

Digital Entrepreneurial Readiness among High School Students: The Roles of Digital Financial Literacy, Self-Efficacy, and Digital Creativity

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ABSTRACT

The rapid growth of Indonesia's digital economy contrasts sharply with the low level of youth entrepreneurship, revealing a significant gap between digital access and entrepreneurial action. This study examines the integrated influence of digital financial literacy, self-efficacy, and digital creativity on digital entrepreneurial readiness among high school students, focusing on the psychological mechanisms that transform competencies into readiness. Using a quantitative approach, data were collected through structured questionnaires from 125 students in the P5 Entrepreneurship Program and analyzed using PLS-SEM. The results show that the model explains 67.8% of the variance in digital entrepreneurial readiness, with self-efficacy acting as a key mediator. Digital creativity shows the strongest effect on self-efficacy, while self-efficacy significantly influences readiness. These findings reveal that psychological mechanisms are as important as technical competencies in fostering entrepreneurial readiness. This study provides evidence-based recommendations for integrating digital skills development with psychological readiness building in Indonesia's Merdeka Curriculum, offering specific strategies for curriculum design and educational policy to bridge the digital entrepreneurship gap among youth.

ABSTRAK

Pertumbuhan pesat ekonomi digital Indonesia berbanding terbalik dengan rendahnya tingkat kewirausahaan pemuda, mengungkap kesenjangan signifikan antara akses digital dan aksi kewirausahaan. Penelitian ini mengkaji pengaruh terintegrasi literasi keuangan digital, efikasi diri, dan kreativitas digital terhadap kesiapan kewirausahaan digital pada siswa SMA, dengan fokus pada mekanisme psikologis yang mentransformasi kompetensi menjadi kesiapan. Menggunakan pendekatan kuantitatif, data dikumpulkan melalui kuesioner terstruktur dari 125 siswa dalam Program Kewirausahaan P5 dan dianalisis dengan PLS-SEM. Hasil penelitian menunjukkan bahwa model menjelaskan 67,8% varians kesiapan

kewirausahaan digital, dengan efikasi diri berperan sebagai mediator kunci. Kreativitas digital menunjukkan efek terkuat pada efikasi diri, sementara efikasi diri secara signifikan mempengaruhi kesiapan. Temuan ini mengungkapkan bahwa mekanisme psikologis sama pentingnya dengan kompetensi teknis dalam menumbuhkan kesiapan kewirausahaan. Studi ini memberikan rekomendasi berbasis bukti untuk mengintegrasikan pengembangan keterampilan digital dengan pembangunan kesiapan psikologis dalam Kurikulum Merdeka Indonesia, menawarkan strategi spesifik untuk desain kurikulum dan kebijakan pendidikan guna menjembatani kesenjangan kewirausahaan digital di kalangan pemuda.

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INTRODUCTION

The fourth industrial revolution has fundamentally transformed global economic landscapes, creating unprecedented opportunities for digital entrepreneurship ¹. This paradigm shift is underpinned by massive digital connectivity, with approximately 67% of the global population now using the internet, dramatically expanding the potential for digital ventures ². Indonesia, as Southeast Asia's largest digital economy with 216 million internet users and a projected market value of USD 146 billion by 2025 ³ exemplifies this shift. However, a critical paradox emerges despite massive digital connectivity, the youth entrepreneurship rate remains critically low at 3.47%, trailing neighboring countries and contributing to a 9.2% unemployment rate among high school graduates ⁴. indicating a substantial misalignment between digital access and entrepreneurial readiness among the youth demographic ⁵

¹ Brighton Nyagadza et al., "Digital Technologies, Fourth Industrial Revolution (4IR) & Global Value Chains (GVCs) Nexus with Emerging Economies' Future Industrial Innovation Dynamics," *Cogent Economics & Finance* 10, no. 1 (2022): 2014654.

² International Telecommunication Union, "Measuring Digital Development: Facts and Figures 2023," 2023.

³ Nguyen Hoa Cuong and Dinh Khanh Le, "Vietnam Digital Transformation and the Way Forward," in *Knowledge Transformation and Innovation in Global Society: Perspective in a Changing Asia* (Springer, 2024), 141–64.

⁴ Badan Pusat Statistik, *Statistik Pemuda Indonesia 2023* (Jakarta, 2023).

⁵ Dipak U Tatpuje et al., "A Comparative Study on Advanced Skills of Technology and Entrepreneurial Skills with the Awareness and Preparedness among the Rural Youths," *Entrepreneurship Education* 5, no. 1 (2022): 21–35.

Digital entrepreneurial readiness encompasses the multidimensional cognitive, behavioral, and affective preparedness required for success in digital business environments ⁶ Indonesia's Merdeka Curriculum through P5 (Projek Penguatan Profil Pelajar Pancasila) provides a strategic framework for developing these competencies, yet three critical barriers persist. Digital financial literacy remains alarmingly low at 49.92% nationally ⁷ with 63% of students struggling with fundamental financial concepts ⁸. Simultaneously, psychological barriers manifest through limited entrepreneurial self-efficacy, affecting 51% of students, while digital creativity utilization remains suboptimal due to consumption-focused rather than value-creation digital engagement ⁹.

Despite substantial research examining digital financial literacy, self-efficacy, and digital creativity independently, their integration within a comprehensive theoretical framework remains limited ¹⁰. Contemporary studies have established individual significance of these variables, yet a critical research gap persists regarding how they interactively shape digital entrepreneurial readiness, particularly the mediating mechanism of self-efficacy in translating digital competencies into concrete readiness within Indonesia's educational context ¹¹. This gap is especially pronounced among high school students in structured entrepreneurship programs where early-stage entrepreneurial development occurs ¹².

