Creative Self-Efficacy, Digital Literacy, and Innovative Work Behavior: Evidence from the Startup Industry

Siti Fatimah Azzahra[1], Winny Puspasari Thamrin[2]
[1] Fakultas Psikologi, Universitas Gunadarma
[2]Fakultas Psikologi, Universitas Gunadarma

Submitted: 02 February 2026., Revised: 26 May 2026 ,Accepted: 08 June 2026
*DOI:*10.38156/psikowipa.v6i2.533

Abstract

Innovative work behavior involves deliberate actions toward creating, introducing, or executing valuable new ideas. For startups to survive, this type of behavior is absolutely essential. However, existing literature rarely examines its individual predictors, specifically creative self-efficacy and digital literacy, simultaneously within a startup environment. To fill this gap, this quantitative study investigated how both factors influence innovative work behavior by collecting data from 135 startup employees through purposive sampling. The multiple linear regression analysis showed that creative self-efficacy (β = 0,480, p < 0,001) and digital literacy (β = 0,280, p < 0,001) significantly influence innovative work behavior. Collectively, these two variables account for 43.4% of the variance in innovative work behavior. This findings offers an empirical contribution to the literature on innovative work behavior, while providing practical implications for startups to design employee development programs that reinforce one another in fostering workplace innovation

Keywords: creative self-efficacy; digital literacy; innovative work behavior; startup employees.

Abstrak

Perilaku kerja inovatif adalah perilaku yang disengaja untuk menciptakan, mengenalkan, atau menerapkan ide-ide baru yang bermanfaat. Perilaku kerja inovatif sangat krusial bagi keberlangsungan perusahaan *startup*, tetapi penelitian yang menguji prediktor individualnya terutama efikasi diri kreatif dan literasi digital secara simultan dalam konteks *startup* masih terbatas. Melalui pendekatan kuantitatif, penelitian ini bertujuan untuk menguji pengaruh efikasi diri kreatif dan literasi digital terhadap perilaku kerja inovatif, adapun data dari 135 responden karyawan *startup* dikumpulkan dengan teknik purposive sampling. Hasil analisis regresi linear berganda menunjukan bahwa efikasi diri kreatif (β = 0,480, p < 0,001) dan literasi digital (β = 0,280, p < 0,001) masing-masing berpengaruh signifikan terhadap perilaku kerja inovatif. Secara bersama-sama kedua variabel memberikan kontribusi sebesar 43,4% terhadap perilaku kerja inovatif. Penelitian ini memberikan kontribusi empiris terhadap literatur perilaku kerja inovatif sekaligus implikasi praktis bagi *startup* dalam merancang program pengembangan karyawan yang saling mendukung dalam membangun inovasi di tempat kerja.

Kata kunci : efikasi diri kreatif; literasi digital; perilaku kerja inovatif; karyawan *startup*.

Introduction

Innovation has become a key driver of organizational growth and resilience amid rapid global change. It is broadly defined as the process of transforming novel ideas into valuable products, services, or practices (World Intellectual Property

[1] Corresponding author E-mail addresses
azzahrasitif@outlook.com (Siti Fatimah Azzahra)

Organization [WIPO, 2024). According to the Global Innovation Index (GII) 2024, although Indonesia possesses considerable innovation input potential, the country continues to face challenges in generating tangible innovation outputs (WIPO, 2024). One of the major barriers identified is rigid work processes, which often limit employees' opportunities to explore, experiment, and develop new approaches to work (American Management Association, 2020; Riswan et al., 2021). Consequently, employees' innovative work behavior has become increasingly important as a key mechanism for driving organizational innovation, particularly within dynamic sectors such as startup companies.

The demand for adaptability and innovation is especially critical in startup environments. Data from Startup Ranking indicate that, as of 2024, Indonesia hosts approximately 2,562 active startups, making it the second-largest startup ecosystem in Southeast Asia and the sixth-largest globally (Yashilva, 2024). Unlike conventional organizations, startups are characterized by rapid change, technology-driven innovation, and high levels of uncertainty. Despite their growth potential, startups also face substantial risks, with approximately 70% of Indonesian startups failing within their first three to five years of operation (Wijantini, 2025). Such conditions create significant pressure on employees, who are expected to continuously generate innovative solutions while navigating uncertainty and intense market competition.

Innovation capability and adequate organizational resources are essential factors contributing to startup performance (Startup Genome, 2024). To remain competitive, organizations must encourage employees to engage in innovative work behavior. According to Munir and Beh (2019), employees' innovative work behavior constitutes a critical component of startup competitiveness and long-term success.

Janssen (2000) defines innovative work behavior (IWB) as a set of individual actions aimed at generating, promoting, and implementing new ideas within the workplace. Innovative work behavior consists of three interrelated stages. The first stage, idea generation, involves actively identifying opportunities and developing novel solutions through creative thinking and problem-solving. The second stage, idea promotion, refers to efforts to gain support and resources necessary for implementing innovative ideas. The final stage, idea realization, involves transforming ideas into practical applications, such as new procedures, products, or service improvements.

