



Unveiling the Role of Risk-Taking Ability in Mediating the Influence of Entrepreneurship Education, Digital Financial Literacy, and Financial Self-Efficacy on Students' Courage to Start a Business

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Abstract: This study aims to analyze the effects of Entrepreneurship Education, Digital Financial Literacy, and Financial Self-Efficacy on Students' Courage to Start a Business, with Risk-Taking Ability as a mediating variable. A quantitative approach with a survey design was employed, with 100 university students in Banyumas Regency selected via purposive sampling. Data were collected through a structured online questionnaire and analyzed using SEM-PLS with a bootstrapping procedure. The results indicate that Entrepreneurship Education, Digital Financial Literacy, and Financial Self-Efficacy have positive and significant effects on Risk-Taking Ability. Furthermore, Risk-Taking Ability has a positive and significant effect on Students' Courage to Start a Business. In addition, Risk-Taking Ability is proven to positively and significantly mediate the effects of the three independent variables on students' entrepreneurial courage. These findings suggest that students' entrepreneurial courage is largely determined by their ability to assess risks and opportunities and to make decisions under uncertainty. This study contributes theoretically by uniquely integrating financial aspects and psychological aspects within a single framework grounded in the Theory of Planned Behavior, Social Cognitive Theory, and Behavioral Finance Theory. By linking students' digital financial capability with their risk-taking ability, the model explains how financial knowledge strengthens psychological readiness in entrepreneurial decision-making. The findings also provide practical implications for higher education institutions and policymakers in designing entrepreneurship programs that simultaneously develop digital financial competence and risk-taking capacity.

Article History

Received: 14-01-2026

Revised: 17-02-2026

Accepted: 28-02-2026

Published: 25-03-2026

Key Words:

Entrepreneurship Education; Digital Financial Literacy; Financial Self-Efficacy; Entrepreneurial Courage; Risk-Taking Ability.

How to Cite: Sutrisno, Solihati, G. P., Syamsuri, Pramono, S. A., Jayanto, I., & Shafiq, M. A. (2026). Unveiling the Role of Risk-Taking Ability in Mediating the Influence of Entrepreneurship Education, Digital Financial Literacy, and Financial Self-Efficacy on Students' Courage to Start a Business. *Jurnal Kependidikan : Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran, Dan Pembelajaran*, 12(1), 1-13. <https://doi.org/10.33394/jk.v12i1.19701>



<https://doi.org/10.33394/jk.v12i1.19701>

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Introduction

In today's rapidly developing digital economy, entrepreneurship is increasingly viewed as a strategic pathway to address youth unemployment while simultaneously fostering inclusive economic growth (Diawati et al., 2024). Digitalization not only transforms business models but also reshapes how individuals perceive opportunities, manage financial resources, and evaluate risks in entrepreneurial decision-making (Kraus et al., 2022). For university students, particularly in developing regions, entrepreneurship is no longer determined solely



by access to capital or market opportunities, but also by psychological readiness, financial competencies, and confidence in undertaking calculated risks. Nevertheless, despite growing institutional support for entrepreneurship education, not all students demonstrate the courage to start a business (Atrup et al., 2023). This condition underscores the importance of understanding the internal and cognitive mechanisms that translate educational and financial capabilities into actual entrepreneurial action.

Globally, the primary challenge faced by prospective young entrepreneurs is not merely the lack of business ideas, but rather low financial confidence and limited risk tolerance within an increasingly uncertain economic environment. The Global Entrepreneurship Monitor (GEM) 2024/2025 report indicates that approximately 49% of respondents of productive age worldwide cited fear of failure as the main reason for not starting a business, even though more than 60% acknowledged the presence of business opportunities around them (GEM, 2025). Furthermore, global financial literacy data reveal that only about 33% of the world's population possesses an adequate level of financial literacy, which directly affects individuals' ability to understand capital management, risk, and financial decision-making (WEF, 2024). This condition is also reflected among university students, where despite having acquired basic entrepreneurial knowledge, many remain hesitant to start a business due to low financial self-efficacy and limited understanding of digital financial instruments such as e-wallets, online investment platforms, and digital accounting systems.