⁶ Arezou Mirhabibi, Ali Shayan, and Shaghayegh Sahraei, "Improving Digital Entrepreneurship Readiness of Business Students: The Moderating Roles of Digital Mindset and Digital Education," *The International Journal of Management Education* 23, no. 2 (2025): 101151; Xixi Zhang, Xinglin Hao, and Xuerui Jia, "Enhancing Employees' Readiness for Digital Transformation: Findings from SEM and FsQCA Approaches Based on the Planned Behavior Perspective," *Journal of Enterprise Information Management*, 2025, 1–26.

⁷ Rahmat Hidayat, "The Influence of Financial Behavior on Capital Market Investment Decision Making with Mediating of Financial Literacy in Yogyakarta," *International Journal Of Research In Business And Social Science* 12, no. 8 (2023): 227–37.

⁸ Annamaria Lusardi and Flore-Anne Messy, "The Importance of Financial Literacy and Its Impact on Financial Wellbeing," *Journal of Financial Literacy and Wellbeing* 1, no. 1 (2023): 1–11.

⁹ Jeffrey E McGee and Mark Peterson, "The Long-term Impact of Entrepreneurial Self-efficacy and Entrepreneurial Orientation on Venture Performance," *Journal of Small Business Management* 57, no. 3 (2019): 720–37.

¹⁰ Hamood Mohammed Al-Hattami, "Understanding How Digital Accounting Education Fosters Innovation: The Moderating Roles of Technological Self-Efficacy and Digital Literacy," *The International Journal of Management Education* 23, no. 2 (2025): 101131; Tiina Koskelainen et al., "Financial Literacy in the Digital Age—A Research Agenda," *Journal of Consumer Affairs* 57, no. 1 (2023): 507–28.

¹¹ Douglas F Kauffman, Jesus de la Fuente, and Evelyn Boruchovitch, *Past, Present and Future Contributions from the Social Cognitive Theory (Albert Bandura)* (Frontiers Media SA, 2023).

¹² Richard Bläse et al., "Identifying Institutional Gaps: Implications for an Early-stage Support Framework for Impact Entrepreneurs," *Corporate Social Responsibility and Environmental Management* 32, no. 1 (2025): 679–97; Natalie Brüne and Eva Lutz, "The Effect of Entrepreneurship Education in Schools on Entrepreneurial Outcomes: A Systematic Review," *Management Review Quarterly* 70, no. 2 (2020): 275–305.

This study addresses this critical gap by developing and testing an integrated theoretical model that examines both direct and mediated relationships between digital financial literacy, self-efficacy, digital creativity, and digital entrepreneurial readiness. Grounded in the integration of Digital Entrepreneurship Theory¹³, Social Cognitive Theory¹⁴, and the Theory of Planned Behavior¹⁵. This research investigates five key hypotheses concerning these relationships and their interplay in the Indonesian educational context.

The theoretical significance of this research lies in its novel integration of multiple theoretical perspectives to explain the complex interplay between digital competencies and psychological factors. Practically, the findings offer evidence-based insights for educational policymakers and practitioners seeking to enhance digital entrepreneurship education through the Merdeka Curriculum. Ultimately, this research aims to contribute to developing more effective, contextually relevant models that can bridge the digital entrepreneurship readiness gap among Indonesian youth.

Within this broader context, the present study focuses on the implementation of entrepreneurship education at SMA SHAFTA Surabaya, a senior high school that actively integrates the *Projek Penguatan Profil Pelajar Pancasila* (P5) Entrepreneurship Program as part of the Merdeka Curriculum. Through this program, students are involved in experiential learning activities such as developing business ideas, producing and marketing products through digital platforms, and managing basic financial transactions related to their projects. This environment provides a relevant educational setting where students are exposed not only to digital technologies but also to early entrepreneurial practices. However, despite these opportunities, variations in students' readiness to engage in digital entrepreneurship are still observable, particularly in terms of their financial literacy in digital contexts, confidence in entrepreneurial capabilities, and ability to transform digital creativity into business-oriented initiatives. Therefore, examining the interaction between digital financial literacy, self-efficacy, and digital creativity within this school context becomes important to understand how entrepreneurship education programs at the high school level can effectively foster digital entrepreneurial readiness among students.

Methods

This study employs an explanatory quantitative design with an associative-causal approach to examine the causal relationships between independent and

¹³ Satish Nambisan, "Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship," *Entrepreneurship Theory and Practice* 41, no. 6 (2017): 1029–55.

¹⁴ Albert Bandura, "Toward a Psychology of Human Agency: Pathways and Reflections," *Perspectives on Psychological Science* 13, no. 2 (2018): 130–36.

¹⁵ Icek Ajzen, "The Theory of Planned Behavior: Frequently Asked Questions," *Human Behavior and Emerging Technologies* 2, no. 4 (2020): 314–24.

dependent variables ¹⁶. The research was conducted at SMA SHAFTA Surabaya during October-November 2024, selected based on its mature and structured implementation of the P5 Entrepreneurship Program. This context provides an ideal setting as students have gained direct experience in developing business ideas, producing products, marketing through digital platforms, and managing business finances in real world scenarios.