From a theoretical perspective, the mechanisms underlying innovative work behavior can be explained through Bandura's (1977) Social Cognitive Theory. According to this theory, self-efficacy serves as a central cognitive mechanism influencing individual behavior. Self-efficacy determines how individuals make decisions, allocate effort, and persist when encountering obstacles. However, self-efficacy is domain-specific; confidence in one area does not necessarily translate into competence in another. Recognizing this limitation, Farmer and Tierney (2017) introduced the concept of creative self-efficacy, defined as an individual's belief in their ability to produce creative outcomes.

Abbott (2010) further conceptualized creative self-efficacy into two dimensions: Creative Thinking Self-Efficacy (CTSE) and Creative Performance Self-Efficacy (CPSE). CTSE refers to confidence in generating unique, flexible, and original ideas, whereas CPSE reflects confidence in implementing creative ideas in real-world settings, including mastering job-related tasks, building professional relationships,

and maintaining motivation. Both dimensions are highly relevant to innovative work behavior, as innovation requires not only the generation of novel ideas but also their successful implementation.

The relationship between creative self-efficacy and innovative work behavior is evident across all stages of innovation. Since innovation inherently involves uncertainty and risk, individuals with strong creative self-efficacy are more likely to persevere, adapt, and remain engaged when facing workplace challenges (Farmer & Tierney, 2017). Empirical evidence supports this view. Effiyaldi et al. (2024) found that employees with higher levels of creative self-efficacy exhibited stronger innovative work behavior. Similarly, Reiter-Palmon and Hunter (2023) argued that creative self-efficacy functions as a motivational resource that encourages individuals to engage in creative efforts and innovation-related activities.

Nevertheless, confidence in one's creative abilities alone may not be sufficient to produce innovation without the technical competencies required to implement ideas effectively. Within startup ecosystems, where organizational activities heavily depend on digital technologies, digital literacy has become an essential capability for facilitating innovation processes. Digital literacy refers to the ability to effectively use, understand, and critically evaluate digital technologies and information (Ng, 2012).

According to Ng (2012), digital literacy comprises three dimensions: technical, cognitive, and socio-emotional. The technical dimension involves the ability to operate digital devices and applications. The cognitive dimension refers to the capacity to evaluate, analyze, and synthesize digital information. The socio-emotional dimension concerns the ability to interact responsibly, ethically, and effectively in digital environments.

Digital literacy can be viewed as a technical competency that facilitates innovative work behavior. Santoso et al. (2019) emphasized that digital literacy extends beyond the ability to operate hardware and software; it also encompasses cognitive skills for processing information into innovative ideas and socio-emotional skills for obtaining support and collaboration necessary for implementing those ideas. Consistent with this perspective, Pilav-Velić et al. (2021) found a significant relationship between digital literacy and innovative work behavior, while Gusti et al. (2023) demonstrated that digital literacy contributes to employees' innovation capacity in the workplace.

The relationships among creative self-efficacy, digital literacy, and innovative work behavior have attracted increasing scholarly attention. Effiyaldi et al. (2024) reported that creative self-efficacy positively influences innovative work behavior among small and medium-sized enterprise (SME) employees in Jambi City. Similarly, Arifin et al. (2024) found that confidence in creative abilities enhances performance by encouraging the generation of new ideas. In terms of digital literacy, Gusti et al. (2023) identified it as a significant predictor of innovative work behavior in the banking sector, while Santoso et al. (2019) highlighted its role as a key driver of innovation in technology-intensive industries.

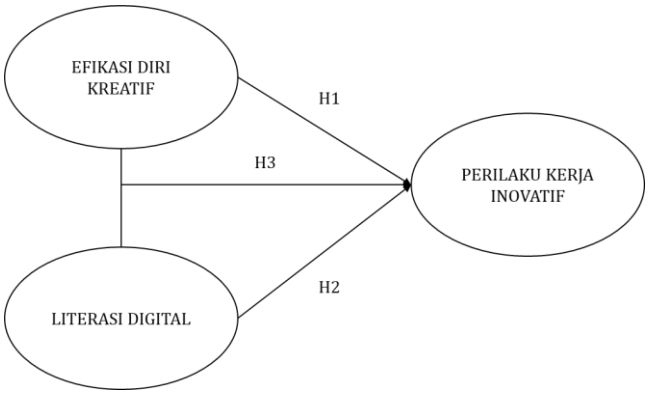
Recent studies have begun integrating these variables into a broader innovation framework. Wu et al. (2025) suggested that digital skills serve as a bridge that enables individuals to transform creative potential into tangible innovations. Likewise, Santoso et al. (2019) argued that the combination of creative self-efficacy

and digital literacy represents a critical foundation for innovation in technology-driven industries.