In Indonesia, the government actively promotes entrepreneurship development through higher education policies, including the Merdeka Belajar–Kampus Merdeka (MBKM) program and the integration of cross-disciplinary entrepreneurship courses. However, national data indicate that Indonesia's entrepreneur ratio remains relatively low. According to BPS data, the proportion of established entrepreneurs accounted for only around 3.35–3.47% of the total national labor force in 2024–2025, far below the standards of developed countries and national targets. Although the absolute number of novice entrepreneurs is considerably higher, it has not yet contributed significantly to employment stability and productive business growth (Jayadi, 2025). In addition, national surveys show that Indonesia's financial literacy index stood at approximately 65.43% in 2024, still below the financial inclusion level of 75.02%, indicating a gap in public understanding of financial aspects, including digital financial literacy (BPS Pati, 2024). This disparity limits students' ability to assess business feasibility, manage digital cash flows, and make rational financial decisions amid uncertainty.

At the regional level, Banyumas Regency provides a relevant context for examining students' entrepreneurial courage, particularly when compared to major metropolitan cities such as Jakarta and Surabaya. As one of the growing education hubs in Central Java, Banyumas hosts a substantial number of university students across several higher education institutions. Based on official data from BPS Kabupaten Banyumas, Universitas Jenderal Soedirman has more than 18,500 students, Universitas Islam Negeri Prof. KH Saifuddin Zuhri Purwokerto has approximately 13,750 students, Universitas Muhammadiyah Purwokerto has around 14,340 students, and Universitas AMIKOM Purwokerto has about 3,480 students—reflecting a significant concentration of higher education in the region (Dimas Satria Banyumas, 2023). The region also has approximately 1.19 million productive-age residents out of a total population of 1.86 million, representing a substantial pool of potential young entrepreneurs (Darmawan, 2024).

However, compared to metropolitan ecosystems, students in non-metropolitan regions such as Banyumas operate within structurally different entrepreneurial environments. Major



cities like Jakarta and Surabaya typically provide denser business networks, stronger venture capital presence, wider industry diversification, and greater exposure to startup culture, which can lower perceived uncertainty and encourage higher business risk-taking. In contrast, thinner local markets, more limited access to formal financing, and fewer visible high-growth entrepreneurial role models may increase perceived risk among students in Banyumas. Although exposure to digital financial services has expanded alongside fintech platforms, digital banking, and online marketplaces (Hidayat et al., 2023), student-led business initiatives remain relatively limited in scale. This condition suggests that, beyond structural availability, stronger internal drivers—such as financial self-efficacy and risk-taking ability—are essential to foster entrepreneurial courage in non-metropolitan contexts.

These conditions highlight the importance of entrepreneurial courage—defined as an individual's willingness to start a business despite uncertainty and potential financial loss—as a crucial outcome variable. Empirical studies in similar regional contexts indicate that entrepreneurship education can enhance knowledge and positive attitudes toward entrepreneurship, yet it does not automatically encourage risk-taking behavior if students lack confidence in their financial capabilities (Lusardi & Mitchell, 2023). Moreover, digital financial literacy is becoming increasingly critical, as students are required to navigate complex financial information, assess digital transaction risks, and make decisions in rapidly evolving digital markets (Başar et al., 2025). This makes Banyumas a theoretically and practically relevant context for examining the interaction between educational and financial factors in shaping students' entrepreneurial courage.