The study population comprised all students (N=125) from grades X to XII participating in the P5 Entrepreneurship Program at SMA SHAFTA Surabaya. Given the homogeneous population characteristics and limited size, a saturated sampling technique was employed, involving the entire population as respondents (Cohen, 2023). Inclusion criteria included: (1) active participation in the P5 Entrepreneurship Program for at least one semester, and (2) voluntary participation through informed consent. The sample size of 125 meets the '10-times rule' for PLS-SEM ¹⁷, which requires the sample to be at least 10 times the number of structural paths pointing to a construct. In our most complex construct, the rule is satisfied. Respondent distribution is presented in Table 1.

Table 1. Respondent Distribution at SMA SHAFTA Surabaya

Class	Number of Respondents
X-1	16
X-2	24
X-3	25
XI-1	16
XI-2	20
XII	24
Total	125

The research instrument consisted of an online questionnaire distributed through Google Forms, containing 33 valid statements using a 5-point Likert scale (1=Strongly Disagree, 5=Strongly Agree). The questionnaire was developed based on verified operational definitions of variables, with items adapted from established scales: Digital Financial Literacy was adapted from OECD/INFE (2020), Self-Efficacy from McGee, (2019), Digital Creativity from Garcia-Rodriguez (2023), and Digital Entrepreneurial Readiness was developed by researchers based on Sahut et al. (2021). Prior to the main study, validity and reliability tests were conducted through a pretest involving 52 respondents outside the research sample. Validity testing using Corrected Item-Total

¹⁶ James P Takona, "Research Design: Qualitative, Quantitative, and Mixed Methods Approaches," *Quality & Quantity* 58, no. 1 (2024): 1011–13.

¹⁷ Joseph F Hair Jr et al., *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook* (Springer Nature, 2021).

Correlation ($r > 0.273$; $n=52$; $\alpha=0.05$) led to the elimination of three invalid items¹⁸. Reliability testing of the 33 valid items yielded Cronbach's Alpha coefficients meeting reliability criteria ($\alpha > 0.7$) for all constructs.

Tabel 2. Operational Definitions of Research Variables

Variable	Operational Definition	Indicators	Number of Items	Source
Digital Financial Literacy (X_1)	Ability to understand, evaluate, and use digital financial services for economic decision making.	<ol style="list-style-type: none"> 1. Basic Knowledge 2. Transaction Skills 3. Positive Attitude 4. Decision Making 5. Evaluation Ability 6. Monitoring Behavior 7. Data Security 	7	OECD/I NFE (2020)
Self-Efficacy (X_2)	Belief in one's capability to manage business, lead, and face entrepreneurial challenges.	<ol style="list-style-type: none"> 1. Business Management 2. Human Resource Leadership 3. Mental Maturity 4. Business Initiation 	12	19
Digital Creativity (X_3)	Ability to create innovative ideas and works using digital technology.	<ol style="list-style-type: none"> 1. Ideation and Innovation 2. Originality 3. Problem Solving 4. Experimentation 5. Collaboration 6. Inspiration & Business Ideas 7. Innovation Courage 	7	20
Digital Entrepreneurship Readiness (Y)	Mental, knowledge, and skill preparedness to start digital	<ol style="list-style-type: none"> 1. Motivation 2. Knowledge 3. Positive Attitude 4. Risk Tolerance 5. Technology Utilization 	7	Developed by researchers based on ²¹

¹⁸ Joe F. Hair, Christian M. Ringle, and Marko Sarstedt, "PLS-SEM: Indeed a Silver Bullet," *Journal of Marketing Theory and Practice* 19, no. 2 (2011): 139–52, <https://doi.org/10.2753/MTP1069-6679190202>.

¹⁹ McGee, J. E., & Peterson, M. (2019). The long-term impact of entrepreneurial self-efficacy and entrepreneurial orientation on venture performance. *Journal of Small Business Management*, 57(3), 720–737. <https://doi.org/10.1111/jsbm.12324>

²⁰ García-Rodríguez MI, Biedma-Velázquez L, Serrano-Del-Rosal R. The legitimacy of pain according to sufferers. *PLoS One*. 2023 Nov 15;18(11):e0291112. doi: 10.1371/journal.pone.0291112. PMID: 37967079; PMCID: PMC10651017.

²¹ Sahut, Jean-Michel, Luca Iandoli, and Frédéric Teulon. "The Age of Digital Entrepreneurship." *Small Business Economics* 56, no. 3 (2021): 1159–69. <https://www.jstor.org/stable/27295614>.

business	6. Basic Skills
ventures.	7. Mental Readiness

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 software. PLS-SEM chosen for its ability to handle complex models, test mediation, and its robustness with non-normal data and smaller sample sizes²². Data analysis followed these stages process:

- Measurement Model Evaluation (Outer Model), assessed whether indicators truly represent the measured variables through convergent validity testing (loading factor > 0.7 and Average Variance Extracted > 0.5) and discriminant validity testing (Fornell-Larcker criterion), along with reliability testing (composite reliability > 0.7 and Cronbach's alpha > 0.7).
- Structural Model Evaluation (Inner Model), assessed the coefficient of determination (R^2) and predictive relevance (Q^2) with the condition that $Q^2 > 0$ indicates the model has relevant predictive capability.
- Hypothesis Testing, examined path coefficients and their significance levels through bootstrapping with 5000 subsamples. Hypotheses were supported if t-statistics > 1.96 ($p < 0.05$)²³.
- Mediation Analysis, tested the mediating role of self-efficacy using specific indirect effects with bootstrapping procedures, following the contemporary guidelines for mediation analysis in PLS-SEM (Nitzl et al., 2023).