Despite growing empirical evidence, several research gaps remain. Most previous studies have focused on established organizations such as banks, government institutions (Fransisca et al., 2024; Gusti et al., 2023; Supardi et al., 2024), manufacturing companies (Arifin et al., 2024; Azeem & Hanoum, 2024; Pilav-Velić et al., 2021), and educational institutions (Cundawan et al., 2021; Wu et al., 2025). Comparatively little attention has been devoted to startup companies, despite their strong dependence on innovation for survival and growth. Furthermore, many previous studies have treated creative self-efficacy and digital literacy primarily as mediating or moderating variables. Consequently, the direct contributions of these factors to innovative work behavior, particularly within Indonesian startups, remain insufficiently understood.

Given that startup employees typically operate in highly digitalized environments where digital literacy is often considered a baseline requirement, psychological resources such as creative self-efficacy may serve as critical differentiating factors influencing innovative work behavior. Therefore, the present study aims to examine the effects of creative self-efficacy and digital literacy on innovative work behavior among startup employees.

The novelty of this study lies in its focus on the startup industry, a context characterized by rapid technological change, high uncertainty, and continuous innovation demands. Unlike previous studies that predominantly examined established organizations, this research investigates the relative contributions of creative self-efficacy and digital literacy as direct predictors of innovative work behavior among startup employees in Indonesia. The findings are expected to contribute to the literature on innovation management, organizational behavior, and entrepreneurship by providing empirical evidence from a rapidly growing yet underexplored sector. The conceptual framework of the study is presented in Figure 1.



Fugure 1

Method

Research Design and Participants

This study employed a quantitative approach to examine the relationships among the research variables. Innovative Work Behavior (IWB) was designated as the dependent variable (Y), while Creative Self-Efficacy (CSE; X1) and Digital Literacy (DL; X2) served as the independent variables.

Participants were selected using purposive sampling based on the following criteria: (1) employees aged between 20 and 45 years (Etikariena, 2018); (2) currently employed in digital startup companies operating in Indonesia; and (3) having worked for at least six months within their respective organizations (Ardini & Etikariena, 2021). These criteria were established to ensure that participants possessed sufficient work experience and exposure to innovation-related activities within startup environments.

Data were collected through an online questionnaire administered via Google Forms and distributed to startup employees. Prior to hypothesis testing, the instruments underwent content validity and reliability assessments. According to Azwar (2022), content validity evaluates the extent to which scale items adequately represent the construct being measured. Item discrimination was assessed using corrected item–total correlation analysis, with coefficients ranging between .25 and .30 considered acceptable (Azwar, 2022). Reliability was evaluated using Cronbach's alpha coefficient. Reliability values of .70 or higher are generally considered satisfactory (Sodik & Siyoto, 2015), although values above .60 may still be acceptable in certain research contexts (Rochaety et al., 2019).

Measures

Innovative Work Behavior

Innovative Work Behavior was measured using an adapted version of the Innovative Work Behavior Scale developed by Janssen (2000). The instrument consists of three dimensions: idea generation, idea promotion, and idea realization. The scale contains nine items and demonstrated excellent reliability (Cronbach's α = .95).

Creative Self-Efficacy

Creative Self-Efficacy was assessed using an adapted version of the Creative Self-Efficacy Inventory developed by Abbott (2010). The instrument comprises two dimensions: Creative Thinking Self-Efficacy (CTSE) and Creative Performance Self-Efficacy (CPSE). The scale consists of 21 items and demonstrated excellent internal consistency (Cronbach's α = .95).

Digital Literacy

Digital literacy was measured using the Digital Literacy Scale developed by Anwar et al. (2023), based on the digital literacy framework proposed by Ng (2012). The instrument assesses three dimensions: technical, cognitive, and socio-emotional literacy. The scale consists of 10 items and demonstrated good reliability (Cronbach's α = .87).

Data Analysis

Prior to hypothesis testing, several statistical assumption tests were conducted, including tests of normality, linearity, multicollinearity, and heteroscedasticity. Subsequently, multiple linear regression analysis was performed to examine the effects of creative self-efficacy and digital literacy on innovative work behavior.

Participant categorization for each research variable was determined using empirical means, hypothetical means, and standard deviations. All statistical analyses were conducted using IBM SPSS Statistics software.

Common Method Bias Control

To minimize the potential influence of common method bias (CMB), both procedural and statistical remedies were implemented. Following the recommendations of Kock et al. (2021), several procedural remedies were applied prior to data collection. These included providing participants with clear information regarding the study objectives, obtaining informed consent that emphasized data confidentiality and respondent anonymity, and designing different response formats across measurement instruments to reduce respondents' ability to infer causal relationships among the variables.

