



The Role of Creativity, Educational Support, and Self-Efficacy on Digital Entrepreneurial Intention: Insight from Indonesian Students

Muhamad Ridwan^{1*}, Ahmad Zaki², Deby Amirunnisa³, Sella Enggar Pramesti⁴

*Corresponding author email: muhamad.ridwan@upnyk.ac.id

^{1,2,3,4}UPN “Veteran” Yogyakarta, Indonesia

Abstract. This study presents a research model that uses creativity, educational support, and self-efficacy as theoretical constructs to predict digital entrepreneurial intention. Based on the literature review, the study proposes five hypotheses in a research model tested using structural equation modeling (SEM) by surveying 303 students from various Indonesian universities. The findings indicate that self-efficacy is an essential predictor of digital entrepreneurial intention. Besides, self-efficacy has significant positive mediating effects on the relationship between creativity and digital entrepreneurial intention. The results also suggest that self-efficacy significantly mediates the relationship between educational support and digital entrepreneurial intention. The conclusions underscore the importance of fostering creativity, providing educational support, and nurturing self-efficacy to encourage students in venturing into digital entrepreneurship. As a result, this study holds notable theoretical and practical implications for the advancement of digital entrepreneurship promotion.

Keywords: creativity, educational support, self-efficacy, digital entrepreneurial intention

1 Introduction

The present state of open unemployment in Indonesia can be analyzed using statistics [1] in Figure 1. The data categorize individuals based on their highest level of education, revealing that vocational high school graduates constitute the largest proportion of the overall unemployment rate. However, when combining diploma, bachelor, and advanced degree holders, university graduates emerge with the highest percentage of open unemployment in Indonesia. There is a prevailing expectation among young workers, particularly recent graduates, that securing well-paying positions in both private and public sectors will be attainable post-graduation. This predicament stems from the widespread belief that pursuing higher education inherently facilitates job acquisition.

Encouraging entrepreneurial intention during the student years stands out as a strategy to mitigate the elevated unemployment rates among university graduates. By providing suitable career opportunities and encouraging them to start their own businesses, especially digital businesses, since students are members of Generation Z, a generation closely identified with the growing adoption of technology in daily life, it is appropriate to encourage them to participate in the Golden Indonesia 2045 target. Digital entrepreneurial goals are influenced by a variety of internal and external factors. Studies on the intentions of digital entrepreneurs are therefore becoming more and more significant.

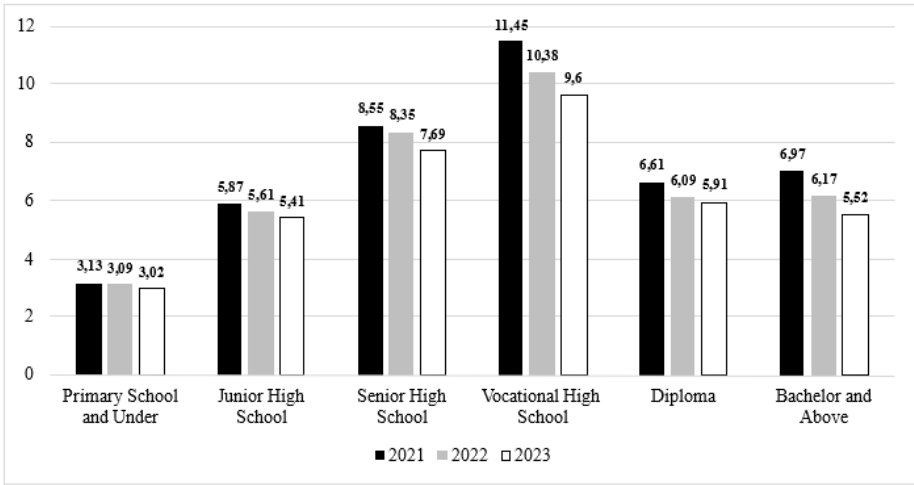


Fig. 1. Unemployment Rate in Indonesia
Source: BPS Indonesia, 2023

Academics, decision-makers, and practitioners have become more interested in digital entrepreneurship research in recent years [2][3]. Although it is still in its infancy, digital entrepreneurship is becoming more and more significant, and there is limited understanding of the factors influencing it [4][5]. Additionally, it is important to fully comprehend the prerequisites for becoming a successful digital entrepreneur as well as the elements that motivate people to start their own businesses online [6][7].

