2023). However, adopting new things requires the development of innovative work behaviours, a recurring process in which teachers and staff strive to find new ideas to adopt and promote to other members of the organisation, thereby achieving mutual benefit (Lambriex-schmitz et al., 2020).

Several symptoms observed at Madrasah Terpadu Jepara justified the selection of the core variables in this study. First, many teachers preferred their comfort zones over professional growth, indicating a low GM. Second, despite motivational encouragement from the principals, teachers and staff had not fully translated this support into innovative behaviour, suggesting that Innovative Leadership alone was insufficient to drive IWB. Third, several teachers showed low enthusiasm at work, reflecting poor WE. Fourth, teachers demonstrated limited self-reflection, indicating a lack of SA as a foundation for behavioural change. These empirical conditions confirmed that GM, IL, WE, and SA were relevant and grounded variables for this study.

Several previous studies have provided inconsistent results. (Eftadi, 2025) found that GM does not directly influence IWB, but is mediated by psychological empowerment. (Rosing et al., 2011) revealed that the influence of IL on IWB has varied results, sometimes it has an influence but in other contexts it has no influence. (Prasetyono et al., 2022) also emphasized that WE is not always a consistent predictor of IWB. Furthermore, Jong & Hartog (J. De Jong & Hartog, 2010) highlighted that IWB measurements are still largely unidimensional and focus more on creativity, while other important aspects such as championing and application receive less attention. This creates a methodological gap because innovative behavior should be understood

as a multidimensional process. London et al. (London et al., 2023) added that SA plays a significant role in work behavior and performance outcomes, but empirical research that positions it as a mediator in the relationship between personal and contextual factors and IWB is still limited, particularly in education. Thus, this study fills a theoretical and practical gap by examining the mediating role of SA in the relationship between GM, IL, and WE on IWB, particularly among teachers and staff at Madrasah Terpadu Kabupaten Jepara. This study is expected to provide a more global theoretical control of the psychological mechanisms underlying IWB, as well as practical implications for the development of adaptive and innovative human resources in the world of education.

This study differs fundamentally from previous research. First, previous research generally only highlights a single factor, such as GM or WE, in relation to IWB. In contrast, this study integrates multiple factors, namely GM, IL, and WE, into a comprehensive model, thus providing a more holistic picture of the determinants of innovative work behavior. Second, this study positions SA not merely as an additional variable but as a key mediator explaining how personal and contextual factors can actually manifest in IWB. Thus, this study broadens our understanding of the psychological mechanisms that bridge the relationship between variables, a previously understudied empirical context. Third, this study provides empirical evidence in the context of Indonesian education, specifically at the Madrasah Terpadu in Jepara Regency.

This research is designed to fill the theoretical and practical gaps by examining the mediating role of SA in the relationship between GM, IL, and WE on IWB among teachers and staff at an Integrated Madrasah in Jepara Regency. Through this approach, the study is expected to provide a more comprehensive theoretical understanding of the psychological mechanisms underlying the formation of IWB. By positioning SA as a key mediator, this study not only expands academic studies on internal and contextual factors influencing IWB but also offers practical implications for the development of adaptive and innovative human resources in educational environments. This contribution is relevant in supporting the implementation of the Independent Curriculum and facing the challenges of the Society 5.0 era, where teachers are required to be more creative, reflective, and able to integrate SA into daily work practices.

This research uses “Job Demands–Resources (JD-R)” Model theory, which is developed by (Doargajudhur et al., 2025) and later expanded upon by (Bakker et al., 2007). This model asserts that the balance between job demands and job resources is a determining factor in shaping WE. When job demands are high but supported by adequate resources, individuals will be more enthusiastic, persistent, and focused at work, making them more likely to generate new ideas and implement them within the organisational context (Schaufeli & Bakker, 2004). Thus, the JD-R Model provides a conceptual framework that explains how supportive working conditions can increase employees' psychological energy, which is then transformed into innovative work behaviour. When job demands are high but balanced with adequate job resources, employees tend to be more enthusiastic, persistent, and focused.

Social Cognitive Theory (SCT) is grounded in the concept of reciprocal determinism, which posits that human functioning depends on the continuous and dynamic interaction between

personal factors (cognitions, beliefs, and emotions), behaviour, and environmental influences, whereby each factor shapes and is shaped by the others (Schunk & Dibenedetto, 2020) emphasises that human behaviour is the result of reciprocal interactions between personal factors, behaviour, and the environment. Cognitive processes such as self-efficacy, self-regulation, and social learning are important determinants of how individuals express creativity and take initiative at work. Thus, innovative behaviour does not only depend on organisational support, but also on cognitive beliefs and self-regulation abilities that enable individuals to develop new ideas, implement solutions, and contribute to improving organisational performance, variables that align with this theory are GM, WE, SA, and IWB.