In addition, a statistical assessment of common method bias was conducted using Harman's Single-Factor Test. According to Podsakoff et al. (2024), common method bias may be present when a single factor accounts for more than 50% of the total variance in an Exploratory Factor Analysis (EFA). Therefore, EFA was performed to evaluate whether common method variance represented a significant threat to the validity of the study findings.

Results

Participant Characteristics

The participants consisted of 135 startup employees, including 85 males (63.0%) and 50 females (37.0%). Based on age, the largest group was aged 20–25 years (n = 68, 50.4%), followed by 26–30 years (n = 47, 34.8%), 31–35 years (n = 15, 11.1%), 36–40 years (n = 4, 3.0%), and 41–45 years (n = 1, 0.7%). In terms of work tenure, most participants had worked between one and five years (n = 73, 54.1%), followed by less than one year (n = 50, 37.0%), five to ten years (n = 9, 6.7%), and more than ten years (n = 3, 2.2%).

Common Method Bias Assessment

Common method bias (CMB) was assessed using both procedural and statistical approaches. Procedural remedies included the design of the questionnaire format, the provision of informed consent, and clear instructions regarding questionnaire completion. In addition, Harman's single-factor test was conducted using SPSS. The exploratory factor analysis (EFA) yielded a value of 17.806%, which was well below the 50% threshold. Therefore, common method bias was not considered a significant threat to the validity of the study findings.

Assumption Testing

Prior to hypothesis testing, several classical assumption tests were conducted. The normality test was performed using the Kolmogorov–Smirnov test. The results indicated significant values below .05 ($p < .05$) for all study variables, namely innovative work behavior, creative self-efficacy, and digital literacy. Nevertheless, based on the Central Limit Theorem (Brussolo, 2018), the data were considered approximately normally distributed because the sample size exceeded 30 participants (N = 135).

Linearity testing demonstrated significant linear relationships between each independent variable (creative self-efficacy and digital literacy) and innovative work behavior, with significance values below .05 ($p \leq .05$). Multicollinearity testing indicated that the regression model was free from multicollinearity issues, as evidenced by a tolerance value of .751 (> .10) and a Variance Inflation Factor (VIF) value of 1.331 (< 10). Furthermore, heteroscedasticity was examined using the Huber–White method. The calculated χ^2 value (19.035) was lower than the critical χ^2 value (162.01), indicating that the regression model did not suffer from heteroscedasticity.

Hypothesis Testing

Multiple linear regression analysis was conducted to examine the effects of creative self-efficacy and digital literacy on innovative work behavior. A significance value of .05 or lower was used as the criterion for hypothesis acceptance.

H1 and H2 Testing

Table 1. Regression Results for H1 and H2

Variable	B	SE	β	t	p
Creative Self-Efficacy → Innovative Work Behavior	.454	.071	.480	6.400	< .001
Digital Literacy → Innovative Work Behavior	.441	.118	.280	3.741	< .001

As presented in Table 1, the first hypothesis was supported. Creative self-efficacy had a significant positive effect on innovative work behavior ($\beta = .480$, $t = 6.400$, $p < .001$). This finding indicates that employees with higher levels of creative self-efficacy tend to exhibit stronger innovative work behavior. Similarly, the second hypothesis was supported. Digital literacy exerted a significant positive effect on innovative work behavior ($\beta = .280$, $t = 3.741$, $p < .001$). Thus, employees with higher levels of digital literacy were more likely to engage in innovative work behavior.

H3 Testing

Table 2. Simultaneous Effect of Creative Self-Efficacy and Digital Literacy on Innovative Work Behavior

Variable	**R**	**R^2**	**Adjusted R^2**	**F**	**p**
Creative Self-Efficacy and Digital Literacy → Innovative Work Behavior	**.665**	**.443**	**.434**	**52.465**	**< .001**

The regression model was statistically significant ($F = 52.465$, $p < .001$). The model explained 44.3% of the variance in innovative work behavior ($R^2 = .443$), while the remaining 55.7% was attributable to factors not included in the present study. Therefore, the third hypothesis was supported, indicating that creative self-efficacy and digital literacy jointly exert a significant influence on innovative work behavior among startup employees.

Variable Categorization

To determine the category levels of each variable, empirical means, hypothetical means, and standard deviations were compared.

Table 3. Empirical Mean, Hypothetical Mean, and Standard Deviation

Variable	Empirical Mean	Hypothetical Mean	SD	Category
Innovative Work Behavior	50.70	36	9	High
Creative Self-Efficacy	61.50	45	10	High
Digital Literacy	38.51	27	6	High

The results indicate that innovative work behavior, creative self-efficacy, and digital literacy were all categorized as high among startup employees.