All analyses followed guidelines recommended by Hair, (2022) to ensure research validity and reliability. This research received ethical approval from the University Ethics Committee and adhered to ethical principles based on the Declaration of Helsinki by guaranteeing data confidentiality and voluntary respondent participation.

The PLS-SEM approach was particularly appropriate for this study due to several factors: (1) the research focuses on prediction and theory development rather than theory confirmation, (2) the model includes formative constructs, (3) the study examines mediation relationships, and (4) the sample size, while adequate for PLS-SEM, might be insufficient for covariance-based SEM²⁴. Furthermore, PLS-SEM's ability to handle complex models with multiple latent variables and its robustness with non-normal data make it ideal for educational research contexts²⁵.

²² J. F. J. Hair et al., *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 3rd ed. (SAGE Publications, 2022)

²³ Ibid.

²⁴ Hair Jr et al., *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*.

²⁵ Marko Sarstedt et al., "Progress in Partial Least Squares Structural Equation Modeling Use in Marketing Research in the Last Decade," *Psychology & Marketing* 39 (January 27, 2022): 1035–64, <https://doi.org/10.1002/mar.21640>.

RESULT AND DISCUSSION

Result

The evaluation of the measurement model confirms that all constructs meet the established criteria for reliability and convergent validity. As presented in Table 3, all Cronbach's Alpha values range from 0.889 to 0.949 and Composite Reliability values range from 0.914 to 0.955, significantly exceeding the 0.70 threshold and indicating excellent internal consistency. The rho_A values (0.892–0.951) further confirm construct stability, while all Average Variance Extracted (AVE) values exceed 0.50, demonstrating adequate convergent validity. Discriminant validity was established using the Fornell-Larcker criterion.

Table 3. Construct Reliability and Validity Results

Construct	Cronbach's Alpha	rho_A	Composite Reliability	AVE
Digital Creativity (DC)	0.903	0.906	0.924	0.634
Digital Financial Literacy (DFL)	0.889	0.892	0.914	0.602
Self-Efficacy (SE)	0.949	0.951	0.955	0.641
Digital Entrepreneurial Readiness (DER)	0.910	0.912	0.928	0.650

The structural model demonstrates strong explanatory power, explaining 65% of the variance in Digital Entrepreneurial Readiness ($R^2 = 0.65$) and 50% of the variance in Self-Efficacy ($R^2 = 0.50$). According to Hair et al. (2021), these values represent moderate to strong explanatory power. The model's predictive relevance is confirmed by Q^2 values of 0.407 (DER) and 0.320 (SE), both exceeding zero and indicating substantial predictive capability.

The model fit assessment reveals excellent results across multiple indices: SRMR = 0.065 (below the 0.08 threshold), with d_ULS and d_G values within acceptable limits of the HI95 bootstrap quantile. These results collectively confirm the model's adequacy in representing the empirical data and its robustness for hypothesis testing²⁶.

²⁶ Hair Jr et al., *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*.

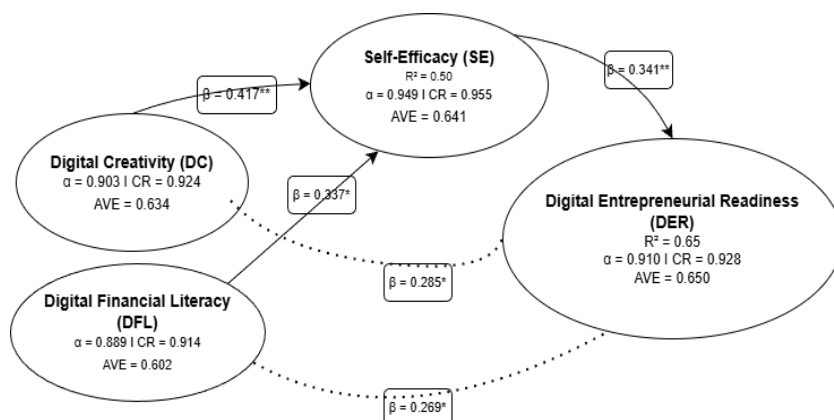


Figure 1. PLS-SEM Structural Model Results

Hypothesis testing using bootstrapping with 5000 subsamples reveals that all five hypothesized relationships are statistically significant (Table 4). The analysis demonstrates that Digital Creativity exerts the strongest influence on Self-Efficacy ($\beta = 0.417, p < 0.01$), followed by Self-Efficacy's substantial impact on Digital Entrepreneurial Readiness ($\beta = 0.341, p < 0.01$).

Table 4. Hypothesis Testing Results (Bootstrapping)

Hypothesis	Path	Path Coefficient (β)	T-Statistic	P-Value	Result
H1	DFL → DER	0.269	2.283	0.023	Supported
H2	SE → DER	0.341	2.957	0.003	Supported
H3	DC → DER	0.285	2.245	0.025	Supported
H4	DFL → SE	0.337	2.490	0.013	Supported
H5	DC → SE	0.417	3.052	0.002	Supported

The effect size analysis (Table 5) reveals crucial insights into the practical significance of each relationship. Self-Efficacy demonstrates a very large effect on Digital Entrepreneurial Readiness ($f^2 = 1.082$), substantially exceeding Cohen's (1988) threshold for large effects (0.35). Digital Creativity shows meaningful influence on Self-Efficacy ($f^2 = 0.132$), while Digital Financial Literacy has notable effects ($f^2 = 0.086$). The relatively smaller f^2 values for direct paths DC to DER and DFL to DER suggest that their effects are primarily mediated through self-efficacy.