IWB can be understood as a series of work activities, both physical and cognitive, carried out by individuals in the context of their work, either independently or in social interactions, to complete tasks that support the achievement of innovation goals (Kwon & Kim, 2020). Innovative behaviour demonstrated by employees contributes to the formation of an adaptive and innovative organisation. According to Jong & Hartog (2010), IWB can be categorised into two main dimensions: a creativity-oriented dimension, which includes problem identification and idea generation, and an implementation-oriented dimension, which includes the promotion and realisation of ideas. Every employee is therefore required to demonstrate innovative work behaviour by actively generating new ideas and making improvements to work processes and results in order to remain relevant to the needs and dynamics of the environment (Riyoko, 2012).

GM is an established psychological construct reflecting an individual's belief that their abilities, intelligence, and talents can be developed through effort, continuous learning, and persistence, which in turn underlies their capacity to innovate in the context of work (Krskova & Breyer, 2023). This concept was first introduced by (Yeager & Dweck, 2012) who explained that individuals with a GM believe that their abilities, intelligence, and talents can be developed through effort, appropriate strategies, continuous learning, and help from others. Individuals with a GM tend to view challenges as opportunities to learn and adapt, enabling them to contribute optimally to the organisation (A. Ali, 2025).

Prior research has demonstrated that GM plays an important role in shaping SA. Individuals who believe their abilities are malleable are more likely to engage in self-reflection, recognise their developmental needs, and actively seek feedback all of which are core components of SA (Eftadi, 2025). Furthermore, (Lin et al., 2022) found that a GM positively supports teachers' professional development by strengthening their self-efficacy and reflective capacity. When individuals embrace a belief in the malleability of their abilities, they are more inclined to monitor and adjust their own cognitive and behavioural patterns, thereby deepening their SA, this study proposes the following hypothesis:

H1: Growth mindset influences Self Awareness. Beyond its effect on SA, GM has also been linked to IWB. Employees with a GM are more open to new ideas, willing to take risks in the

innovation process, and persistent in the face of failure (Lin et al., 2022). (Eftadi, 2025) confirmed that GM serves as a key determinant of IWB, as individuals who believe in continuous self development tend to generate and implement novel ideas more actively. In the context of education, teachers with a GM are more likely to experiment with new teaching approaches and improve their pedagogical practices in response to changing demands. This study proposes the following hypothesis:

H2: Growth Mindset influences Innovative Work behaviour. Innovative leadership (IL) is a leadership concept that emphasises a leader's ability to create, develop, and implement new ideas that can improve organisational effectiveness (Yan et al., 2024). IL not only leads with vision and strategy, but also acts as a catalyst for change that encourages creativity, learning, and collaboration in the workplace. Research shows that IL plays an important role in building an organisational culture that supports experimentation, tolerance for failure, and learning from mistakes as part of the innovation process (Rosing et al., 2011).

IL has been shown to foster SA among subordinates. Leaders who consistently model reflective behaviour, provide constructive feedback, and encourage open dialogue create conditions in which employees are prompted to examine their own strengths, limitations, and contributions (Roosdhany, 2024). (Dharmajaya, 2025) further noted that IL cultivates a psychologically safe environment, wherein individuals feel empowered to assess their own performance honestly and adapt their behaviour accordingly, thereby strengthening SA. Based on the above analysis, this study proposes the following hypothesis:

H3: Innovative Leadership influences Self Awareness. Despite its indirect contributions, prior research suggests that the relationship between innovative leadership and IWB is not always direct. (Rosing et al., 2011) demonstrated that the influence of IL on IWB is heterogeneous, sometimes significant but inconsistent in other contexts. In educational settings, the role of a principal may function more as a facilitator of conducive work conditions rather than a direct driver of teacher innovation. The lack of motivation, role models among head teachers, and self-efficacy cannot be separated from the influence of the environment and school leaders (Roosdhany, 2024), suggesting that IL's effect on IWB may be conditional and context-dependent.

H4: Innovative Leadership influences Innovative Work Behaviour. Work Engagement (WE) is a positive mental state characterised by vigour (high energy), dedication, and absorption at work (Schaufeli & Bakker, 2004). Teachers with high WE will be more committed to their profession, persistent in facing learning challenges, and open to pedagogical innovation. WE is not only reflected in individual participation in daily activities, but also in how organisational activities consistently shape work habits that eventually develop into a work culture that supports IWB (Ismanto & Pebruary, 2023).

