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Digital literacy, entrepreneurial knowledge, and internal locus of control as predictors of entrepreneurial interest among Indonesian economics education students

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Abstract
High unemployment rates among college graduates and low interest in entrepreneurship among students are pressing issues in Indonesia's economic development. This study examines how digital literacy, entrepreneurial knowledge, and internal locus of control influence entrepreneurial interest among economics students at Surabaya State University. Using a quantitative approach and explanatory research design, this study involved 171 participants obtained through random sampling. Data analysis was performed using Partial Least Squares (PLS)-based Structural Equation Modeling (SEM) through the WarpPLS application. The results of the study demonstrate that entrepreneurial interest is positively and significantly impacted by all three variables. Among the three, entrepreneurial knowledge emerged as the dominant factor, followed by digital literacy and internal locus of control. Overall, this research model was able to explain 48% of the variation in entrepreneurial interest.

Keywords: Digital Literacy, Entreprenurial Knowledge, Internal Locus of Control, Entrepreneurial Interest

Abstrak
Tingginya tingkat pengangguran di kalangan lulusan perguruan tinggi serta rendahnya minat berwirausaha mahasiswa merupakan permasalahan serius dalam pembangunan ekonomi Indonesia. Penelitian ini bertujuan untuk menganalisis pengaruh literasi digital, pengetahuan kewirausahaan, dan *internal locus of control* terhadap minat berwirausaha mahasiswa Pendidikan Ekonomi di Universitas Negeri Surabaya. Penelitian ini menggunakan pendekatan kuantitatif dengan desain penelitian eksplanatori. Sampel penelitian terdiri atas 171 responden yang diperoleh melalui teknik *random sampling*. Analisis data dilakukan dengan metode *Structural Equation Modeling* (SEM) berbasis Partial Least Squares (PLS) menggunakan aplikasi WarpPLS. Hasil penelitian menunjukkan bahwa literasi digital, pengetahuan kewirausahaan, dan *internal locus of control* berpengaruh positif dan signifikan terhadap minat berwirausaha mahasiswa. Di antara ketiga variabel tersebut, pengetahuan kewirausahaan merupakan faktor yang paling dominan memengaruhi minat berwirausaha, diikuti oleh literasi digital dan *internal locus of control*. Secara keseluruhan, model penelitian ini mampu menjelaskan sebesar 48% variasi minat berwirausaha mahasiswa.

Kata Kunci: Literasi Digital, Pengetahuan Kewirausahaan, Internal Locus of Control, Minat Berwirausaha

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1. Introduction

Entrepreneurship plays a vital role in driving economic growth through job creation and innovation (Franco, 2020). However, Indonesia continues to face high unemployment among college graduates. As of February 2025, the Open Unemployment Rate reached 4.76%, or around 7.28 million people, with many being vocational and university graduates (BPS, 2025). This indicates a gap between higher education outcomes and labor market needs, a challenge also reflected globally, where youth unemployment stood at 13% in 2023 (ILO, 2024). In response, students must shift from being job seekers to job creators. Although entrepreneurship offers a strategic solution, student interest remains low. Many still prefer formal employment due to perceptions of stability and security. Indonesia's early-stage entrepreneurial activity rate of 9.6% also trails behind several Southeast Asian countries (GEM, 2020).

Lack of digital literacy the ability to access and use digital technologies in a commercial setting is frequently linked to low rates of entrepreneurship (Tinmaz et al., 2022). In today's digitally driven economy, this competency is vital, as it empowers businesses to harness e-commerce, social media, and digital marketing tools to identify new opportunities and implement strategic initiatives (Ip, 2024; Smith & Storrs, 2023). Entrepreneurial knowledge, which includes understanding business concepts, financial management, marketing strategies, and legal aspects, serves as a theoretical basis that helps individuals make more informed decisions and minimize the potential for failure (Zhang, 2025). Psychological factors such as internal locus of control refer to confidence in achieving success or failure depends primarily on their own efforts and abilities (Rotter, 1966), is an important asset for developing proactivity, persistence, and responsibility in facing the challenges of conducting business activities.

This study also integrates the Theory of Planned Behavior (Ajzen, 1991), thus providing a more comprehensive analytical framework. This theory explains how the interaction between intention and behavioral control directly influences the decision to undertake an entrepreneurial venture. This helps connect psychological aspects with external factors such as digital literacy and entrepreneurial knowledge. The Economics Education Study Program at Surabaya State University (UNESA) has a dual mandate, namely preparing graduates who are not only ready to become teachers, but also competent in entrepreneurship. Ironically, entrepreneurial interest among students is still relatively low, with most preferring careers in formal institutions. This preference is at odds with the vast opportunities offered by the digital economy and signals a failure to transform entrepreneurial knowledge into real intent. Therefore, this study focuses on analyzing the influence of digital literacy, entrepreneurial knowledge, and internal locus of control as key factors that are believed to be able to bridge the gap between education and actual interest in entrepreneurship.