Categorization by Age

Table 4. Variable Categorization by Age Group

Age Group	N	IWB Mean	Category	CSE Mean	Category	DL Mean	Category
20–25 years	68	51.66	High	61.19	High	38.08	High
26–30 years	47	49.70	High	61.61	High	38.06	High
31–35 years	15	49.06	High	61.93	High	38.70	High
36–40 years	4	54.00	High	64.50	High	38.00	High
41–45 years	1	55.00	High	65.00	High	38.00	High

Across all age groups, innovative work behavior, creative self-efficacy, and digital literacy were consistently categorized as high.

Categorization by Work Tenure

Table 5. Variable Categorization by Work Tenure

Work Tenure	N	IWB Mean	Category	CSE Mean	Category	DL Mean	Category
< 1 year	50	50.78	High	61.04	High	38.40	High
1–5 years	73	50.68	High	61.65	High	43.20	Very High
5–10 years	9	51.55	High	63.88	High	38.20	High
> 10 years	3	51.00	High	60.33	High	33.00	High

The findings indicate that participants across different tenure groups generally demonstrated high levels of innovative work behavior and creative self-efficacy. Digital literacy was also categorized as high across most groups, with employees having one to five years of work experience exhibiting a very high level of digital literacy.

Discussion

The results of the hypothesis testing revealed that creative self-efficacy had a positive and significant effect on innovative work behavior ($\beta = .480$, $p < .001$). This finding was further supported by the descriptive results, which indicated that startup employees in this study demonstrated a high level of creative self-efficacy ($M = 61.5$). In other words, the stronger employees' confidence in their creative abilities, the greater their tendency to engage in innovative work behavior. This relationship may be explained by the fact that confidence in one's creative potential encourages individuals to take risks, persevere in the face of challenges, and remain resilient despite encountering obstacles or idea rejection, thereby sustaining the innovation process. These findings are particularly relevant within startup environments, where continuous innovation is essential and employees frequently face situations in which self-confidence determines whether ideas are pursued or abandoned (Puente-Díaz, 2016).

The results are consistent with Reiter-Palmon and Hunter (2023), who argued that creative self-efficacy serves as a key motivational driver for engaging in creativity-demanding activities. Similarly, Arifin et al. (2024) found that creative self-efficacy encourages employees to recognize and pursue opportunities for innovation.

Digital literacy was also found to have a positive and highly significant effect on innovative work behavior ($\beta = .280$, $p < .001$). Descriptive findings further indicated that startup employees exhibited high levels of digital literacy ($M = 38.51$). Employees with strong digital literacy skills are more capable of adapting to technological changes and effectively utilizing digital ecosystems to access information, collaborate with others, and implement ideas more efficiently, thereby facilitating innovation. According to Handiman and Adam (2024), digital literacy enables employees to identify innovation opportunities by analyzing and anticipating dynamic market changes. In startup environments, where technology forms an integral part of daily operations, digital literacy becomes a critical competency. The present findings support Santoso et al. (2019), who identified digital literacy as a catalyst for innovative behavior in highly digitalized workplaces.

Taken together, creative self-efficacy and digital literacy significantly influenced innovative work behavior, accounting for 44.3% of the variance ($R^2 = .443$). This finding suggests that workplace innovation is not driven by a single factor but rather by the combination of employees' confidence in their creative capabilities and their ability to effectively utilize digital technologies. Nevertheless, 55.7% of the variance in innovative work behavior remained unexplained, indicating the presence of additional contributing factors. Previous studies have identified organizational support and organizational culture (Azeem & Hanoum, 2024; Liu et al., 2016), leadership style (Santoso et al., 2019; Yusuf & Etikariena, 2023), and job autonomy (Putri & Prastika, 2024) as important predictors of innovative work behavior.

The dynamic and digitally oriented nature of startup ecosystems may provide employees with greater opportunities to transform creative confidence and digital competence into tangible innovative actions. This context differs from conventional organizations, which often operate within more rigid structures and procedures that limit opportunities for creativity and technological experimentation (Etikariena & Muluk, 2014; Fransisca et al., 2024). These findings support Yuan and Woodman's (2010) argument that innovative work behavior emerges from the interaction between intrinsic individual characteristics and the capacity to implement ideas effectively. Similarly, Effiyaldi et al. (2024) demonstrated that the combination of creative self-efficacy and digital literacy significantly contributes to innovative work behavior.

The present study required participants to have worked for at least six months in their organizations. This criterion was established to ensure that employees had acquired sufficient job-related knowledge and experience to engage in innovative work behavior (Ardini & Etikariena, 2021). Descriptive analyses revealed slight variations across tenure groups. Employees with one to five years of work experience exhibited relatively higher levels of innovative work behavior ($M = 50.68$) and digital literacy ($M = 43.20$) compared to other tenure groups. This may be because employees within this tenure range tend to possess strong work motivation while maintaining fresh perspectives that have not yet been constrained by rigid organizational routines. In contrast, employees with five to ten years of experience demonstrated the highest levels of creative self-efficacy. This finding suggests that confidence in one's creative abilities develops gradually through accumulated experiences, learning opportunities, and exposure to workplace challenges over time (Puente-Díaz, 2016).