WE has been found to significantly influence SA. Employees who are highly engaged in their work tend to be more attentive to their own emotional states, motivations, and behavioural patterns, as sustained engagement requires continuous self-monitoring and adjustment

(Prasetyono et al., 2022). (Kwon & Kim, 2020) further highlighted that engaged employees are more likely to reflect on their experiences and identify areas for improvement, both of which are integral to the development of SA. In the educational context, teachers with high WE are more likely to engage in reflective practices that enhance their understanding of their own strengths and weaknesses. This study proposes the following hypothesis:

H5: Work Engagement influences Self Awareness. Beyond its effect on SA, WE has also been consistently linked to IWB. Employees who are psychologically engaged provide greater energy, dedication, and full engagement to help the organisation achieve its goals (Prasetyono et al., 2022). (Kwon & Kim, 2020) confirmed that WE serves as a strong motivational resource that encourages employees to go beyond routine tasks and actively seek new ideas and improvements. In the context of education, engaged teachers are more willing to develop and implement innovative teaching methods, thereby contributing to a more adaptive and creative learning environment.

H6: Work Engagement influences Innovative Work Behaviour. Self Awareness (SA) is interpreted as an individual's fundamental ability to understand their own thoughts, emotions, motivations, and behaviours, and how these affect other people and the work environment (London et al., 2023). Individuals with high SA are able to recognise their strengths and weaknesses and adjust their behaviour to be more effective at work. In an organisational context, SA includes the ability to recognise challenges and limitations, enabling individuals to respond wisely and make decisions appropriate to the situation (Widiastuti et al., 2023).

SA has been identified as an important psychological mechanism that drives IWB. Sutton (Sutton, 2016) found that individuals with high SA are better equipped to translate internal insights into constructive behavioural change, including the generation and implementation of new ideas. (London et al., 2023) further established that SA enables individuals to reflect deeply on their experiences and make necessary adjustments to improve work effectiveness. When employees possess a clear understanding of their own capabilities and the demands of their environment, they are more likely to take initiative, explore novel solutions, and contribute meaningfully to the organisation's innovation process. Building on the above, SA is also proposed to mediate the relationship from GM and IWB. Individuals with a GM who also possess high SA are not only motivated to grow, but are also capable of channelling that motivation into concrete innovative actions at work. SA serves as the mechanism through which the positive beliefs inherent in a GM are translated into actual behavioural outcomes (Eftadi, 2025). Similarly, SA is expected to mediate the relationship between innovative leadership and innovative work behaviour. Even when innovative leadership does not directly trigger IWB, it may first enhance employees' SA by cultivating a reflective and feedback-rich environment which in turn drives IWB. This indirect pathway suggests that SA is the psychological bridge through which the effects of IL are ultimately realised in employee behaviour (London et al., 2023; Rosing et al., 2011). High WE provides the psychological energy and commitment

necessary for innovation, but it is through SA that this energy is consciously directed and strategically applied. Employees who are both engaged and SA are better positioned to identify opportunities for improvement, adapt their approaches, and sustain innovative behaviour over time (Kwon & Kim, 2020; Prasetyono et al., 2022).

H7: Self Awareness influences Innovative Work Behaviour. H8: Self Awareness mediates the relationship between Growth mindset and Innovative Work Behaviour. H9: Self Awareness mediates the relationship between Innovative Leadership and Innovative Work Behaviour. H10: Self Awareness mediates the relationship between Work Engagement and Innovative Work Behaviour.

Based on the formulation of the hypothesis, the researcher proposes a research structure as shown in Figure 1.