Various studies on entrepreneurial interest have been conducted, with different focuses. Several previous studies analyzed the influence of entrepreneurial knowledge (Jaya & Harti, 2021; Pratama et al., 2024) and internal locus of control (Annisa et al., 2021; Ayuni & Kustini, 2020) separately, while other studies highlight the role of digital

literacy in entrepreneurial interest (Apidana, 2021; Filia et al., 2024). However, there are several weaknesses that need to be considered. First, there has been no integration of the three main variables, namely digital literacy, entrepreneurial knowledge, and internal locus of control, into a single research model that tests their simultaneous and partial effects. Second, most previous studies have only been conducted on the general population or different institutions, so a more specific study is needed on Economics Education students at Surabaya State University. Furthermore, even though internal and external locus of control have differing impacts on entrepreneurial desire, the assessment of locus of control in many research frequently fails to discriminate between the two.

Thus, by conducting a thorough analysis of the concurrent and partial effects of digital literacy, entrepreneurial knowledge, and internal locus of control on the entrepreneurial interest among students in the Economics Education Study Program at UNESA, this study seeks to fill this research gap. The urgency of this research lies in the pressing need to address the persistently low entrepreneurial interest among education students, who are expected not only to become educators but also to serve as agents of economic change. In the context of digital transformation and limited formal employment opportunities, fostering entrepreneurial intentions among future teachers is crucial for developing a generation capable of instilling entrepreneurial values in the education system.

This study is therefore essential to provide empirical evidence that can inform curriculum development and educational policies aimed at producing graduates who are not only academically qualified but also equipped with the mindset and skills to create economic opportunities. The findings of this study are expected to provide deeper and more descriptive insights into encouraging increased interest in entrepreneurship among students, while not merely adding to the literature, but also presenting comprehensive analysis and providing practical implications for educational policy at UNESA, such as developing a more entrepreneurship-oriented curriculum and supporting national entrepreneurship development programs to reduce poverty levels.

2. Literature Review

Student interest in participating in entrepreneurial activities is one of the strategic issues in human resource development, especially in the digital economy era that demands creativity, innovation, and independence. A person's interest in entrepreneurship reflects their psychological desire to establish an independent and sustainable business. In higher education, increasing this interest is one of the main indicators of the effectiveness of entrepreneurship education, given that it is closely related to students' readiness to face the dynamics and demands of the world of work.

According to Ganefri et al. (2024) Entrepreneurship education integrated with digital literacy enhancement significantly increases students' intensity to start their own businesses. This statement is in line with the Theory of Planned Behavior (TPB) developed by Ajzen (1991), where interest in entrepreneurship is influenced by three

main factors, namely attitudes toward behavior, subjective norms, and perceptions of behavioral control. Tseng et al. (2022) thereby substantiating this theory by illustrating the significant role of locus of control in fortifying perceptions of behavioral control and entrepreneurial intentions within digital contexts.

The era of digital revolution has made digital literacy a crucial component in forming young people's entrepreneurial mindset. In particular, students with advanced digital competencies are better able to adjust to quick changes in technology, use digital platforms to find and seize business opportunities, and show the confidence required to make strategic, tech-driven business decisions. Duong (2025) highlights that digital and artificial intelligence (AI) literacy foster studen interset in digital entrepreneurship by enhancing their self-efficacy and confidence in using technology. Research Wardoyo et al. (2024) also revealed that digital literacy exerts a significant influence on entrepreneurial development, a relationship that is mediated and strengthened by entrepreneurial literacy and an internal locus of control.

Furthermore, Iskandar et al. (2024) emphasizes that Indonesian students who are classified as digital natives with high digital literacy have a more positive entrepreneurial attitude and a greater tendency to utilize digital technology as a means of innovation. The findings of this investigation are backed by Maulani et al. (2023) emphasizes that students' ability to navigate and evaluate digital content is closely related to their entrepreneurial intentions through e-commerce platforms and social media. Additional research from Khairunisa, N.A (2023) shows that students' interest in entrepreneurship is positively and significantly impacted by digital literacy. Students who are proficient with digital technology such as social media and e-commerce platforms tend to be more eager to launch their own companies. These results demonstrate that digital literacy abilities not only enhance technical aspects but also contribute to the development of an entrepreneurial attitude that is adaptable to the demands of the digital economy. Based on the established theoretical and empirical foundation, this study proposes hypothesis (H_1) Digital literacy positively and significantly influences the interest of UNESA's Economics Education students in pursuing entrepreneurial ventures.