This study integrates three major theoretical perspectives to explain the mechanisms through which entrepreneurship education and financial capabilities influence students' courage to start a business. The Theory of Planned Behavior (TPB) posits that behavior is driven by intention, which is shaped by attitudes, subjective norms, and perceived behavioral control (Ajzen, 1991). In this study, entrepreneurship education contributes to the formation of favorable attitudes toward entrepreneurship and supportive normative beliefs, while financial self-efficacy strengthens perceived behavioral control in making business decisions. Complementing this, Social Cognitive Theory (SCT) highlights self-efficacy as a central determinant of whether individuals initiate and persist in challenging activities (Bandura, 1986). Financial self-efficacy reflects students' confidence in managing financial resources, coping with uncertainty, and handling potential losses, thereby increasing their readiness to engage in entrepreneurial action.

Importantly, Behavioral Finance Theory (BFT) functions as a conceptual bridge linking educational influences (TPB) and self-efficacy mechanisms (SCT). While TPB explains how education shapes intention and SCT explains how self-belief sustains action, BFT clarifies how these cognitive and motivational factors translate into actual financial risk behavior. Financial decisions are often affected by heuristics, emotional biases, and subjective risk perceptions (Atif et al., 2020; Mahmood et al., 2024). Entrepreneurship education enhances financial knowledge and awareness of risk, and financial self-efficacy strengthens confidence in managing uncertainty; however, BFT explains whether students can regulate fear of loss, avoid overconfidence, and evaluate risk-return trade-offs objectively. Thus, risk-taking ability emerges as the behavioral mechanism that connects intention (TPB) and self-efficacy (SCT) to entrepreneurial courage, transforming educational inputs and psychological confidence into concrete entrepreneurial action.

A number of previous studies confirm that entrepreneurship education positively influences entrepreneurial intention (Hasan et al., 2024; Ndofirepi, 2020) and that financial literacy improves the quality of financial decision-making (Islawati et al., 2024; Lusardi &



Mitchell, 2023), while financial self-efficacy strengthens responsible financial behavior (Anwar, 2025; Munir & Putri, 2025). However, empirical findings remain inconsistent when explaining why these factors do not always translate into entrepreneurial courage or actual business initiation. Theoretically, this gap arises because entrepreneurship inherently involves uncertainty and potential loss; thus, knowledge and intention alone are insufficient without the behavioral capacity to confront risk. Risk-Taking Ability is therefore crucial as a mediating variable because it converts cognitive inputs (education and literacy) and psychological confidence (self-efficacy) into concrete action under uncertainty. Without this mediation, students may understand financial concepts and feel capable, yet still avoid entrepreneurial decisions due to fear of failure. Incorporating Risk-Taking Ability addresses contradictions in prior findings and provides theoretical novelty by clarifying how educational and psychological factors interact behaviorally to shape entrepreneurial courage, particularly in non-metropolitan contexts where perceived risk may be higher.

Based on this discussion, it can be concluded that most prior research has focused primarily on the direct effects of educational or financial factors on entrepreneurial outcomes, without thoroughly examining the mediating role of risk-taking ability. Moreover, limited attention has been given to integrating entrepreneurship education, digital financial literacy, and financial self-efficacy within a comprehensive theoretical framework, especially in regional contexts such as Banyumas Regency. Therefore, this study aims to empirically examine the effects of entrepreneurship education, digital financial literacy, and financial self-efficacy on students' courage to start a business, with risk-taking ability as a mediating variable, among university students in Banyumas Regency. This research is expected to contribute theoretically to the development of an integrated entrepreneurship model grounded in behavioral finance and psychological perspectives, as well as to provide practical insights for universities and local governments in designing effective strategies to foster young entrepreneurs who are courageous, financially capable, and resilient.