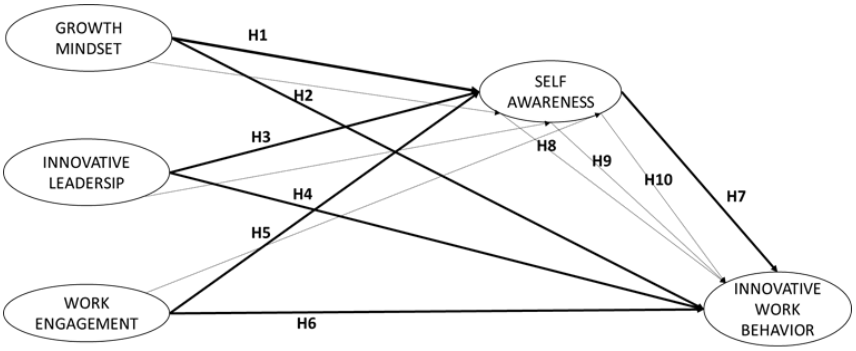

Figure 1. Research Model

Source: Research Data (Processed), 2026

RESEARCH METHODS

This study employed quantitative approach with an explanatory research type using primary data obtained directly from respondents through the distribution of questionnaires. The unit of analysis in this study was teachers and staff at Madrasah Terpadu Jepara, consisting of MIN 2 Jepara, MTsN 1 Jepara, and MAN 1 Jepara, with a total population of 230 people. The Data collection technique used in this study was census sampling, a sampling method in which all members of the population are included as research respondents. Census sampling was chosen because the population size was relatively small and could be reached in its entirety, and to ensure that demographic characteristics such as age, gender, length of service, and educational background were comprehensively represented in the study. However, out of the entire population, only 144 respondents completed the questionnaire. Data collection was conducted using a questionnaire designed to measure five research variables with a total of 29 indicators. All indicators were adapted from previous studies that had undergone a validation process, thus providing a strong empirical basis. The analysis method used is "*Partial Least Squares - Structural Equation Modelling (PLS-SEM)"*, which is suitable for testing complex models with multiple mediators and multiple predictors. The use of these two methods, often referred to as multiple mediator models, helps researchers understand the mediating mechanisms and

direct/indirect effects in structural model (Ringle, C. M., Wende, S., and Becker, 2022). Data analysis was conducted using SmartPLS 4.0 software with systematic steps. First, an outer model evaluation was conducted to test the validity and reliability of the constructs. Next, an inner model evaluation was conducted to assess the quality of the structural model. The final stage was hypothesis testing using the bootstrapping technique with 5,000 samples to obtain estimates of the significance and accuracy of the parameters in the research model. The statement items are presented in Table 1. The instrument used was a Ten-point Likert scale, which is an attitude measurement scale first introduced by Rensis Likert in 1932, with points ranging from One (strongly disagree) to Ten (strongly agree) (Koo & Yang, 2025). The Likert scale allows researchers to obtain data on the level of respondents agreement with the statements or questions asked. In practice, respondents are asked to provide answers within a specific range of agreement categories, enabling researchers to measure attitudes, perceptions, and behavioural tendencies in a more systematic manner (Hair et al., 2017).

Table 1. Measurement Items

Variable	Items	Statement Items	References
Growth Mindset	GM1	You can change your intelligence level significantly	Adopted from Lin *et al* (2022)
	GM2	I enjoy when learning new things to expand my knowledge and satisfying my curiosity	Adopted from Baharuddin & Amiruddin (2025)
	GM3	I have a strong sense of curiosity, always wanting to try new things	
	GM4	I enjoy working hard because I believe it can bring positive benefits	
	GM5	I accept if other people criticize me because I can improve my self	
Innovative Leadership	IL1	Finding the right way to socialize innovation	Adopted from Abun *et al* (2023)
	IL2	Taking risks to open up opportunities for innovation	
	IL3	Being a catalyst for changing community attitudes and behaviors for the better	Adopted from Moh. Ali (2022)
	IL4	Creating opportunities for teachers to showcase their talents.	Adopted from Yan *et al* (2024)
	IL5	Being open-minded and having a strong sense of innovation	
	IL6	Possessing strong professional skills	
Work Engagement	WE1	When I working I do meaningful and purposeful	Adopted from Zeng *et al* (2019)
	WE2	I feel strong and energized at work	
	WE3	Time flies when I'm doing my work	
	WE4	I'm enthusiastic about the work I do’	Adopted from Diyah *et al* (2025)
	WE5	I take pride in my work	

Variable	Items	Statement Items	References
	WE6	My work related to the environment inspires and energizes me	Adopted from Kaur (2025)
Self Awareness	SA1	I always strive to develop myself	Adopted from Sutton (2016)
	SA2	I am aware of my abilities and limitations	
	SA3	I understand my emotions	
	SA4	I think about how I can interact with my coworkers	
	SA5	I am realistic about myself	London *et al* (2023)
Innovative Work Behaviour	IWB1	Actively planning the implementation of my ideas	Adopted from Guo *et al* (2023)
	IWB2	Striving to convince others to support my innovative ideas	J. P. J. D. Jong & Hartog (2008)
	IWB3	Striving to develop new ideas	
	IWB4	Searching for new approaches to accomplishing tasks	
	IWB5	Generating new ideas for difficult problems	Adopted from Alhasan & Ibrahim (2026)

Source: Adapted from various references, 2026

RESULTS & DISCUSSION

The demographic characteristics of the 144 respondents are presented in Table 2, categorised by age, gender, educational background, and work experience.