More research on digital entrepreneurial intention is needed, according to a review of previous research. Several theoretical frameworks might represent predictors of digital entrepreneurial intention, yet only a limited number of studies have validated this notion [8]. This study presents a research model that uses creativity, educational support, and self-efficacy as theoretical constructs. These factors, though not extensively explored, are utilized to examine the elements influencing digital entrepreneurial intention.

2 Literature Review

2.1. Digital Entrepreneurial Intention

Research on entrepreneurial intentions in general is quite extensive and comprehensive, but research that specifically explores digital entrepreneurial intentions is still lacking. Several studies on digital entrepreneurship intentions that already exist have pointed to the fact that studies on digital entrepreneurship intentions have not been extensively explored, and there are still several factors that have been researched [9]. The Theory of Planned Behavior is the most widely used theory for exploring entrepreneurial intentions. Various other theoretical paradigms also have the possibility of being an antecedent of digital entrepreneurship intentions, but a limited number of studies have been unable to provide evidence for it [8].

2.2. Self-Efficacy

Self-efficacy is defined as an individual's belief in their capacity to effectively execute the necessary actions to meet situational expectations [10]. The outcomes of actions, including perceived goal progress and achievement, as well as environmental inputs, can influence self-efficacy [11]. [12] provided evidence supporting a positive relationship between entrepreneurial self-efficacy and entrepreneurial intentions. Similarly, other studies, such as those [13] and [14], have reported consistent findings, indicating that entrepreneurial self-efficacy significantly influences entrepreneurial intention.

2.3 Creativity

Creativity holds significant importance in individual cognitive processes as it facilitates the generation of novel and valuable ideas by leveraging relevant information and knowledge. [15] defines creativity as the production of ideas that are both original and valuable, whether in the short or long term. [16] assert that entrepreneurship is, in part, an outcome of creativity, as new enterprises often exhibit uniqueness and value. Given its association with identifying opportunities leading to the establishment of new ventures, creativity is considered crucial to entrepreneurial intent or behavior [17]. Additionally, [18] found that individuals perceiving themselves as creative are more likely to engage in entrepreneurial activities. Expanding the perspective, research by [19] indicates that the relationship between creativity and entrepreneurial intentions is mediated by self-efficacy.

2.4 Educational Support

Giving students the expertise and skills needed to assist start-ups and future entrepreneurial success is known as entrepreneurial educational support [20]. According to Liu et al. [21] there is a positive correlation between educational support and entrepreneurial intention. Turker and [22] discovered similar findings, indicating that entrepreneurial intention was significantly predicted by perceived educational support. Additionally, [23] demonstrated a significant correlation between educational support and entrepreneurial intention, with self-efficacy operating as a mediating factor in the relationship.

Based on the literature review, the study proposes five hypotheses for a research model below:

H1: Self efficacy has a positive and significant effect on digital entrepreneurship intentions.

H2: Creativity has a positive and significant effect on self efficacy.

H3: The relationship between creativity and digital entrepreneurial intention is mediated by self efficacy.

H4: Educational support has a positive and significant effect on self efficacy.

H5: The relationship between educational support and digital entrepreneurial intention is mediated by self efficacy.

3 Method

The goal of this research is to investigate the impact of creativity, educational support, and self-efficacy on digital entrepreneurial intention. Data collection for this study was conducted through an online survey, employing a purposive sampling technique to select the study sample. Participants in this research consisted of Indonesian students across different educational levels. Three hundred and thirty-three respondents who matched the study's data processing requirements answered the survey. The minimum sample size requirement has been reached as the number of variables evaluated is at least ten times smaller than the sample size [24].

Previous research instruments were used to measure the variables in this research, including six items of digital entrepreneurial intention adapted from Liñán & Chen [25], four items of self-efficacy were adapted [26], six items of creativity adapted [19], and three items of educational support adapted from Denanyoh et al. [27]. Since all of the study's variables were measured with already-existing instruments for measurement, back translation was used to translate the instruments into Indonesian. Participants were tasked with completing a questionnaire using a 5-point Likert scale. The scale ranged from 1 (strongly disagree) to 5 (strongly agree), with the points in between representing varying degrees of disagreement or agreement.