Table 5. Effect Size (f^2) Analysis Results

Path	f^2 Value	Effect Size	Interpretation
SE → DER	1.082	Very Large	Dominant practical influence
DC → SE	0.132	Small-Medium	Meaningful contribution
DFL → SE	0.086	Small	Notable influence
DC → DER	*	Small	Modest direct effect
DFL → DER	*	Small	Modest direct effect

The mediation analysis confirms Self-Efficacy as a significant psychological mechanism. The specific indirect effects show:

1. DC → SE → DER: $\beta = 0.142, p = 0.023$ (significant partial mediation)
2. DFL → SE → DER: $\beta = 0.115, p = 0.095$ (marginal partial mediation)

This indicates that Self-Efficacy serves as a partial mediator in both relationships, supporting Bandura's (2018) Social Cognitive Theory that self-efficacy transforms digital competencies into actionable entrepreneurial readiness. The mediation effects account for approximately 34% of Digital Creativity's total effect and 30% of Digital Financial Literacy's total effect on readiness.

The PLSpredict analysis demonstrates the model's strong out-of-sample predictive capability (Table 6). Both constructs show substantial predictive power with $Q^2_{predict}$ values of 0.511 for DER and 0.481 for SE, significantly exceeding the 0.35 threshold for strong predictive relevance²⁷. The comparison with linear model (LM) benchmarks confirms PLS-SEM's superior performance, achieving lower RMSE values across all indicators.

Table 6. Predictive Power Assessment

Construct	Q^2 (Blindfolding)	$Q^2_{predict}$ (PLSpredict)	Predictive Capability
DER	0.407	0.511	Strong
SE	0.320	0.481	Strong

Analysis reveals that Digital Entrepreneurial Readiness achieves the highest predictive power ($Q^2_{predict} = 0.511$), followed by Self-Efficacy ($Q^2_{predict} = 0.481$). Both values substantially exceed the threshold for strong predictive relevance, confirming the model's utility for practical applications in educational settings and its robustness for forecasting digital entrepreneurial readiness.

Discussion

This study provides compelling evidence for the integrated model of digital entrepreneurial readiness. The strong support for all five hypotheses, combined with substantial effect sizes and excellent predictive power, confirms that digital financial literacy, self-efficacy, and digital creativity collectively form a robust framework for understanding students' preparedness for digital entrepreneurship. This finding highlights that readiness for digital entrepreneurship among high school students is not merely determined by the availability of digital competencies, but also by how students internalize these competencies as part of their entrepreneurial identity and confidence to act.

The finding that Digital Creativity has the strongest effect on Self-Efficacy ($\beta = 0.417, f^2 = 0.132$) underscores the importance of creative digital

²⁷ Hair Jr et al.

competencies in building entrepreneurial confidence. This aligns with Digital Entrepreneurship Theory (Nambisan, 2017), which emphasizes innovation and creativity as core drivers of digital venture creation. However, the present findings extend this perspective by indicating that digital creativity not only contributes to innovative outcomes but also strengthens students' confidence in their entrepreneurial capabilities. In this context, creativity becomes both a productive skill and a psychological resource that encourages students to view entrepreneurial challenges as achievable. Students who can generate novel digital solutions develop stronger beliefs in their entrepreneurial capabilities, particularly relevant in Indonesia's context where youth are highly engaged with digital content creation platforms.

Self-Efficacy emerges as the central psychological mechanism, demonstrating both strong direct effects on readiness ($\beta = 0.341$) and very large practical significance ($f^2 = 1.082$). This finding strongly supports Social Cognitive Theory (Bandura, 2018) and ²⁸, confirming that self-efficacy serves as the critical bridge that transforms digital competencies into concrete entrepreneurial preparedness. This suggests that students may possess adequate digital skills and knowledge, yet without strong confidence in their ability to apply them in entrepreneurial contexts, those competencies may not translate into actual readiness to initiate digital ventures. As a partial mediator, self-efficacy enhances rather than completely explains the relationship between digital competencies and readiness.

Digital Financial Literacy shows significant but relatively smaller effects ($\beta = 0.269$, $f^2 = 0.07$), suggesting that while financial competence is essential, its impact is partially channeled through psychological factors rather than acting solely as a technical skill. This result indicates that financial knowledge alone may not automatically lead to entrepreneurial readiness among students. Instead, financial literacy becomes more meaningful when students feel confident in applying financial decision-making skills within entrepreneurial activities. This nuanced understanding provides valuable insights for curriculum design and instructional strategies. That result in line with ²⁹.

These findings can be better understood through the integrated perspective of Digital Entrepreneurship Theory, Social Cognitive Theory, and the Theory of Planned Behavior. Digital Entrepreneurship Theory emphasizes the role of digital technologies, creativity, and innovation as fundamental drivers of new venture creation in digital environments. In this study, the significant influence of digital creativity and digital financial literacy supports this view by demonstrating that digital competencies form an important foundation for students' entrepreneurial readiness. However, the findings also reveal that competencies alone are

²⁸ Arifin, Mohd Arpi, Maheran Zakaria, and Hasnun Anip Bustaman. "Digital Adoption, Self-Efficacy, and Business Success—towards Resilience and Sustainability Micro-Entrepreneurs in the Post-Pandemic World." *Cogent Business & Management* 10, no. 3 (2023): 2260128

²⁹ Hasan et al., (2024) and Li et al., (2024)

insufficient without the psychological mechanisms that motivate individuals to act.