Table 2. Sample Characteristics

Characteristics	Category	Frequency	Percentage
Age	< 25 years	6	4.2%
	25 years - 34 years	48	33.3%
	35 years - 44 years	39	27.1%
	45 years - 54 years	34	23.6%
	> 54 years	17	11.8%
Gender	Male	71	49.3%
	Female	73	50.7%
Education	Master's Degree	43	29.9%
	Bachelor's Degree	91	63.2%
	Diploma Degree	2	1.4%
	Senior High School	8	5.6%
Work Experience	< 1 year	15	10.4%
	1 - 3 years	15	10.4%

Characteristics	Category	Frequency	Percentage
	4 - 6 years	31	21.5%
	7 - 10 years	11	7.6%
	>10 years	72	50%

Source: Research Data (Processed), 2026

The measurement model was evaluated to test the validity and reliability of the research construct using "*Partial Least Squares Structural Equation Modelling"* (PLS-SEM) with *SmartPLS 4.0* software. The results of the PLS-SEM algorithm are presented in Figure 2.

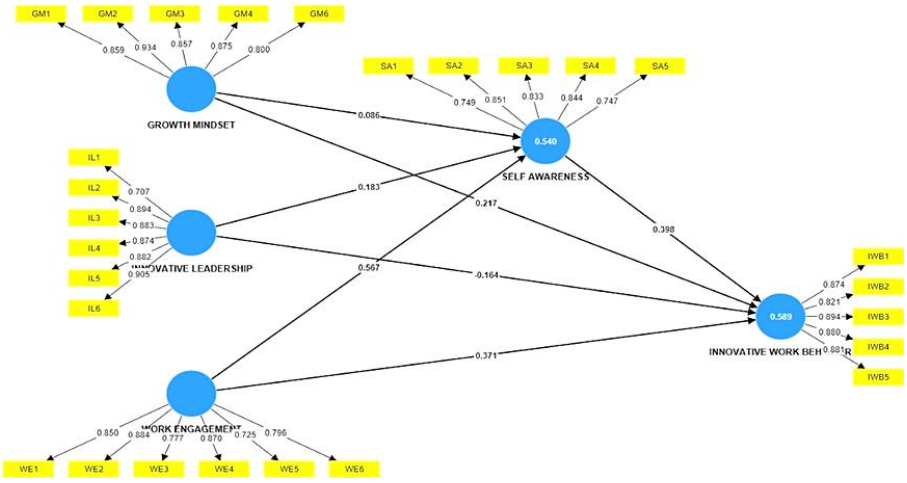

Figure 2. PLS-SEM Algorithm

Source: Research Data (Processed), 2026

Convergent Validity Test. Convergent validity is measured using outer loadings and Average Variance Extracted (AVE) values. According to (Ringle & Sarstedt, n.d.) the recommended outer loading value is ≥ 0.708, while the AVE value must be ≥ 0.50.

Shows that all indicator have outer loadings above 0.708, except for IL1 (0.707). According to (Ringle & Sarstedt, n.d.) Indicator with an outer loading value ≥ 0.708 are considered to meet convergent validity. Indicator with values between 0.40-0.70 can still be retained if their removal reduces construct reliability, while indicators with values < 0.40 should be removed. An outer loading value of 0.707 can still be used because it is close to the recommended threshold and still provides an adequate contribution to the latent construct, which is still acceptable because it is within the threshold value. This indicates that each indicator is able to explain its latent variable well (Table 3).

Table 3. Outer Loadings Test Results

Variable	Items	Growth Mindset	Innovative Leadership	Innovative Work Behavior	Self Awareness	Work Engagement
Growth Mindset	GM1	0.859				
	GM2	0.934				
	GM3	0.857				
	GM4	0.875				
	GM6	0.800				
Innovative Leadership	IL1		0.707			
	IL2		0.894			
	IL3		0.883			
	IL4		0.874			
	IL5		0.882			
	IL6		0.905			
Innovative Work Behavior	IWB1			0.874		
	IWB2			0.821		
	IWB3			0.894		
	IWB4			0.88		
	IWB5			0.881		
Self Awareness	SA1				0.749	
	SA2				0.851	
	SA3				0.833	
	SA4				0.844	
	SA5				0.747	
Work Engagement	WE1					0.85
	WE2					0.884
	WE3					0.777
	WE4					0.87
	WE5					0.725
	WE6					0.796

Source: Data output processed with SmartPLS 4.0, 2026

The AVE test results show that all variables have AVE values > 0.50, which is means that each construct is able to explain more than 50% of the variance of its indicator. The highest AVE value was obtained by the IWB variable (0.757), indicating that the indicator of IWB have excellent internal consistency in measuring this construct (Table 4).

Reliability Test. Construct reliability was measured using Composite Reliability (rho_c) and Cronbach's Alpha. The recommended value for both indicators is ≥ 0.70 (Hair et al., 2017).