The research data were analyzed using the Partial Least Square - Structural Equation Modeling (PLS-SEM) approach. SmartPLS 3.0 was employed to examine the validity and reliability of the instrument, as well as to investigate the proposed hypotheses and their relationships with the variables.

4 Result and Discussion

The outcomes of the PLS Algorithm analysis, as depicted in Table 1, reveal that the majority of indicators for each variable attain an Outer Loading (OL) score exceeding 0.5. Furthermore, the results affirm that the Cronbach Alpha (CA) score surpasses the 0.7 threshold. Additionally, the Composite Reliability (CR) score surpasses the 0.7 limit, indicating strong reliability for all the variables.

As all constructs surpass the 0.5 threshold, the Average Variance Extracted (AVE) score affirms convergent validity. Meanwhile, the Fornell-Larcker Criterion (FL) score was employed for the discriminant validity test, indicating that each construct's AVE square root exceeds its correlation with other constructs. Additionally, the Cross Loadings (CL) reveal that all indicators exhibit a higher score in their original construct compared to other constructs in the model. Therefore, it can be stated that any construct meets both discriminant and convergent validity.

The study generated a Variance Inflation Factor (VIF) score that is below the standard limit of 5. This shows that the exogenous variables have no significant intercorrelation. The RSquare score is 0.273 for digital entrepreneurial intention and 0.581 for self-efficacy, both above the criterion 0,10 as endogenous variables. These values indicate that exogenous and endogenous variable variances are sufficiently explained by the suggested model. Furthermore, the Q-Square values presented in the Blindfolding analysis findings are 0.161 for digital entrepreneurial intention and 0.401 for self-efficacy. This indicates that since its values are greater than zero, the model developed that was used to predict endogenous variables is meaningful.

Table 1. PLS Algorithm Analysis

Variable	Indicator	OL	CA	CR	AVE	FL	CL	VIF
Digital	DEI1	0,774	0,874	0,905	0,613	0,783	0,774	1,811
Entrepreneurial Intention	DEI2	0,731				(others: 0,523;	0,731	1,701
	DEI3	0,812				0,523;	0,812	2,107
	DEI4	0,757				0,479;	0,757	1,853
	DEI5	0,826				0,431)	0,826	2,246
	DEI6	0,793					0,793	2,090
Self-Efficacy	SEF1	0,836	0,860	0,905	0,704	0,839	0,836	2,066
	SEF2	0,822				(others: 0,822	0,822	2,005
	SEF3	0,846				0,747;	0,846	2,071
	SEF4	0,852				0,529;	0,852	2,154
Creativity	CRV1	0,845	0,914	0,933	0,700	0,837	0,845	2,689
	CRV2	0,817				(others: 0,817	0,817	2,395
	CRV3	0,850				0,747;	0,850	2,663
	CRV4	0,866				0,479;	0,866	3,076
	CRV5	0,867				0,408)	0,867	2,939
	CRV6	0,772					0,772	1,860
Educational Support	EDS1	0,890	0,880	0,926	0,806	0,898	0,890	2,157
	EDS2	0,900				(others: 0,900	0,900	2,682
	EDS3	0,904				0,444;	0,904	2,669
						0,431;		0,408)

The bootstrapping approach is employed to assess the significance of various evaluations, utilizing three criteria for hypothesis assessment: the Original Sample, T-Statistics, and P-Value. A positive impact on the relationship between variables is indicated when the Original Sample yields a positive value. The T-Statistics, with a value exceeding 1.96, indicates the expected level of significance from exogenous to endogenous variables. A P-Value below 0.05 is considered standard for accepting a hypothesis.

Table 2. Bootstrapping Analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/ STDEV)	P Values
Self-Efficacy -> Digital Entrepreneurial Intention (H1)	0,523	0,527	0,043	12,198	0,000
Creativity -> SelfEfficacy (H2)	0,678	0,680	0,037	18,343	0,000
Educational Support -> Self-Efficacy (H4)	0,168	0,168	0,048	3,467	0,000
Creativity -> Digital Entrepreneurial Intention (H3)	0,355	0,359	0,037	9,603	0,000

Educational Support -> Digital Entrepreneurial Intention (H5)	0,088	0,088	0,027	3,264	0,001
---	-------	-------	-------	-------	-------

Table 2 displays the findings of the bootstrapping analysis in this investigation, that all hypotheses are accepted. The findings indicate that self-efficacy is an essential predictor of digital entrepreneurial intention, demonstrating that individuals must also feel self-sufficient in order to pursue an entrepreneurial career. Moreover, self-efficacy plays a crucial role as a significant positive mediator in the association between creativity and digital entrepreneurial intention. The findings also indicate that self-efficacy significantly mediates the relationship between educational support and digital entrepreneurial intention.