From the perspective of Social Cognitive Theory, self-efficacy functions as the central psychological factor that determines whether individuals believe they can successfully perform entrepreneurial tasks. The strong effect of self-efficacy and its mediating role in this study confirm that students' confidence in their entrepreneurial abilities is a critical mechanism that transforms digital competencies into entrepreneurial readiness. This supports the argument that behavioral outcomes are strongly influenced by individuals' beliefs in their capabilities.

Meanwhile, the Theory of Planned Behavior provides an additional explanation by highlighting that entrepreneurial behavior is shaped by cognitive evaluations and perceived behavioral control. In this context, digital financial literacy contributes to students' cognitive understanding of financial decision-making, while self-efficacy reflects perceived behavioral control over entrepreneurial activities. Together with digital creativity, these factors form a cognitive-psychological pathway that strengthens students' readiness to engage in digital entrepreneurship. Therefore, the integration of these three theoretical perspectives provides a comprehensive explanation of how technical competencies, psychological confidence, and cognitive evaluations interact to shape digital entrepreneurial readiness among high school students.

This research makes four significant theoretical contributions. First, it successfully integrates three major theoretical perspectives into a comprehensive framework that explains 65% of the variance in digital entrepreneurial readiness. Second, the study provides empirical evidence for the mediating role of self-efficacy, addressing a critical gap in understanding how digital competencies translate into entrepreneurial readiness. Third, the effect size analysis reveals the dominant practical significance of self-efficacy, providing nuanced insights beyond statistical significance. Fourth, the excellent predictive power ($Q^2_{\text{predict}} = 0.511$) demonstrates the model's utility for forecasting and intervention planning.

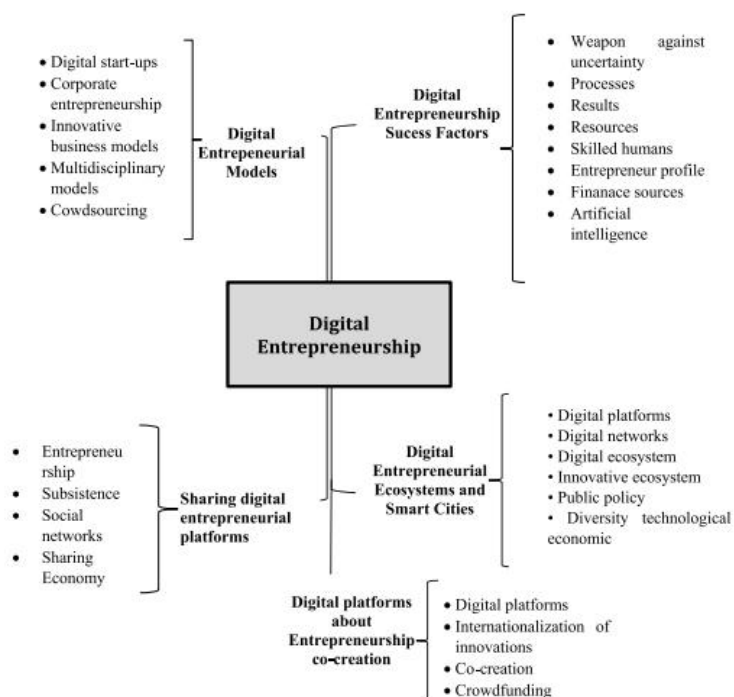


Figure 2. Digital entrepreneurship framework

Source: ³⁰

The figure on Digital Entrepreneurship illustrates a comprehensive framework made up of four major clusters: Digital Entrepreneurial Models, Digital Entrepreneurship Success Factors, Sharing Digital Entrepreneurial Platforms, and Digital Entrepreneurial Ecosystems and Smart Cities. Each cluster focuses on the core elements that determine the digital entrepreneurial landscape, such as novel business models, educated workforce, digital platforms, social networks, public policy, and technologically varied ecosystems.

As a matter of fact, this conceptual framework has a high degree of similarity with the present research findings, especially the outcome indicating that Digital Creativity has the most significant influence on Self-Efficacy. The elements of innovation, co-creation, crowdsourcing, and the use of digital platforms illustrated in the figure to the extent that these creative digital competencies are the core of the contemporary entrepreneurial activity. Such a view is in line with the Digital Entrepreneurship Theory (Nambisan, 2017) which identifies creativity and innovation as the main sources of value creation in digital ventures.

³⁰ Cristina Fernandes et al., “Digital Entrepreneurship Platforms: Mapping the Field and Looking towards a Holistic Approach,” *Technology in Society* 70 (2022): 101979.

In addition, the argument that self-efficacy serves as the central psychological mechanism that connects digital competencies with entrepreneurial readiness is further supported by the study, which is confirmed by the fact that the success factors like "skilled humans," "entrepreneur profile," and "resources" have been included in the research. The direct effect of self-efficacy and its practical value measured as extremely large ($f^2 = 1.082$) are all in line with the core of Social Cognitive Theory³¹ which puts the belief in one's capabilities as the basis for the behavioral engagement and readiness. The items in the diagram that are related to financial resources and digital platforms also back up the view that Digital Financial Literacy, though still significant, is mainly an instrument that goes through psychological pathways, not just a technical skill, which is in agreement with the study's finding of the relatively smaller effect size.