Research Method

This study employs a quantitative approach to examine the effects of entrepreneurship education, digital financial literacy, and financial self-efficacy on students' courage to start a business, with risk-taking ability as a mediating variable, by integrating the Theory of Planned Behavior (Ajzen, 1991), Social Cognitive Theory (Bandura, 1986), and Behavioral Finance Theory (Atif et al., 2020; Mahmood et al., 2024). Data were collected through a structured five-point Likert scale questionnaire distributed online to undergraduate students in Banyumas Regency who had participated in entrepreneurship courses and used digital financial services, using purposive sampling criteria (active students with entrepreneurship education experience and exposure to digital finance); of 117 responses, 100 met the criteria and were analyzed, which satisfies the minimum requirement for SEM-PLS based on the 10-times rule (Hair et al., 2021). The Entrepreneurship Education scale was adapted from prior studies on entrepreneurial learning and curriculum effectiveness, the Digital Financial Literacy scale was adapted from established digital financial literacy measurement frameworks, the Financial Self-Efficacy scale was adapted from validated self-efficacy instruments in financial contexts, the Risk-Taking Ability scale was adapted from entrepreneurial risk propensity measures, and the Courage to Start a Business scale was adapted from entrepreneurial intention and action-oriented courage constructs developed in previous empirical research.

Data analysis was conducted using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with the assistance of SmartPLS version 4.0 software. The evaluation

was carried out in two stages: the outer model and the inner model. The outer model was assessed through convergent validity testing (outer loading ≥ 0.70 ; AVE ≥ 0.50), discriminant validity (Fornell–Larcker criterion), and construct reliability (Cronbach’s Alpha and Composite Reliability ≥ 0.70). Subsequently, the inner model evaluation involved analyzing R-square (R^2) and Q-square (Q^2) values. The R^2 value was used to assess the explanatory power of the independent variables on the dependent variable, with thresholds of 0.25 (weak), 0.50 (moderate), and 0.75 (strong). Meanwhile, the Q^2 value was obtained through the blindfolding procedure to measure the model’s predictive relevance, where $Q^2 > 0$ indicates that the model has good predictive capability. Hypothesis testing was conducted using the bootstrapping technique with 5,000 resamples, and relationships among variables were considered significant if the t-statistic value exceeded 1.96 or the p-value was below 0.05, for both direct and indirect effects through the mediating variable.

Table 1. Characteristics of the Respondents

Characteristics	Category	Frequency	Percentage
University	Universitas Jenderal Soedirman	38	38%
	UIN Prof. KH Saifuddin Zuhri	27	27%
	Universitas Muhammadiyah Purwokerto	25	25%
	Other Private Universities	10	10%
Cohort	2021	12	12%
	2022	29	29%
	2023	41	41%
	2024	18	18%
Gender	Male	54	54%
	Female	46	46%
Age	18–22 years	78	78%
	23–27 years	22	22%
Field of Study	Management	32	32%
	Business Administration	21	21%
	Accounting	19	19%
	Economics	15	15%
	Other Fields	13	13%
Use of Digital Financial Services	Actively using e-wallets & mobile banking	100	100%
Frequency of Digital Transactions	Daily	61	61%
	2–5 times per week	29	29%
	< 2 times per week	10	10%
Experience Using Digital Transactions for Business	Yes (online sales, business payments, etc.)	58	58%
	No	42	42%
Experience Managing Digital Finances	Independently managing finances	67	67%
	Still dependent on others	33	33%
Domicile	Banyumas Regency	100	100%

The respondents were primarily from major universities in Banyumas Regency, dominated by Universitas Jenderal Soedirman (38%), followed by UIN Prof. KH Saifuddin Zuhri (27%) and Universitas Muhammadiyah Purwokerto (25%). Most were from the 2023 cohort (41%), aged 18–22 years (78%), with a relatively balanced gender composition (54% male; 46% female). All respondents had used digital financial services such as e-wallets and mobile banking, with 61% conducting daily transactions, 58% using them for business purposes, and 67% managing their finances independently. These characteristics indicate strong digital financial exposure and provide a relevant basis for examining the roles of

digital financial literacy, financial self-efficacy, and risk-taking ability in shaping students' entrepreneurial courage.