5 Conclusion

Theoretically, this research expands the perspective of digital entrepreneurial intention, especially the importance of creativity, educational support, and self-efficacy in influencing students to pursue digital entrepreneurship. Consequently, universities need to expand their collaboration with the government as well as business institutions in order to provide technical assistance related to growing digital entrepreneurial talents.

Acknowledgement

Acknowledgments are due to Universitas Pembangunan Nasional "Veteran" Yogyakarta for providing the research funding, and sincere appreciation goes to all the participants who contributed to this study.

References

- [1] BPS, "Keadaan Ketenagakerjaan Indonesia Februari 2023," [Online]. Available: <https://www.bps.go.id/pressrelease/2023/05/05/2001/februari-2023--tingkat-pengangguran-terbuka--tpt--sebesar-5-45-persen-dan-rata-rata-upah-buruhsebesar-2-94-juta-ru피아h-perbulan.html>. [Accessed: June 23, 2023].
- [2] V. Jafari-Sadeghi, A. Garcia-Perez, E. Candelò, and J. Couturier, "Exploring the impact of digital transformation on technology entrepreneurship and technological market expansion: The role of technology readiness, exploration and exploitation," *J. Bus. Res.*, vol. 124, pp. 100–111, 2021, doi: 10.1016/j.jbusres.2020.11.020.
- [3] T. Beliaeva, M. Ferasso, S. Kraus, and E. J. Damke, "Dynamics of digital entrepreneurship and the innovation ecosystem: A multilevel perspective," *Int. J. Entrepreneurial Behav. Res.*, vol. 26, no. 2, pp. 266–284, 2020, doi: 10.1108/IJEBr-06-2019-0397.
- [4] A. Yaghoubi Farani, S. Karimi, and M. Motaghd, "The role of entrepreneurial knowledge as a competence in shaping Iranian students' career intentions to start a new digital business," *Eur. J. of Training and Development*, vol. 41, no. 1, pp. 83–100, 2017, doi: 10.1108/EJTD-07-2016-0054.