In addition to digital skills, entrepreneurial knowledge also plays a key role in shaping students' interest in engaging in entrepreneurial activities. Entrepreneurial knowledge includes an understanding of the process of identifying opportunities, risk management, business planning, and business development strategies. Students with good entrepreneurial knowledge tend to have stronger analytical and innovative skills in designing business models. Akhter et al. (2022) indicates that entrepreneurial knowledge plays a significant role in shaping interest in digital entrepreneurship, as such knowledge increases individuals' confidence in managing online businesses and utilizing resources more effectively. In line with this, Ganefri et al. (2024) states that students involved in project-based entrepreneurship learning experience significant improvements in knowledge, creativity, and interest in starting their own businesses.

In the context of Economics Education students, this is relevant because a curriculum oriented towards mastery of economic theory can be implemented in an applied manner through digital entrepreneurship activities. New research by (Mutmainah et al., 2024) indicates that entreprenuerial knowledge exerts a significant influence on students interest in pursuing entrepreneurial ventures. The higher the students understanding of the concept of entrepreneurship, the greater their tendency to start their own business. Based on this rationale, the second hypothesis (H_2) posits that entrepreneurial knowledge positively and significantly influences the entrepreneurial interest among UNESA's Economics Education students.

Meanwhile, a strong internal locus of control significantly influences students' inclination toward entrepreneurship. This psychological trait leads individuals to believe that outcomes are contingent upon their own initiatives, rather than outside forces like fate or good fortune. Research Saputro et al. (2022) shows that locus of control has a positive effect on entrepreneurial interest, especially in the context of a developing economy, because it increases individual responsibility and perseverance in facing business challenges. Auna (2020) also found that self-efficacy acts as a mediator in the relationship between locus of control and entrepreneurial interest. Students who have higher levels of self-confidence tend to have stronger motivation to start and maintain business activities. This evidence is substantiated by Tseng et al. (2022) which confirms that locus of control strengthens the perception of behavioral control, one of the main components in the formation of entrepreneurial intention according to TPB.

Research by (Saputro et al., 2022) according to the analytical findings, an internal locus of control significantly and favorably influences entrepreneurial interest. These findings confirm that the stronger a person's belief in their ability to control various outcomes, the higher their tendency to start a business. This empirical evidence is in line with the perspective of entrepreneurial psychology, which emphasizes that internal factors, such as self-confidence and personal responsibility, play a central role in shaping entrepreneurial interest. This study's third hypothesis (H_3), which is based on the theoretical framework and empirical data, states that internal locus of control significantly and favorably influences students' interest in entrepreneurship in Surabaya State University's Economics Education Study Program. Additionally, this study develops a fourth hypothesis (H_4), which asserts that digital literacy, entrepreneurial knowledge, and internal locus of control collectively have a favorable and significant impact on the entrepreneurial interest of students in the Economics Education Study Program at Surabaya State University, based on a thorough synthesis of the literature review presented.

3. Research Method

The research employed a quantitative method with an explanatory approach to examine the determinants of entrepreneurial interest among students in the Economics Education Study Program at Surabaya State University (see Figure 1). The analysis

focused on digital literacy, entrepreneurial knowledge, and internal locus of control, alongside entrepreneurial interest as the outcome variable. Data were gathered through a Likert-scale questionnaire (1–5) constructed based on the indicators corresponding to each variable. The study involved students who had completed entrepreneurship courses, as they were considered to possess foundational knowledge of entrepreneurial concepts and practices.