Results and Discussion

Measurement Model Evaluation (Outer Model)

The initial stage of SEM-PLS analysis involves evaluating the measurement model (outer model), which aims to ensure that each construct in the study meets the criteria of validity and reliability. This evaluation is essential to guarantee that the indicators consistently and accurately measure the constructs, allowing the results of the structural model analysis to be interpreted validly.

Convergent Validity

Convergent validity is used to assess the extent to which indicators within a construct are highly correlated with one another. The criterion applied is a loading factor value of ≥ 0.70 . However, indicators with loading values between 0.60 and 0.70 may still be retained provided that the construct's Average Variance Extracted (AVE) remains ≥ 0.50 . Based on the data processing results using SmartPLS 4.0, all indicators for each construct achieved loading factor values that met the minimum required threshold (see Table 2). Therefore, it can be concluded that all constructs satisfy convergent validity.

Discriminant Validity

Discriminant validity aims to ensure that a construct is empirically distinct from other constructs. This test was conducted using the Fornell–Larcker criterion by comparing the square root of the AVE of each construct with the inter-construct correlation values. The results show that the square root of the AVE for each construct is greater than its correlations with other constructs (see Table 3). This indicates that each construct has conceptual uniqueness and that there is no overlap in measurement among the variables.

Reliability Test

Reliability testing was conducted to assess the internal consistency of the indicators in measuring the constructs. Reliability was evaluated using Cronbach's Alpha and Composite Reliability values, with a minimum threshold of ≥ 0.70 . The analysis results indicate that all constructs have Cronbach's Alpha and Composite Reliability values above the recommended threshold (see Table 2). Thus, the research instrument is considered reliable and suitable for further analysis.

Table 2. Results of Measurement Model (Outer Model) Analysis

Variable (Acronym)	Indicator	Loading Factor	Cronbach's Alpha	Composite Reliability	AVE
Entrepreneurship Education (EE)	EE1	0.782	0.812	0.865	0.616
	EE2	0.801			
	EE3	0.764			
Digital Financial Literacy (DFL)	DFL1	0.735	0.784	0.846	0.579
	DFL2	0.812			
	DFL3	0.768			
Financial Self-Efficacy (FSE)	FSE1	0.821	0.838	0.881	0.651
	FSE2	0.794			
	FSE3	0.813			
Risk-Taking Ability (RTA)	RTA1	0.754	0.796	0.859	0.604
	RTA2	0.802			
	RTA3	0.781			
Entrepreneurial Courage / Courage to Start a Business	ECB1	0.836	0.821	0.879	0.708
	ECB2	0.842			

(ECB)	ECB3	0.821
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Table 3. Discriminant Validity (Fornell–Larcker Criterion)

Variable	EE	DFL	FSE	RTA	ECB
Entrepreneurship Education (EE)	0.785				
DFL	0.412	0.761			
FSE	0.438	0.471	0.807		
Digital Financial Literacy (DFL)	0.396	0.423	0.512	0.777	
ECB	0.455	0.489	0.574	0.608	0.841

Structural Model (Inner Model)

The next stage in SEM-PLS analysis is the evaluation of the structural model (inner model), which aims to assess the model's ability to explain the causal relationships among latent variables. This evaluation was conducted by examining the R-square values, Q-square (predictive relevance), and hypothesis testing to ensure the predictive strength and significance of the relationships among constructs in the research model.

R-Square

The R-square value indicates the extent to which endogenous variables can be explained by the exogenous variables influencing them. Based on the data processing results presented in Table 4, the R-square value for Risk-Taking Ability (RTA) is 0.587, meaning that 58.7% of the variance in students' risk-taking ability can be explained by entrepreneurship education, digital financial literacy, and financial self-efficacy, while the remaining 41.3% is influenced by other factors outside the research model. Meanwhile, the R-square value for Students' Courage to Start a Business is 0.624, indicating that 62.4% of the variance in students' entrepreneurial courage can be simultaneously explained by entrepreneurship education, digital financial literacy, financial self-efficacy, and risk-taking ability. R-square values above 0.50 indicate that the model has moderate to strong explanatory power (Hair et al., 2021).