- [5] S. Nambisan, "Digital Entrepreneurship: Toward a Digital Technology Perspective of Entrepreneurship," *Entrepreneurship: Theory and Practice*, vol. 41, no. 6, pp. 1029–1055, 2017, doi: 10.1111/etap.12254.
- [6] S. Darmanto, D. Darmawan, A. Ekopriyono, and A. U. Dhani, "Development of digital entrepreneurial intention model in Uncertain Era," *Uncertain Supply Chain Manage.*, vol. 10, no. 3, pp. 1091–1102, 2022, doi: 10.5267/j.uscm.2022.7.050.
- [7] S. Kraus et al., "Digital entrepreneurship: A research agenda on new business models for the twenty-first century," *Int. J. Entrepreneurial Behav. Res.*, vol. 25, no. 2, pp. 353–375, 2019, doi: 10.1108/IJEBR06-2018-0425.
- [8] T. C. Huang, Y. J. Wang, and H. M. Lai, "What Drives Internet Entrepreneurial Intention to Use Technology Products? An Investigation of Technology Product Imagination Disposition, Social Support, and Motivation," *Front. Psychol.*, vol. 13, 2022, doi: 10.3389/fpsyg.2022.829256.
- [9] A. A. Mir, S. Hassan, and S. J. Khan, "Understanding digital entrepreneurial intentions: A capital theory perspective," *Int. J. of Emerging Markets*, 2022, doi: 10.1108/IJOEM-05-2021-0687.
- [10] J. E. Maddux and E. M. Kleiman, "Self-efficacy," in A. M. Wood & J. Johnson (Eds.), *The Wiley Handbook of Positive Clinical Psychology*, Chichester, UK: John Wiley & Sons, pp. 89–101, 2016, doi:10.1002/9781118468197.ch7.
- [11] D. H. Schunk and M. K. DiBenedetto, "Motivation and social cognitive theory," *Contemporary Educational Psychology*, vol. 60, p. 101832, 2020, doi: 10.1016/j.cedpsych.2019.101832.
- [12] C. C. Chen, P. G. Greene, and A. Crick, "Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?," *J. Bus. Venturing*, vol. 13, pp. 295–316, 1998, doi: 10.1016/S0883-9026(97)00029-3.
- [13] Z. Peng, G. Lu, and H. Kang, "Entrepreneurial intentions and its influencing factors: A survey of the university students in Xi'an China," *Creative Education*, vol. 3, no. 08, p. 95, 2013, doi: 10.4236/ce.2012.38b02.
- [14] M. J. Austin and M. M. Nauta, "Entrepreneurial role-model exposure, self-efficacy, and women's entrepreneurial intentions," *J. Career Dev.*, vol. 43, no. 3, pp. 260–272, 2016, doi: 10.1177/0894845315597475.
- [15] T. M. Amabile, "Creativity in Context." Boulder, CO: Westview, 1996.
- [16] R. J. Sternberg and T. I. Lubart, "The concept of creativity: Prospects and paradigms," in *Handbook of Creativity*, pp. 3–15, 1999, doi: 10.1017/CBO9780511807916.003.
- [17] D. J. Hansen, R. Shrader, and J. Monllor, "Defragmenting definitions of entrepreneurial opportunity," *J. Small Bus. Manage.*, vol. 49, no. 2, pp. 283–304, 2011, doi: 10.1111/j.1540-627X.2011.00325.x.
- [18] L. A. Zampetakis et al., "Creativity and entrepreneurial intention in young people: Empirical insights from business school students," *The Int. J. of Entrepreneurship and Innovation*, vol. 12, no. 3, pp. 189–199, 2011, doi: 10.5367/ijei.2011.0037.
- [19] A. Biraglia and V. Kadile, "The Role of Entrepreneurial Passion and Creativity in Developing Entrepreneurial Intentions: Insights from American Homebrewers," *J. Small Bus. Manage.*, vol. 55, no. 1, pp. 170–188, 2017, doi: 10.1111/jsbm.12242.
- [20] G. Maheshwari and K. L. Kha, "Investigating the relationship between educational support and entrepreneurial intention in Vietnam: The mediating role of entrepreneurial self-efficacy in the theory of planned behaviour," *The Int. J. of Management Education*, vol. 20, no. 2, 100553, 2021, doi: 10.1016/j.ijme.2021.100553.
- [21] X. Liu et al., "Research on the effects of entrepreneurial education and entrepreneurial self-efficacy on college students' entrepreneurial intention," *Front. Psychol.*, vol. 10, 2019, doi: 10.3389/fpsyg.2019.00869.
- [22] D. Turker and S. S. Selcuk, "Which factors affect entrepreneurial intention of university students?," *J. of European Industrial Training*, vol. 33, no. 2, pp. 142–159, 2009, doi: 10.1108/03090590910939049.

- [23] J. L. Oyugi, "The mediating effect of self-efficacy on the relationship between entrepreneurship education and entrepreneurial intentions of university students," *J. of Entrepreneurship, Management and Innovation*, vol. 11, no. 2, pp. 31-56, 2015.
- [24] J. T. Roscoe, *Fundamental Research Statistics for the Behavioral Science*. (2nd Edition). Holt, Rinehart and Winston, Inc., 1975.
- [25] F. Liñán and Y. W. Chen, "Development And Cross-Cultural Application of A Specific Instrument To Measure Entrepreneurial Intentions," *Entrepreneurship Theory and Practice*, vol. 33, no. 3, pp. 593-617, 2009, doi: 10.1111/j.1540-6520.2009.00318.x.
- [26] H. Zhao, S. E. Seibert, and G. E. Hills, "The Mediating Role of Self-Efficacy in the Development of Entrepreneurial Intentions," *J. of Applied Psychology*, vol. 90, no. 6, pp. 1265-1272, 2005, doi: 10.1037/0021-9010.90.6.1265.
- [27] R. Denanyoh, K. Adjei, and G. E. Nyemekye, "Factors that impact on entrepreneurial intention of tertiary students in Ghana," *Int. J. Bus. Soc. Res.*, vol. 5, no. 3, pp. 19-29, 2015.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