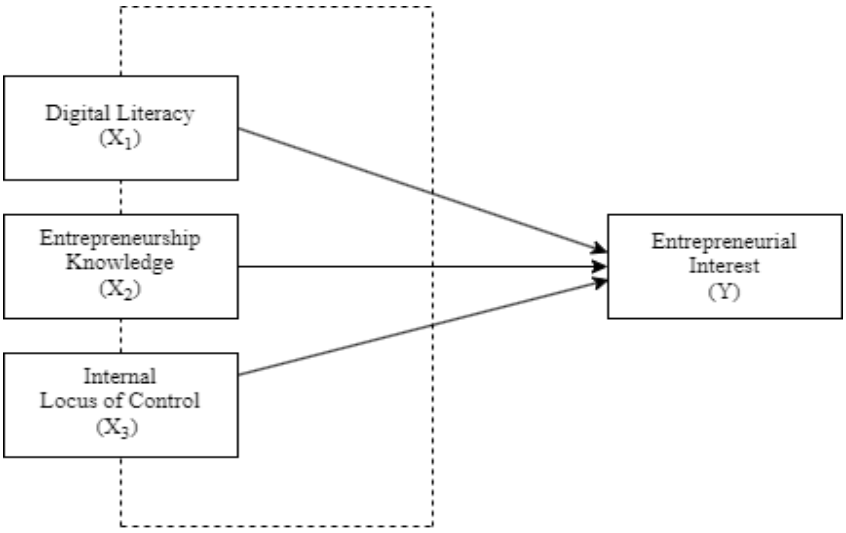

Figure 1. Conceptual Framework

The location was chosen purposively, given that Surabaya State University is recognized for its active integration of entrepreneurship-oriented learning and digital transformation within its curriculum. Although the literature acknowledges additional factors that may shape entrepreneurial interest such as social support, peer influence, or family economic background these were excluded from the model due to the study's focus on students' internal attributes. External influences were assumed to be relatively homogeneous across respondents, thereby minimizing their potential confounding effects. Meanwhile, the measurement variables in this study will be presented in Table 1.

The population in this study included all UNESA Economics Education students who had completed the Entrepreneurship Practice course. The selection of this population was very specific for three reasons. First, as Economics Education students, they were prospective teachers who were expected to become agents of change and instill the spirit of entrepreneurship in their future students. Second, they have acquired unique knowledge, namely the integration of economic theory and direct practical experience in entrepreneurship, which sets them apart from students from non-education study programs. Third, the limited job opportunities for fresh graduates make their interest in entrepreneurship a necessity and a strategic solution. Population refers to all objects or subjects that have certain characteristics and attributes determined by researchers as the scope of generalization, so that they can be studied and become the basis for drawing research conclusions (Sugiyono, 2019).

Table 1. Measurements of Variable

Variable	Operational Definiton	Indicator	Measurement Scale
Digital Literacy (X_1)	The ability of individuals to use digital technology to effectively, safely, and responsibly search for, understand, evaluate, create, and communicate information (Rodríguez-de-dios et al., 2016)	1. Technological Skill (Ability to use digital device effectively) 2. Informational Skill (Ability to search for and evalute digital infirmation) 3. Critical Skill (Ability to think critically about digital information) 4. Communication Skill (Ability to cummunicate using digital media) 5. Personal Security Skill (Awareness of maintaining personal safety in the digital world) 6. Devices Security Skill (Ability to maintain the security of digital device)	Likert Scale 1-5 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
Entrepreneurship Knowledge (X_2)	Individuals level of understanding of entrepreneurial concepts, principles, and practices, including managerial, marketing, financial, and business planning aspect (Mack et al., 2024)	1. Business Management 2. Marketing 3. Financial Knowledge 4. Accounting Knowledge 5. Business Plan Writing	Likert Scale 1-5 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
Internal Locus of Control (X_3)	That belief that one's achievements are the result of ones's own efforts, abilities, and decisions, rather than luck (Rotter, 1966)	1. The belief that success is determined by one's own efforts. 2. Personal responsibility for the result of one's actions.. 3. Control over personal decisions and actions.. 4. Confidence in one's ability to overcome difficulties. 5. Independence and rejection of the role of luck.	Likert Scale 1-5 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
Entrepreneurial Interest (Y)	An individual's desire, interest, and conviction to engage in entrepreneurial activities or start their own business (Castro & Zermeño, 2021)	1. General interest in entrepreneurship. 2. Desire to become an entrepreneur. 3. Business or product ideas. 4. Belief in entrepreneurial abilities. 5. Interest in pursuing entrepreneurship education. 6. Views on entrepreneurship 7. Desire to learn entrepreneurship in study programs.	Likert Scale 1-5 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

Source: Data Process, 2025

The population in this study includes all UNESA Economics Education students who have taken the Entrepreneurship Practice course, since this group is said to have firsthand knowledge of business operations and the creation of business ideas. Based on (Table 2) data from the economics education study program in 2025, the population

consists of 299 students, comprising 98 students from the 2022 cohort and 201 students from the 2023 cohort, as presented in Table 2. The sample is a portion of the entire population that has certain characteristics and is used as a representation for research analysis purposes (Sugiyono, 2019). This study employed random sampling, which gave every member of the population an equal chance of being chosen as a respondent. Using the Slovin formula with a 5% margin of error, the sample size was determined as follows:

$$n = \frac{N}{1 + Ne^2}$$

Information:

n = Number of Samples

N = Population Number

e = Percentage of sampling error that is still tolerable

Calculation Result:

$$n = \frac{N}{1 + Ne^2} = \frac{299}{1 + 299\ (0.05^2)} = \frac{299}{1 + 0.7475} = 171{,}1$$