The reliability test results show that all research construct have Cronbach's Alpha and Composite Reliability value above 0.70, indicating that the internal consistency of the instrument is in the good category. In fact, most of the reliability values are above 0.90, which can be considered very high. The variable with the highest reliability is IL, with a Composite Reliability value of 0.944 and a Cronbach's Alpha of 0.938, indicating that the indicators in the IL construct have very strong consistency in measuring this concept. According to (Ringle & Sarstedt, n.d.), reliability values in the range of 0.70–0.90 are considered adequate, while values above 0.90 indicate very high reliability, although values too close to 1.00 may indicate indicator redundancy. Therefore, the results of this study confirm that the instrument used has good reliability and can be relied upon to measure the constructs studied (Table 4).

Table 4. Reliability Test Results

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	AVE
Growth Mindset	0.916	0.919	0.937	0.750
Innovative Leadership	0.929	0.938	0.944	0.740
Innovative Work Behavior	0.920	0.925	0.94	0.757
Self Awareness	0.866	0.873	0.903	0.650
Work Engagement	0.901	0.907	0.924	0.670

Source: Data output processed with SmartPLS 4.0, 2026

Discriminant Validity Test. Discriminant validity was tested using the criteria proposed by Fornell and Larcker (1981). They introduced a traditional approach by emphasizing that the AVE value of each construct should be compared with the squared correlation between the constructs, both with the construct itself and with other reflective constructs in the model. Thus, the shared variance between constructs should not exceed the correlation between constructs in the structural model (Ringle & Sarstedt, n.d.).

Shows that the square root of AVE for each construct is greater than the correlation of that construct with other constructs. This confirms that each construct has good discriminant validity, meaning that each variable more strongly explains its own indicators than the indicators of other variables (Table 5).

Table 5. Fornell-Larcker Criterion

Variable	Growth Mindset	Innovative Leadership	Innovative Work Behavior	Self Awareness	Work Engagement
Growth Mindset	**0.866**				
Innovative Leadership	0.423	**0.860**			
Innovative Work Behavior	0.543	0.333	**0.870**		
Self Awareness	0.477	0.521	0.680	**0.806**	
Work Engagement	0.554	0.532	0.687	0.712	**0.819**

Source: Research Data (Processed), 2026

Structural Model Evaluation (Inner Model) Multicollinearity Test. Multicollinearity testing is performed using the *Variance Inflation Factor* (VIF). To ensure there are no multicollinearity issues, the VIF value should be below 5. Effect size (f^2) measures the magnitude of the influence of exogenous variables on endogenous variables (Ringle & Sarstedt, n.d.).

The results of the effect size analysis using the f-square value show the variation in contribution between variables in the research model. The WE variable has the greatest influence on SA with an f^2 value of 0.409, which is classified as large (large effect) according to Cohen's classification (1988). This indicates that work engagement contributes substantially to increasing employee SA. Furthermore, the SA variable has a medium effect IWB with an f^2 value of 0.177, indicating that SA plays a significant role in encouraging IWB. Meanwhile, other relationships, such as GM on IWB (0.076) and IL on SA (0.051), are in the small effect category but still make a meaningful contribution to the model. Thus, the f-square test results confirm that although most relationships have a small effect, there are key variables that contribute more strongly to the formation of IWB (Table 6).

The results of multicollinearity testing using the VIF show that all values are below the threshold of 5, with most even below 3. This indicates that there are no multicollinearity issues in the structural model, so that each construct can play an independent role in explaining the relationship between variables. The highest VIF value was found in the relationship between WE and IWB, at 2.406, which is still well below the critical threshold and therefore acceptable. This finding is in line with the recommendation of (Hair et al., 2017), which states that a VIF value below 5 indicates no multicollinearity that interferes with model estimation. Thus, the VIF test results provide empirical evidence that this research model is free from multicollinearity issues and is feasible to proceed to the next stage of analysis (Table 6).

Table 6. Effect Size (f^2) and Variance Inflation Factor (VIF)

Correlation	f^2	VIF	Result
Growth Mindset → Innovative Work Behavior	0.076	1.508	No multicollinearity
Growth Mindset → Self Awareness	0.011	1.491	No multicollinearity
Innovative Leadership → Innovative Work Behavior	0.043	1.515	No multicollinearity
Innovative Leadership → Self Awareness	0.051	1.443	No multicollinearity
Self Awareness → Innovative Work Behavior	0.177	2.174	No multicollinearity
Work Engagement → Innovative Work Behavior	0.139	2.406	No multicollinearity
Work Engagement → Self Awareness	0.409	1.708	No multicollinearity

Source: Research Data (Processed), 2026

Coefficient of Determination (R^2). The coefficient of determination (R^2) describes the extent to which variations in the dependent variable can be explained by the independent variables.