Table 4. R-Square Test Results

No	Endogenous Variable	R-Square	Information
1	Risk-Taking Ability (RTA)	0.587	Moderate
2	Entrepreneurial Courage / Courage to Start a Business (ECB)	0.624	Moderate

Q-Square (Predictive Relevance)

The Q-square test was conducted to assess the predictive capability of the research model. A Q² value greater than zero indicates that the model has good predictive relevance. The Q² value was calculated using the following formula: $Q^2 = 1 - (1 - R_1^2) \times (1 - R_2^2)$.

$$Q^2 = 1 - (1 - 0.587) \times (1 - 0.624)$$

$$Q^2 = 1 - (0.413 \times 0.376)$$

$$Q^2 = 1 - 0.155$$

$$Q^2 = 0.845$$

The calculation results show that the Q² value is 0.845, indicating that the research model has very strong predictive capability in explaining the phenomenon of students' courage to start a business.

Hypothesis Testing

Hypothesis testing was conducted using bootstrapping in SEM-PLS by examining path coefficients, t-statistics, and p-values, with significance determined at $t > 1.96$ and $p < 0.05$ (95% confidence level). The results show that all hypotheses are supported, with t-values ranging from 2.087 to 5.117 and p-values between 0.000 and 0.037. Entrepreneurship education, digital financial literacy, and financial self-efficacy significantly influence risk-taking ability, which in turn significantly affects students' entrepreneurial courage. The

indirect effects are also significant ($t = 2.087$; $p = 0.037$), confirming that risk-taking ability serves as an effective mediator and supports the integrated framework of the Theory of Planned Behavior, Social Cognitive Theory, and Behavioral Finance Theory in explaining entrepreneurial courage.

Table 5. Hypothesis Testing Results

Hypothesis	Relationship Between Variables	Path Coefficient	T-Value	P-Value	Decision
H1	Entrepreneurship Education (EE) → Risk-Taking Ability (RTA)	0.268	3.941	0.000	Accepted
H2	Digital Financial Literacy (DFL) → Risk-Taking Ability (RTA)	0.231	3.214	0.001	Accepted
H3	Financial Self-Efficacy (FSE) → Risk-Taking Ability (RTA)	0.307	4.628	0.000	Accepted
H4	Risk-Taking Ability (RTA) → Entrepreneurial Courage (ECB)	0.342	5.117	0.000	Accepted
H5	EE, DFL, FSE → RTA → ECB (Mediating Effect)	0.118	2.087	0.037	Accepted

The hypothesis testing results (H1) indicate that Entrepreneurship Education has a positive and significant effect on Risk-Taking Ability, as shown in Table 5 with a path coefficient of 0.268, a t-value of 3.941, and a p-value of 0.000. This finding is supported by the respondent characteristics presented in Table 1, where 100% of respondents were active students who had participated in entrepreneurship education, and 58% had prior experience using digital transactions for business activities such as online sales or business payments. In addition, 67% of respondents managed their digital finances independently, indicating that most students are already in an active learning phase related to economic decision-making. This condition is relevant to the indicators of entrepreneurship education—Understanding of Entrepreneurship Concepts, Business Planning Skills, and Exposure to Entrepreneurial Practices—which are empirically reflected in the measurement quality shown in Table 2, where the EE indicators exhibit loading factor values ranging from 0.764 to 0.801 and an AVE value of 0.616. The combination of adequate entrepreneurship learning and relatively active respondent characteristics logically contributes to an increased ability among students to face and manage risks in a calculated manner.