Therefore, the number of samples used in this study was 171 students. The uniqueness of this sample is expected to provide contextual and relevant findings for the development of an entrepreneurship curriculum at the Teacher Training Institute (LPTK). To meet the participation criteria, respondents must be active students of the Unesa Economics Education study program for the 2022 and 2023 batches, have completed entrepreneurship practice courses, and be willing to participate voluntarily by completing the questionnaire. The data collection process was carried out by distributing an online questionnaire through Google Forms. In addition, this study followed the social research code of ethics that refers to the Surabaya State University research ethics guidelines (2024), which emphasize the principles of confidentiality, non-discrimination, and freedom from coercion. All data collected was used only for academic purposes and kept confidential.

Table 2. Distribution of respondents based on Study Program and Cohort

No	Study Program	Cohort	Total of Students
1	S1 Economics Education	2022	98
2	S1 Economics Education	2023	201
Total			299

In this study, SEM-PLS was used for data analysis with the WarpPLS application. The analysis process consisted of two main stages. The first stage was the evaluation of the measurement model, which included testingconvergent validity through factor loading values with a minimum limit of > 0.30in accordance with the research provisions, as well as the Average Variance Extracted (AVE) value, whichmust exceed 0.50. Construct reliability was assessed through CompositeReliability and Cronbach's Alpha, which is categorized as adequate if the value isabove 0.70. Furthermore, discriminant validity was evaluated using theFornell–Larcker criteria, namely by comparing the square root of the AVE of each construct with its correlation to other constructs toensure that each variable has good discrimination.

The next stepis the evaluation of the structural model, which is done byconsidering the coefficient of determination (R^2) value to assess the ability of the independent variablesin explaining the dependent variables. In addition, WarpPLS providesModel Fit and Quality Indices such as APC, ARS, and AVIF, which are used toensure the overall feasibility of the model. Predictive validity testingis also carried out using the Q^2 value to determine the extent to which the model haspredictive power for endogenous variables. The equation model used in this study is shown as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta 3X3 + \varepsilon$$

In this equation, Y represents entrepreneurial interest, while X_1, X_2, and X_3 represent digital literacy, entrepreneurial knowledge, and internal locus of control, respectively. The value α indicates the constant, while ε describes the influence of factors outside the model that cannot be directly observed. This study also follows the principles of social and educational research ethics as stated in the Surabaya State University research ethics guidelines (2024). All student participation was voluntary, without coercion, and accompanied by informed consent. Each respondent was given an explanation of the research objectives and questionnaire completion procedures. The researcher guarantees that all respondent data is anonymous and confidential, used only for scientific purposes. Data security measures are implemented to ensure that no personal information can identify participants. Therefore, this research was conducted with consideration for scientific integrity, transparency, and protection of participant rights.

4. Results and Discussion

4.1 Results

This study measured variable X1 using a 6 question questionnaire., 5 questions to measure variable X2, 5 questions to measure variable X3, and 7 questions to measure variable Y. As a result, the questionnaire employed in this study has 23 questions in total. Based on population and sampling estimates intended in the research technique utilizing the Slovin calculation method, 171 people participated in the study. Based on Table 2, all indicators are declared convergent valid. This is evidence by: Factor Loading Values: If the factor loading >0.30 (ex X1.1= 0.790 > 0.30) meets convergent validity, this indicates a very strong relationship between the indicator and its latent variable. Significant value (p-value): All indicators are < 0.001, which proves that the relationship between each indicator and its construct is statistically significant. Therefore, it can be concluded that the research instrument has met the convergent validity requirements and no indicators need to be removed, in order for the analysis to move on to the following phase.