The analysis results show that the research model is able to explain 58.9% of the variance in the IWB construct (R^2 = 0.589), which means that the variables GM, IL, SA, and WE collectively contribute significantly to IWB. The remaining 41.1% is explained by other factors outside this research model. Meanwhile, the SA construct has an R^2 value of 0.540, which indicates that the variables of GM, IL, and WE are able to explain 54.0% of the variance in SA, while the remaining 46.0% is influenced by external factors. Based on Ringle & Sarstedt (n.d.) classification, an R^2 value of 0.50-0.75 falls into the moderate category, indicating that the research model has sufficient explanatory power and is reliable for describing the relationship between latent variables (Table 7).

Table 7. R-Square Values

Variable	R^2	R^2 Adjusted
Innovative Work Behavior	0.589	0.577
Self Awareness	0.540	0.530

Source: Data output processed with SmartPLS 4.0, 2026

Hypothesis Test. Hypothesis testing was conducted by analysing the path coefficients and the significance of the relationships between variables in the structural model.

The results of hypothesis testing show that most of the relationships between variables support theoretical predictions, particularly the role of GM, WE, and SA in encouraging IWB. These findings are in line with "*Social Cognitive Theory"*, which emphasises that individuals' beliefs in their ability to develop (GM) and SA function as cognitive mechanisms that influence IWB. Furthermore, the results showing the strong influence of WE on SA and IWB can be explained through the "*Job Demands-Resources" (JD-R)* Model, in which WE acts as a psychological resource that increases energy, dedication, and absorption, thereby encouraging IWB (Table 8).

Table 8. Hypothesis Test Results

Hypothesis	Correlation	Path Coefficient	Direct	Hypothesis Result
H1	Growth Mindset → Self Awareness	0.086	Positive	Accepted
H2	Growth Mindset → Innovative Work Behavior	0.217	Positive	Accepted
H3	Innovative Leadership → Self Awareness	0.183	Positive	Accepted
H4	Innovative Leadership → Innovative Work Behavior	-0.164	Negative	Rejected
H5	Work Engagement → Self Awareness	0.567	Positive	Accepted
H6	Work Engagement → Innovative Work Behavior	0.371	Positive	Accepted
H7	Self Awareness → Innovative Work Behavior	0.398	Positive	Accepted

Source: Research Data (Processed), 2026

The results of the indirect influence analysis show that SA acts as a partial mediator in the relationship between GM, IL, and WE on IWB. This finding confirms that SA is not only an independent variable that has a direct influence, but also functions as a psychological mechanism that bridges the influence of other factors on IWB. The largest mediation effect was found in the relationship between WE and IWB through SA (0.226), indicating that high work involvement encourages individuals to better understand their potential, roles, and contributions, thereby increasing their tendency to behave innovatively (Table 9).

Table 9. Specific Indirect Effects (Mediation of Self Awareness)

Hypothesis	Correlation	Indirect Effect	Descriptive
H8	Growth Mindset → Self Awareness → Innovative Work Behavior	0.034	Partial mediation
H9	Innovative Leadership → Self Awareness → Innovative Work Behavior	0.073	Partial mediation
H10	Work Engagement → Self Awareness → Innovative Work Behavior	0.226	Partial mediation

Source: Research Data (Processed), 2026

RESULTS & DISCUSSION

The results confirmed that GM had a positive influence on SA. This finding aligns with prior research suggesting that individuals who believe their abilities are malleable are more likely to engage in self-reflection and recognise their developmental needs (Eftadi, 2025). In the context of Madrasah Terpadu Jepara, teachers who demonstrated a willingness to grow and learn were also more capable of recognising their own strengths and weaknesses, enabling them to be more reflective in their professional practice. GM was also found to have a positive influence on IWB. This is consistent with (Lin et al., 2022), who emphasised that individuals with a GM are more open to new ideas and willing to take risks in the innovation process. At Madrasah Terpadu Jepara, teachers with a growth-oriented mindset were more likely to experiment with new teaching approaches and improve their pedagogical practices, directly contributing to IWB. The results indicated that IL had a positive influence on SA. Leaders who consistently modelled reflective behaviour and provided constructive feedback created conditions in which teachers were prompted to examine their own performance honestly (Roosdhany, 2024). At Madrasah Terpadu Jepara, the motivational encouragement provided by the principals played a role in fostering teachers' self-reflection, thereby strengthening their SA. Conversely, IL was not shown to have a direct effect on IWB. This finding is consistent with (Rosing et al., 2011), who showed that the influence of IL on IWB is heterogeneous and highly dependent on the organisational context. In the context of Madrasah Terpadu Jepara, despite the principals' efforts to encourage innovation, this leadership support had not been fully translated into actual innovative behaviour among teachers and staff. This suggests that IL may function more as a facilitator of conducive working conditions rather than a direct driver of IWB in educational settings.