Interesting patterns also emerged across age groups. Younger employees (20–25 years old) appeared to demonstrate stronger digital competencies, likely because they belong to a generation that has grown up in a highly digitalized environment (Krueger et al., 2018). Conversely, innovative work behavior and creative self-efficacy were descriptively higher among employees aged 41–45 years. However, this finding should be interpreted with caution because the number of respondents in this age group was extremely limited, preventing meaningful generalization to the broader population.

Overall, the findings of this study should be interpreted in light of several limitations. All variables were measured using self-report instruments, which may introduce common method bias and influence the observed relationships among variables (Podsakoff et al., 2024). Although both procedural and statistical remedies were implemented, the possibility of common method bias cannot be completely eliminated because respondents provided data for all variables, measurements were collected at a single point in time, and participants may have been inclined to provide consistent responses across measures (common rater effect).

Theoretically, this study contributes to the literature on innovative work behavior by demonstrating that both psychological resources (creative self-efficacy) and technological competencies (digital literacy) play significant roles in fostering innovation among startup employees. The findings extend Social Cognitive Theory by highlighting the importance of domain-specific efficacy beliefs in predicting innovative behavior within technology-intensive work environments. Furthermore, the study contributes empirical evidence from the startup sector, which remains relatively underexplored despite its strong reliance on innovation for survival and growth.

Practically, the findings suggest that startup organizations should not focus solely on developing employees' technical digital skills. Instead, organizations should also invest in strategies that strengthen employees' confidence in their creative capabilities. Such efforts may include providing greater autonomy, recognizing creative contributions, offering opportunities for experimentation, and supporting the implementation of employee-generated ideas. By fostering both creative self-efficacy and digital literacy, startups may enhance their capacity for sustained innovation and competitiveness.

Conclusion and Recommendations

The findings indicate that both creative self-efficacy and digital literacy significantly influence innovative work behavior among startup employees. Among the two predictors, creative self-efficacy emerged as the stronger determinant, as reflected by its larger standardized regression coefficient. This finding suggests that employees' confidence in their creative abilities constitutes a particularly important factor in encouraging innovative behavior in startup environments.

The results also revealed that 55.7% of the variance in innovative work behavior remained unexplained, indicating opportunities for future research to expand the model by incorporating additional variables. Future studies may consider examining organizational culture, leadership styles, job autonomy, organizational support, or psychological empowerment as potential predictors of innovative work

behavior. Researchers are also encouraged to focus on specific startup sectors or subsectors to obtain more context-specific and representative findings.

To reduce potential bias and improve measurement accuracy, future research should complement self-report measures with alternative assessment methods, such as supervisor-rated evaluations or peer assessments of innovative work behavior.

Given the dominant role of creative self-efficacy identified in this study, startup management should prioritize initiatives that strengthen employees' creative confidence in addition to enhancing digital competencies. Creating a supportive work environment through autonomy, recognition, constructive feedback, and opportunities to transform ideas into practical innovations may be particularly effective in promoting innovative work behavior and sustaining organizational competitiveness.

References

Abbot, D. H. (2010). *Constructing a creative self-efficacy inventory: A Mixed method inquiry* [University of Nebraska]. https://www.proquest.com/docview/305217740

American Management Association. (2020, March 24). *Identifying and removing the barriers to innovation*. American Management Association. https://www.amanet.org/articles/identifying-and-removing-the-barriers-to-innovation/

Anwar, Z., Hanurawan, F., Chusniyah, T., & Setiyowati, N. (2023). Adaptation of the Academic Digital Literacy Scale for College Students: A Validity and Reliability Study. *Psychological Science and Education*, *28*(4), 98–111. https://doi.org/10.17759/pse.2023280406

Ardini, D. R., & Etikariena, A. (2021). Aktivitas Belajar dan Perilaku Kerja Inovatif pada Masa Pandemi Dimediasi oleh Efikasi-Diri Inovasi. *Gadjah Mada Journal of Psychology (GamaJoP)*, *7*(2), 195. https://doi.org/10.22146/gamajop.67988

Arifin, H. A., Fitriyani, Matriadi, F., & Nurainun. (2024). The Influence of Creative Self-Efficacy on Employee Performance through Innovative Work Behavior as Mediating and Digital Literacy as Moderating. *International Journal of Social Science and Human Research*, *7*(1). https://doi.org/10.47191/ijsshr/v7-i01-04

Azeem, R. A. C., & Hanoum, S. (2024). Analyzing the Impact of Creative Self-Efficacy, Leadership Style, Locus of Control, and Organizational Culture on Innovative Work Behavior and Employee Performance. *Journal La Sociale*, *5*(2), 518–530. https://doi.org/10.37899/journal-la-sociale.v5i2.1096

Azwar, S. (2022). *Metode penelitian psikologi edisi II* (2nd ed.). Pustaka Pelajar.