Table 2. Convergent Validity Test Result

No	X1	Factor Loading	X2	Factor Loading	X2	Factor Loading	Y	Factor Loading
1	X1.1	0.790***	X2.1	0.836***	X3.1	0.721***	Y.1	0.846***
2	X1.2	0.705***	X2.2	0.776***	X3.2	0.712***	Y.2	0.819***
3	X1.3	0.761***	X2.3	0.758***	X3.3	0.687***	Y.3	0.687***

No	X1	Factor Loading	X2	Factor Loading	X2	Factor Loading	Y	Factor Loading
4	X1.4	0.592***	X2.4	0.788***	X3.4	0.734***	Y.4	0.777***
5	X1.5	0.673***	X2.5	0.788***	X3.5	0.651***	Y.5	0.829***
6	X1.6	0.665***					Y.6	0.812***
7							Y.7	0.813***

Note: ***significant at 1 percent

Table 3. Discriminant Validity Test Result on X1

No	Indicator	Loading	Cross Loading			Description
		X1	X2	X3	Y	
1	X1.1	0.790	-0.101	0.077	-0.046	Fulfilled
2	X1.2	0.705	0.243	-0.101	-0.212	Fulfilled
3	X1.3	0.761	0.087	-0.020	0.172	Fulfilled
4	X1.4	0.592	-0.029	0.052	0.068	Fulfilled
5	X1.5	0.673	-0.166	0.062	0.037	Fulfilled
6	X1.6	0.665	-0.043	-0.069	-0.014	Fulfilled

Table 4. Discriminant Validity Test Result on X2

No	Indicator	Loading	Cross Loading			Description
		X2	X1	X3	Y	
1	X2.1	0.836	0.092	-0.086	-0.045	Fulfilled
2	X2.2	0.776	-0.083	-0.093	-0.064	Fulfilled
3	X2.3	0.758	-0.224	0.183	0.089	Fulfilled
4	X2.4	0.788	-0.039	0.101	-0.034	Fulfilled
5	X2.5	0.788	0.237	-0.094	0.058	Fulfilled

Table 5. Discriminant Validity Test Result on X3

No	Indicator	Loading	Cross Loading			Description
		X3	X1	X2	Y	
1	X3.1	0.721	-0.138	-0.118	0.168	Fulfilled
2	X3.2	0.712	0.191	-0.192	0.039	Fulfilled
3	X3.3	0.687	0.213	0.086	-0.152	Fulfilled
4	X3.4	0.734	-0.149	0.135	-0.059	Fulfilled
5	X3.5	0.651	-0.112	0.098	-0.001	Fulfilled

Table 6. Discriminant Validity Test Result on Y

No	Indicator	Loading	Cross Loading			Description
		Y	X1	X2	X3	
1	Y.1	0.846	0.207	-0.084	-0.151	Fulfilled
2	Y.2	0.819	-0.058	-0.106	-0.094	Fulfilled
3	Y.3	0.687	-0.213	0.287	0.092	Fulfilled
4	Y.4	0.777	-0.048	-0.142	0.122	Fulfilled
5	Y.5	0.829	-0.008	-0.086	-0.008	Fulfilled
6	Y.6	0.812	0.085	0.095	0.036	Fulfilled
7	Y.7	0.813	-0.008	0.080	0.029	Fulfilled

Tables 3 through 6 demonstrate that if the value of X1.4 with a loading of 0.592 and cross loading for X2 = -0.029, X3 = 0.052, and Y = 0.068, then discriminant validity is fulfilled because the discriminant factor will be fulfilled if the loading is greater than the cross loading, whereas if the loading is smaller than the cross loading, then

discriminant validity is not fulfilled. In Tables 3 to 6, all variables meet discriminant validity.

Table 7. AVE Roots and Their Correlation

No	Variable	AVE Roots				Description
		X1	X2	X3	Y	
1	X1	0.701	0.497	0.593	0.546	Fulfilled
2	X2	0.497	0.790	0.345	0.594	Fulfilled
3	X3	0.593	0.345	0.702	0.405	Fulfilled
4	Y	0.546	0.594	0.405	0.799	Fulfilled

From the AVE root results and their correlations, it can be seen that each variable has a larger AVE root than the other variables. This is evidenced by X1, which has an AVE root of 0.701, which is larger than the AVE roots of the other variables.

Table 8. Composite Reliability Result

No	Variable	Composite Reliability Coefficients	Description
1	X1	0.852	Fulfilled
2	X2	0.892	Fulfilled
3	X3	0.829	Fulfilled
4	Y	0.925	Fulfilled

From the Composite Reliability results in the table above, it can be seen that all coefficients are above or greater than 0.7, thus meeting the Composite Reliability criteria.

Table 9. Cronbach's Alpha Result

No	Variable	Cronbach's Alpha Coefficients	Description
1	X1	0.790	Fulfilled
2	X2	0.849	Fulfilled
3	X3	0.741	Fulfilled
4	Y	0.905	Fulfilled

From the Cronbach's Alpha Coefficients in Table 9, it can be seen that all coefficients are above or greater than 0.6, thus meeting the Cronbach's Alpha Coefficients criteria.