Practically, these findings offer actionable insights for educational practice within Indonesia's Merdeka Curriculum framework. The very large effect size of self-efficacy suggests that educational interventions should prioritize confidence building activities alongside technical skill development³². For curriculum development, educators should integrate digital creativity exercises with financial literacy training through interdisciplinary project-based learning that systematically builds mastery experiences. Nevertheless, the findings imply that exposure to digital tools and entrepreneurial projects alone may not guarantee entrepreneurial readiness. Educational programs must also intentionally cultivate students' confidence through guided practice, feedback, and opportunities for small entrepreneurial successes. For teaching methodologies, implementing scaffolded learning approaches that ensure early success in digital projects can effectively enhance self-efficacy. For educational policy, allocating resources for teacher training in digital entrepreneurship education and establishing school-industry partnerships can provide authentic digital entrepreneurship experiences that bridge the gap between theoretical knowledge and practical readiness.

In the context of SMA SHAFTA Surabaya, where the P5 Entrepreneurship Program already provides students with opportunities to develop products, market them through digital platforms, and manage basic financial transactions, these findings suggest that the program can be further strengthened by emphasizing reflective learning and confidence-building components. Teachers may incorporate structured mentoring sessions, peer collaboration, and reflective discussions that allow students to evaluate their entrepreneurial experiences and recognize their progress. Such strategies can help students translate their practical experiences into stronger entrepreneurial self-beliefs.

³¹ Bandura, "Toward a Psychology of Human Agency: Pathways and Reflections."

³² Andri Ioannou and Symeon Retalis, "Building Entrepreneurial Self-Efficacy in the EdTech Sector: The Impact of an Entrepreneurship Education Program," *The International Journal of Information and Learning Technology* 42, no. 3 (2025): 251–68.

For other schools implementing similar P5 entrepreneurship initiatives, the results highlight the importance of designing learning environments that balance skill development with psychological empowerment. Schools should not only focus on teaching students how to use digital tools or create products, but also encourage experimentation, tolerate failure as part of learning, and provide continuous feedback that supports students' confidence. By fostering both digital competence and entrepreneurial self-efficacy, schools can create more supportive ecosystems that prepare students to participate actively in the digital economy as innovators rather than merely as consumers of digital technology.

The strong predictive power of the model indicates its potential utility for early identification of students who may need additional support in developing digital entrepreneurial capabilities, enabling targeted interventions and resource allocation.

CONCLUSION

This study conclusively demonstrates that digital entrepreneurial readiness among Indonesian high school students is best understood through an integrated competency psychology framework. The research validates that digital financial literacy, self-efficacy, and digital creativity collectively explain 65% of the variance in digital entrepreneurial readiness, with self-efficacy serving as the crucial psychological mechanism that partially mediates the relationships between digital competencies and readiness. Three key conclusions emerge from this research. First, digital creativity exerts the strongest influence on self-efficacy development, highlighting the importance of innovative digital competencies in building entrepreneurial confidence. Second, self-efficacy functions as the central psychological bridge, transforming both financial and creative digital competencies into actionable readiness. Third, the integrated model demonstrates strong predictive power, confirming its utility for educational planning and intervention design.

The main limitations of this study include its cross-sectional design and focus on a single school context, which may affect generalizability. Future research should employ longitudinal designs to examine the development of digital entrepreneurial readiness over time, expand sample coverage to diverse geographical and socio-economic contexts in Indonesia, and explore additional variables such as digital mindset, entrepreneurial passion, and environmental support factors.

Despite these limitations, this research provides both theoretical and practical contributions. Theoretically, it advances our understanding of the psychological mechanisms underlying digital entrepreneurship readiness. Practically, it offers evidence-based strategies for enhancing digital

entrepreneurship education within Indonesia's Merdeka Curriculum, specifically through the P5 program framework. By addressing both technical competencies and psychological readiness, this research contributes to preparing Indonesian youth not merely as digital consumers, but as innovative creators and leaders in the digital economy.

REFERENCES

- Ajzen, Icek. "The Theory of Planned Behavior: Frequently Asked Questions." *Human Behavior and Emerging Technologies* 2, no. 4 (2020): 314–24.
- Al-Hattami, Hamood Mohammed. "Understanding How Digital Accounting Education Fosters Innovation: The Moderating Roles of Technological Self-Efficacy and Digital Literacy." *The International Journal of Management Education* 23, no. 2 (2025): 101131.
- Arifin, Mohd Arpi, Maheran Zakaria, and Hasnun Anip Bustaman. "Digital Adoption, Self-Efficacy, and Business Success—towards Resilience and Sustainability Micro-Entrepreneurs in the Post-Pandemic World." *Cogent Business & Management* 10, no. 3 (2023): 2260128.
- Badan Pusat Statistik. *Statistik Pemuda Indonesia 2023*. Jakarta, 2023.
- Bandura, Albert. "Toward a Psychology of Human Agency: Pathways and Reflections." *Perspectives on Psychological Science* 13, no. 2 (2018): 130–36.
- Bläse, Richard, Matthias Filser, Jana Weise, Albenä Björck, and Kaisu Puumalainen. "Identifying Institutional Gaps: Implications for an Early-stage Support Framework for Impact Entrepreneurs." *Corporate Social Responsibility and Environmental Management* 32, no. 1 (2025): 679–97.
- Brüne, Natalie, and Eva Lutz. "The Effect of Entrepreneurship Education in Schools on Entrepreneurial Outcomes: A Systematic Review." *Management Review Quarterly* 70, no. 2 (2020): 275–305.
- Cuong, Nguyen Hoa, and Dinh Khanh Le. "Vietnam Digital Transformation and the Way Forward." In *Knowledge Transformation and Innovation in Global Society: Perspective in a Changing Asia*, 141–64. Springer, 2024.
- Fernandes, Cristina, João J Ferreira, Pedro Mota Veiga, Sascha Kraus, and Marina Dabić. "Digital Entrepreneurship Platforms: Mapping the Field and Looking towards a Holistic Approach." *Technology in Society* 70 (2022): 101979.
- Garcia-Rodriguez, F., G.-S. E., and R.-R. I. "Digital Creativity in Entrepreneurship: The Role of Innovative Thinking in Digital Ventures."