Bandura, A. (1977). Self-Efficacy: toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215.

Brussolo, M. E. (2018). *Understanding the Central Limit Theorem the Easy Way: A Simulation Experiment*. 1. https://doi.org/10.3390/proceedings2211322

Cundawan, A., Marchyta, N. K., & Santoso, T. (2021). Mediating effect of creative self-efficacy on the influence of knowledge sharing towards innovative work behavior among millennial knowledge workers. *Jurnal Manajemen Dan Pemasaran Jasa*, *14*(2), 149–164. https://doi.org/10.25105/jmpj.v14i2.8873

Effiyaldi, Mulyono, H., Suratno, E., & Pasaribu, J. P. K. (2024). The Effect Of Transactional Leadership, Transformational Leadership, Creative Self Efficacy

On Innovative Work Behavior And Employee Performance Moderated By Digital Literacy. *Jurnal Aplikasi Manajemen*, *22*(2), 335–351. https://doi.org/10.21776/ub.jam.2024

Etikariena, A. (2018). Perbedaan Perilaku Kerja Inovatif Berdasarkan Karakteristik Individu Karyawan. *Jurnal Psikologi Universitas Diponegoro*, *17*(2), 107–118. https://doi.org/https://doi.org/10.14710/jp.17.2.107-118

Etikariena, A., & Muluk, H. (2014). Correlation between Organizational Memory and Innovative Work Behavior. *Makara Human Behavior Studies in Asia*, *18*(2), 77. https://doi.org/10.7454/mssh.v18i2.3463

Farmer, S. M., & Tierney, P. (2017). Considering Creative Self-Efficacy: Its Current State and Ideas for Future Inquiry. In *The Creative Self: Effect of Beliefs, Self-Efficacy, Mindset, and Identity* (pp. 23–47). Elsevier. https://doi.org/10.1016/B978-0-12-809790-8.00002-9

Fransisca, F., Caroline, A., Kornarius, Y. P., Gunawan, T., & Gunawan, A. (2024). Pengaruh Literasi Digital terhadap Perilaku Kerja Inovatif di Perusahaan BPRS Amanah Rabbaniah. *MES Management Journal*, *3*, 277–297. https://doi.org/10.56709/mesman.v3.i1.199

Gusti, T. E. P., Caroline, A., Kornarius, Y. P., & Gunawan, A. (2023). Studi komparatif literasi digital karyawan bank: Analisis dampak perbedaan spesifikasi perbankan. *Jurnal Nasional Manajemen Pemasaran Dan Sumber Daya Manusia*, *4*(3), 141–157. https://doi.org/10.47747/jnmpsdm.v4i3.1443

Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, *73*, 287–302. https://doi.org/https://doi.org/10.1348/096317900167038

Judijanto, L., Karmagatri, M., Lutfi, Sepriano, Pipin, S. J., Erwin, Indrayani, N., Nugraha, U., & Lukmana, H. (2024). *Pengembangan Startup Digital* (Efitra (ed.); 1st ed., Vol. 1). PT. Green Pustaka Indonesia.

Kock, F., Berbekova, A., & Assaf, A. G. (2021). Understanding and managing the threat of common method bias : Detection , prevention and control. *Tourism Management*, *86*(February), 104330. https://doi.org/10.1016/j.tourman.2021.104330

Krueger, D. C., Stone, D. L., & Lukaszewski, K. M. (2018). Age and Digital Divide. *Journal of Strategic Innovation and Sustainabilitu*, *13*.

Liu, Z., Ge, L., & Peng, W. (2016). How organizational tenure affects innovative behavior?: The role of culture difference and status determinants. *Nankai Business Review International*, *7*(1), 99–126. https://doi.org/10.1108/NBRI-01-2016-0001

Munir, R., & Beh, L.-S. (2019). Measuring and enhancing organisational creative climate , knowledge sharing , and innovative work behavior in startups development. *Emerald Insight*, *32*(4), 269–289. https://doi.org/10.1108/BL-03-2019-0076

Ng, W. (2012). Can we teach digital natives digital literacy? *Computers and Education*, *59*(3), 1065–1078. https://doi.org/10.1016/j.compedu.2012.04.016

Pilav-Velić, A., Cerne, M., Trkman, P., Wong, S. I., & Abaz, A. K. (2021). Digital or Innovative: Understanding "digital Literacy - Practice - Innovative Work Behavior" Chain. *South East European Journal of Economics and Business*, *16*(1),