Based on Table 10 regarding the analysis of model fit and quality indices, it can be seen that the research model meets the criteria for good feasibility. The values of APC = 0.280 ($P < 0.001$), ARS = 0.484 ($P < 0.001$), and AARS = 0.475 ($P < 0.001$) indicate that the relationship between variables is significant and the model has adequate explanatory power. The AVIF (1.714) and AFVIF (1.742) values are below the ideal limit (≤3.3), so there is no multicollinearity problem. The GoF = 0.521 value is in the large category, indicating a strong model fit. In addition, the SPR, RSCR, and SSR values are 1.000, and the NLBCDR = 1.000, all of which meet the ideal criteria.

Table 10. Model Fit and Quality Indices

No	Model Fit and Quality Indices	Fit Criteria	Analyze Result	Description
1	Average Path Coefficient (APC)	P<0.05	0.280,	Fulfilled fit model requirement

			(P<0.001)	
2	Average R-squared (ARS)	P<0.05	0.484, (P<0.001)	Fulfilled fit model requirement
3	Average Adjusted R-squared (AARS)	P<0.05	0.475, (P<0.001)	Fulfilled fit model requirement
4	Average block VIF (AVIF)	acceptable if <= 5, ideally <= 3.3	1.714	Ideal
5	Average full collinearity VIF (AFVIF)	acceptable if <= 5, ideally <= 3.3	1.742	Ideal
6	Tenenhaus GoF (GoF)	small >= 0.1, medium >= 0.25, large >= 0.36	0.521	Large
7	Sympson's paradox ratio (SPR)	acceptable if >= 0.7, ideally = 1	1.000	Ideal
8	R-squared contribution ratio (RSCR)	acceptable if >= 0.7, ideally = 1	1.000	Ideal
9	Statistical suppression ratio (SSR)	acceptable if >= 0.7	1.000	Acceptable
10	Nonlinear bivariate causality direction ratio (NLBCDR)	acceptable if >= 0.7	1.000	Acceptable

Table 11. Variable Profile

No	Indicator	Factor Loading	Average	Recommendations
1	X1.1	0.790	4.538012	Maintain
2	X1.2	0.705	4.25731	Maintain
3	X1.3	0.761	4.245614	Maintain
4	X1.4	0.592	4.397661	Maintain
5	X1.5	0.673	4.549708	Maintain
6	X1.6	0.665	4.093567	Improved
7	X2.1	0.836	3.900585	Immediately Improved
8	X2.2	0.776	3.918129	Immediately Improved
9	X2.3	0.758	3.994152	Improved
10	X2.4	0.788	3.982456	Improved
11	X2.5	0.788	3.935673	Immediately Improved
12	X3.1	0.721	4.497076	Maintain
13	X3.2	0.712	4.397661	Maintain
14	X3.3	0.687	4.339181	Maintain
15	X3.4	0.734	4.233918	Maintain
16	X3.5	0.651	4.269006	Maintain
17	Y.1	0.846	4.023392	Improved
18	Y.2	0.819	4.035088	Improved
19	Y.3	0.687	3.666667	Immediately Improved
20	Y.4	0.777	4.105263	Improved
21	Y.5	0.829	4.064327	Improved
22	Y.6	0.812	4.134503	Improved
23	Y.7	0.813	4.22807	Improved

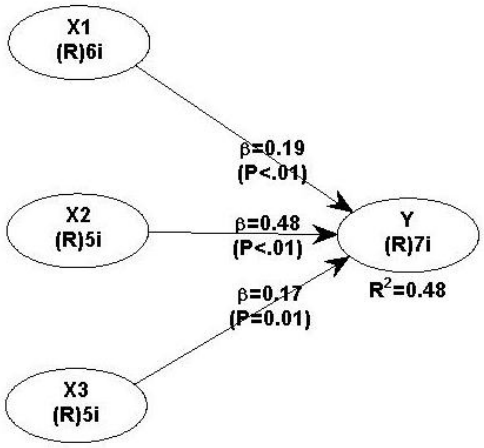

Figure 2. Result of Hypotesis Test

Based on the results of the path analysis that has been conducted, all hypotheses proposed in this study are empirically supported.