WE was found to have the strongest positive influence on SA. This supports (Prasetyono et al., 2022), who found that highly engaged employees tend to be more attentive to their own emotional states and behavioural patterns. At Madrasah Terpadu Jepara, teachers who demonstrated higher enthusiasm and dedication in their work were more likely to engage in self-monitoring and reflection, thereby deepening their SA. WE was also confirmed to have a positive influence on IWB. This aligns with (Kwon & Kim, 2020), who established that WE serves as a strong motivational resource that encourages employees to go beyond routine tasks and actively seek new ideas. At Madrasah Terpadu Jepara, teachers with higher engagement levels showed greater willingness to develop and implement innovative teaching methods, contributing to a more adaptive learning environment. SA was confirmed to have a significant positive influence on IWB. This supports London et al. (London et al., 2023), who found that individuals with high SA are better equipped to translate internal insights into constructive behavioural change. At Madrasah Terpadu Jepara, teachers who possessed a clearer understanding of their own capabilities and limitations were more likely to take initiative, explore novel solutions, and contribute meaningfully to the institution's innovation process. SA was found to partially mediate the relationship between GM and IWB.

This confirms that while GM directly drives IWB, it also operates through SA as a psychological mechanism. At Madrasah Terpadu Jepara, teachers with a growth-oriented mindset who also possessed high SA were not only motivated to grow, but were also capable of channelling that motivation into concrete innovative actions at work (Eftadi, 2025). SA was also found to partially mediate the relationship between IL and IWB. Even when IL did not directly trigger IWB, it first enhanced teachers' SA by cultivating a reflective and feedback-rich environment, which in turn drove IWB. This finding suggests that at Madrasah Terpadu Jepara, the impact of principals' innovative leadership on teacher behaviour was realised indirectly through the strengthening of SA (Rosing et al., 2011). The largest mediation effect was found in the relationship between WE and IWB through SA. This indicates that high work engagement provided the psychological energy necessary for innovation, but it was through SA that this energy was consciously directed and strategically applied. At Madrasah Terpadu Jepara, teachers who were both highly engaged and self-aware were better positioned to identify opportunities for improvement and sustain innovative behaviour over time.

CONCLUSION & SUGGESTION

This study aimed to examine the mediating role of SA in the relationship between GM, IL, and WE on IWB among teachers and staff at Madrasah Terpadu Jepara. The findings revealed that GM, WE, and SA had a significant positive influence on IWB, while IL did not show a direct effect on IWB. Furthermore, IL, GM, and WE were all found to positively influence SA. In terms of mediation, SA was confirmed to partially mediate the relationship between GM and IWB (H8), IL and IWB (H9), and WE and IWB (H10), with the strongest mediation effect found in the WE – SA – IWB. These findings confirm that SA functions as a crucial

psychological bridge that transforms the influence of GM, IL, and WE into actual IWB. Theoretically, this study contributes to expanding the understanding of mediation mechanisms in IWB by positioning SA as a key psychological mediator, while also strengthening the integration between the Job Demands-Resources (JD-R) Model and Social Cognitive Theory.

The results and discussion of this study provide important implications for human resource development in educational institutions. Training programs that foster GM should be designed through workshops, coaching, and learning communities that emphasize learning from failure and continuous improvement. Teacher professional development should also integrate reflective practice, peer feedback, and self-assessment to strengthen self-efficacy. Furthermore, school management needs to create working conditions that support engagement by providing autonomy, recognizing contributions, and providing development opportunities. Although IL does not have a direct impact, principals still need to build a safe psychological climate for experimentation and facilitate teacher reflection. The model's ability to explain variance in IWB is moderate, so further research is recommended to expand the model by adding other variables such as organizational support, a safe psychological climate, and resource availability, as well as conducting replication studies across different educational contexts to strengthen the generalizability of the findings.

ACKNOWLEDGEMENT

The author acknowledges that this research still has limitations, therefore, constructive input and suggestions are highly appreciated for future improvements. It is hoped that the results presented will provide valuable insights for readers and serve as an important foundation for further research. Author also express my sincere gratitude to all parties, both individuals and institutions, who have provided physical and psychological support and contributed to the successful completion of this research.

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