- Technological Forecasting and Social Change* 186 (2023): 122–135.
- Hair, J. F. J., G. T. M. Hult, C. M. Ringle, and C. Sarstedt. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 3rd ed. SAGE Publications, 2022.
- Hair, Joe F., Christian M. Ringle, and Marko Sarstedt. “PLS-SEM: Indeed a Silver Bullet.” *Journal of Marketing Theory and Practice* 19, no. 2 (2011): 139–52. <https://doi.org/10.2753/MTP1069-6679190202>.
- Hair Jr, Joseph F, G Tomas M Hult, Christian M Ringle, Marko Sarstedt, Nicholas P Danks, and Soumya Ray. *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*. Springer Nature, 2021.
- Hasan, Muhammad, Ericha Tiara Hutamy, Tuti Supatminingsih, Muhammad Ihsan Said Ahmad, Nur Aeni, and Akhtem A Dzhelilov. “The Role of Entrepreneurship Education in the Entrepreneurial Readiness of Generation Z Students: Why Do Digital Business Literacy and Financial Literacy Matter?” *Cogent Education* 11, no. 1 (2024): 2371178.
- Hidayat, Rahmat. “The Influence of Financial Behavior on Capital Market Investment Decision Making with Mediating of Financial Literacy in Yogyakarta.” *INTERNATIONAL JOURNAL OF RESEARCH IN BUSINESS AND SOCIAL SCIENCE* 12, no. 8 (2023): 227–37.
- International Telecommunication Union. “Measuring Digital Development: Facts and Figures 2023,” 2023.
- Ioannou, Andri, and Symeon Retalis. “Building Entrepreneurial Self-Efficacy in the EdTech Sector: The Impact of an Entrepreneurship Education Program.” *The International Journal of Information and Learning Technology* 42, no. 3 (2025): 251–68.
- Kauffman, Douglas F, Jesus de la Fuente, and Evely Boruchovitch. *Past, Present and Future Contributions from the Social Cognitive Theory (Albert Bandura)*. Frontiers Media SA, 2023.
- Koskelainen, Tiina, Panu Kalmi, Eusebio Scornavacca, and Tero Vartiainen. “Financial Literacy in the Digital Age—A Research Agenda.” *Journal of Consumer Affairs* 57, no. 1 (2023): 507–28.
- Li, Jingwen, Haoliang Wang, and WeiNi Soh. “Digital Transformation, Financial Literacy and Rural Household Entrepreneurship.” *Finance Research Letters* 62 (2024): 105171.
- Lusardi, Annamaria, and Flore-Anne Messy. “The Importance of Financial

- Literacy and Its Impact on Financial Wellbeing.” *Journal of Financial Literacy and Wellbeing* 1, no. 1 (2023): 1–11.
- McGee, Jeffrey E, and Mark Peterson. “The Long-term Impact of Entrepreneurial Self-efficacy and Entrepreneurial Orientation on Venture Performance.” *Journal of Small Business Management* 57, no. 3 (2019): 720–37.
- Mirhabibi, Arezou, Ali Shayan, and Shaghayegh Sahraei. “Improving Digital Entrepreneurship Readiness of Business Students: The Moderating Roles of Digital Mindset and Digital Education.” *The International Journal of Management Education* 23, no. 2 (2025): 101151.
- Nambisan, Satish. “Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship.” *Entrepreneurship Theory and Practice* 41, no. 6 (2017): 1029–55.
- Nyagadza, Brighton, Rumbidzai Pashapa, Anyway Chare, Gideon Mazuruse, and P K Hove. “Digital Technologies, Fourth Industrial Revolution (4IR) & Global Value Chains (GVCs) Nexus with Emerging Economies’ Future Industrial Innovation Dynamics.” *Cogent Economics & Finance* 10, no. 1 (2022): 2014654.
- Sahut, Jean-Michel, Luca Iandoli, and Frédéric Teulon. “The Age of Digital Entrepreneurship.” *Small Business Economics* 56, no. 3 (2021): 1159–69.
- Sarstedt, Marko, Joseph Hair, Mandy Pick, Benjamin Liengard, Lacramioara Radomir, and Christian Ringle. “Progress in Partial Least Squares Structural Equation Modeling Use in Marketing Research in the Last Decade.” *Psychology & Marketing* 39 (January 27, 2022): 1035–64. <https://doi.org/10.1002/mar.21640>.
- Takona, James P. “Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.” *Quality & Quantity* 58, no. 1 (2024): 1011–13.
- Tatpuje, Dipak U, Avinash Kakade, Vaibhav Jadhav, and Avinash Ganbote. “A Comparative Study on Advanced Skills of Technology and Entrepreneurial Skills with the Awareness and Preparedness among the Rural Youths.” *Entrepreneurship Education* 5, no. 1 (2022): 21–35.
- Zhang, Xixi, Xinglin Hao, and Xuerui Jia. “Enhancing Employees’ Readiness for Digital Transformation: Findings from SEM and FsQCA Approaches Based on the Planned Behavior Perspective.” *Journal of Enterprise Information Management*, 2025, 1–26.