1. Digital Literacy (X_1) was found to have a positive and significant effect on Entrepreneurial Interest (Y) with a path coefficient of 0.19 and a significance value of $p < 0.01$. This finding supports Hypothesis 1 (H_1).
2. Entrepreneurial Knowledge (X_2) was found to have the most dominant positive and significant influence on Entrepreneurial Interest (Y). This is indicated by the largest path coefficient, which is 0.48 with a significance of $p < 0.01$. This finding provides very strong support for Hypothesis 2 (H_2).
3. Internal Locus of Control (X_3) was also proven to have a positive and significant effect on Entrepreneurial Interest (Y) with a path coefficient of 0.17 at a significance level of $p = 0.01$. Thus, Hypothesis 3 (H_3) is supported.

4.2 Discussions

Digital Literacy and Entrepreneurial Interest

The results indicate that digital literacy has a positive and significant influence on entrepreneurial interest, confirming the first hypothesis. The magnitude of this effect suggests that higher levels of students' ability to utilize digital technology are associated with stronger entrepreneurial interest. This finding is consistent with the empirical condition of the respondents, where personal security skill and technological skills emerged as the most prominent indicators. These findings indicate that students possess strong foundational digital competencies, particularly in maintaining personal security while using digital device and operating digital technology effectively. Such competencies enable students to confidently explore digital business opportunities, use e-commerce platforms, and leverage socia media for marketing, thereby strengthening their entrepreneurial interest. These results align with previous studies by Duong (2025) and Ip (2024) which emphasizes that in the digital economy era, digital literacy serves as a powerful enabler. Digital literacy is not merely a technical skill, but also shapes innovative mindsets and opens access to broader market opportunities, thereby reducing perceived barriers to starting a business.

Entrepreneurial Knowledge and Entrepreneurial Interest

Entrepreneurial knowledge has positive and significant influence on entrepreneurial interest, supporting the second hypothesis. This findings indicates that a solid understanding of key entreprenuerial aspects such as business planning, financial management, marketing strategies, and risk management serves as an important cognitive foundation that enhances students confidence to start a busniess. However, several indicators related to business management, marketing, and business plan development show relatively lower levels of mastery. This suggests that although student are familiar with entrepenurial concept, their pratical understanding remains limited. Strengthening these pratical aspects is therefore essential to further enhance entreprenurial interest. These result are consistent with studies by Mutmainah et al. (2024) and Ganefri et al. (2024) which emphasize the importance of applied entrepreneurial eduation. Nevertheless, other studies indicate that the effect of entrepreneurial knowledge may depend on contextual factors such as curriculum design, teaching methods, and practical exposure. This implies that knowledge alone is insufficient without hands-on experience.

Internal Locus of Control and Entrepreneurial Interest

Internal locus of control has a positive and significant influence on entrepreneurial interest, supporting the third hypothesis. This finding highlights the important role of psychological factors in entrepreneurship. Students who believe that success is determined by their own efforts, abilities, and decisions tend to demonstrate higher levels of proactivity, resilience, and responsibility. Such characteristics encourage individuals to take initiative and perceive challenges as manageable, thereby fostering entreprenuerial interest. These results reinforce the findings Saputro et al. (2022) and theory Rotter (1966) in the context of student entrepreneurship.

Overall, the three independent variables collectively contribute to explaining entrepreneurial interest. This indicates that digital literacy, entrepreneurial knowledge, and internal locus of control play complementary roles in fostering students intention to engage in intrepreneurship. Nevertheless, other factors such as family support, social environment, and access to capital may also influence entreprenurial interest and should be considered in future research.

5. Conclusion

Based on empirical analysis, it was concluded that digital literacy, entrepreneurial knowledge, and internal locus of control has a significant effect on the entrepreneurial interest of State University of Surabaya Economics Education students, both partially and simultaneously. Individually, entrepreneurial knowledge shows the most dominant influence, followed by digital literacy and internal locus of control, reflecting that although all three are important, conceptual understanding of business and management remains the main foundation. Overall, the combination of these three variables was able to explain 48% of the variation in entrepreneurial interest, suggesting the need for a comprehensive approach to entrepreneurship development. Based on these findings, it is recommended to implement an integrated program that

combines strengthening the entrepreneurship curriculum based on real cases, practical digital technical training, and psychological capital development through intensive mentoring, supported by strategic collaboration with digital industry players to create an ecosystem conducive to the emergence of new, competent, and resilient entrepreneurs.

For further research, it is recommended to expand the research model by adding mediating variables such as self-efficacy and moderating variables such as environmental support. A mixed-methods approach and longitudinal design can be applied to understand the dynamics of entrepreneurial interest more comprehensively. The development of contextualized instruments that measure the entrepreneurial literacy of Generation Z and policy research to develop an entrepreneurship framework in teacher training colleges are also important agendas. Expansion of the research sample across universities and disciplines is needed to test the generalization of the developed model.

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