107–119. https://doi.org/10.2478/jeb-2021-0009

Podsakoff, P. M., Podsakoff, N. P., Williams, L. J., Huang, C., & Yang, J. (2024). Common Method Bias: It's Bad, It's Complex, It's Widespread, and It's Not Easy to Fix. *Annual Review of Organizational Psychology and Organizational Behavior*, *11*(1), 17–61. https://doi.org/10.1146/annurev-orgpsych-110721-040030

Puente-Díaz, R. (2016). Creative self-efficacy: An exploration of its antecedents, consequences, and applied implications. *Journal of Psychology: Interdisciplinary and Applied*, *150*(2), 173–193. https://doi.org/10.1080/00223980.2015.1051498

Putri, A. R., & Prastika, N. D. (2024). Exploring the Impact : Understanding Employees ' Innovative Work Behaviors Reviewed from Work Autonomy Exploring the Impact : Memahami Perilaku Kerja Inovatif Karyawan ditinjau dari Otonomi Kerja. *PSIKOBORNEO: Jurnal Ilmiah Psikologi*, *12*(2), 261–271. https://doi.org/http://dx.doi.org/10.30872/psikoborneo.v12i2

Reiter-Palmon, R., & Hunter, S. (2023). *Handbook of Organizational Creativity: Individual and Group Level Influences* (2nd ed.). Elsevier.

Riswan, A. A., Salsabila, C., Mulya, D. P. R., & Saputra, N. (2021). Innovative Work Behavior pada Pegawai di DKI Jakarta: Pengaruh Learning Agility, Work Engagement, dan Digital Readiness. *Studi Ilmu Manajemen Dan Organisasi (SIMO)*, *2*(2), 151–165. https://doi.org/10.35912/simo.v2i2.833

Rochaety, E., Ratih, T., & Latief, A. M. (2019). *Metodologi Penelitian Bisnis: Dengan Aplikasi SPSS EDISI 2*. Mitra Wacana Media. www.mitrawacanamedia.com

Santoso, H., Abdinagoro, S. B., & Arief, M. (2019). The role of digital literacy in supporting performance through innovative work behavior: The case of indonesia's telecommunications industry. *International Journal of Technology*, *10*(8), 1558–1566. https://doi.org/10.14716/ijtech.v10i8.3432

Santoso, H., Elidjen, Abdinagoro, S. B., & Arief, M. (2019). The role of creative self-efficacy, transformational leadership, and digital literacy in supporting performance through innovative work behavior: Evidence from telecommunications industry. *Management Science Letters*, *9*(Spceial Issue 13), 2305–2314. https://doi.org/10.5267/j.msl.2019.7.024

Sodik, M. A., & Siyoto, S. (2015). *Dasar Metodologi Penelitian*. Literasi Media Publishing. https://www.researchgate.net/publication/314093441

Startup Genome. (2024). *THE GLOBAL STARTUP ECOSYSTEM REPORT 2024*. https://startupgenome.com/report/the-global-startup-ecosystem-report-2024/

Supardi, Wibisono, C., Indrayani, Khaddafi, M., & Ilham, R. N. (2024). The Effect of Creative Self-Efficacy , Training and Development on Employee Performance Through Mediation : Innovative Work Behavior and Moderation : Digital Literacy at the Regional Secretariat of the Riau Archipelago Province Access to Success Access to. *General Management*, *25*(203), 409–415. https://doi.org/10.47750/QAS/25.203.44

Wijantini. (2025, January 6). Startup Indonesia: Tumbuh atau runtuh. *Katadata*. https://katadata.co.id/indepth/opini/677b28a9705d3/startup-indonesia-tumbuh-atau-runtuh

World Intellectual Property Organization. (2024). *ranking GII indonesia 2024*. https://www.wipo.int/gii-ranking/en/indonesia

Wu, J., Zhang, Q., Gan, X., Liu, X., Hu, J., & Wang, Y. (2025). The relationship between digital literacy and innovative behavior among Chinese medical students : the chain mediating roles of diversity experience and creative self- efficacy. *BMC Medical Education*, *25*. https://doi.org/10.1186/s12909-025-07799-z

Yashilva, W. (2024, May 7). Indonesia sebagai pusat startup terbesar se-Asia Tenggara. *GoodStats*. https://data.goodstats.id/statistic/indonesia-sebagai-pusat-startup-terbesar-se-asia-tenggara-qejb6

Yuan, F., & Woodman, R. W. (2010). Innovative Behavior In The Workplace: The Role Of Performance And Image Outcome Expectations. *Academy of Management Journal*, *53*, 323–342. https://doi.org/https://doi.org/10.5465/amj.2010.49388995

Yusuf, M. P., & Etikariena, A. (2023). Perilaku Kerja Inovatif Pada Perusahaan Rintisan: Peran Kepemimpinan Inklusif, Keamanan Psikologis, dan Pemberdayaan Psikologis. *Gadjah Mada Journal of Psychology (GamaJoP)*, *9*(1), 101. https://doi.org/10.22146/gamajop.78672