From a theoretical and empirical perspective, this finding is consistent with the Theory of Planned Behavior (TPB), which posits that entrepreneurship education shapes individuals' attitudes and perceived behavioral control toward entrepreneurial behavior. A strong understanding of entrepreneurial concepts and business planning skills enhances students' confidence in dealing with uncertainty, which is subsequently reflected in the indicators of Risk-Taking Ability based on Behavioral Finance Theory, namely willingness to take calculated risks, risk and opportunity assessment, and decision-making under uncertainty. This result aligns with previous studies demonstrating that entrepreneurship education significantly influences students' attitudes and risk tolerance, as applied learning approaches reduce fear-of-failure bias and promote more rational risk evaluation (Hasan et al., 2024; Ndofirepi, 2020). Moreover, other studies have shown that individuals with stronger economic and entrepreneurship education tend to exhibit more objective risk evaluation in financial decision-making (Lusardi & Mitchell, 2023). This study reinforces prior empirical evidence that entrepreneurship education shapes risk-taking ability as a crucial foundation for students' courage to start a business.

The results (H2) indicate that Digital Financial Literacy (DFL) has a positive and significant effect on Risk-Taking Ability (RTA), as shown in Table 5, where the relationship



DFL → RTA yields a path coefficient of 0.231, a t-value of 3.214, and a p-value of 0.001, indicating significance at the 95% confidence level. This finding is supported by the respondent characteristics presented in Table 1, which show that 100% of respondents had used digital financial services such as e-wallets and mobile banking, and 61% conducted digital transactions on a daily basis. In addition, 58% of respondents had utilized digital transactions for business activities, reflecting a high level of exposure to digital financial products and applications. Empirically, the measurement quality of the DFL construct in Table 2 shows indicator loading factor values ranging from 0.735 to 0.812, with an AVE value of 0.579, confirming that the indicators Understanding of Digital Financial Products, Ability to Use Financial Applications, and Understanding of Digital Risk & Security validly and reliably represent digital financial literacy. These results indicate that higher levels of digital financial literacy enable students to better understand the risks and opportunities inherent in financial and business decisions.

From the perspective of Behavioral Finance Theory, this finding suggests that digital financial literacy plays a critical role in shaping more rational decision-making patterns under conditions of uncertainty. A strong understanding of digital financial products and digital security risks helps students mitigate behavioral biases such as overconfidence and loss aversion, thereby increasing their willingness to take calculated risks. Moreover, the ability to use financial applications and to comprehend digital risks enhances risk and opportunity assessment and the quality of decision-making under uncertainty, which are core components of Risk-Taking Ability. These findings are consistent with prior studies showing that financial literacy—particularly in the digital context—improves risk evaluation quality and individuals' courage to engage in risky yet rational financial decisions (Islawati et al., 2024). This study further strengthens empirical evidence that Digital Financial Literacy shapes students' risk-taking ability as a critical foundation in the entrepreneurial process.

The results (H3) indicate that Financial Self-Efficacy (FSE) has a positive and significant effect on Risk-Taking Ability (RTA), as shown in Table 5, where the relationship FSE → RTA yields a path coefficient of 0.307, a t-value of 4.628, and a p-value of 0.000, indicating significance at the 95% confidence level. This finding is reinforced by respondent characteristics presented in Table 1, showing that 67% of respondents manage their digital finances independently, while 58% have experience using digital transactions for business activities. These conditions reflect students' confidence in managing finances and making independent financial decisions. Empirically, the Financial Self-Efficacy construct also demonstrates strong measurement quality in Table 2, with indicator loading values ranging from 0.794 to 0.821 and an AVE of 0.651, indicating that the indicators of confidence in managing finances, confidence in financial decision-making, and resilience to financial problems validly represent students' financial self-beliefs. These findings confirm that higher levels of financial self-efficacy are associated with stronger abilities to cope with risk and uncertainty in entrepreneurial contexts.

Theoretically, these results are consistent with Social Cognitive Theory (SCT), which emphasizes self-efficacy as a key determinant of decision-making behavior under challenging conditions. Students with high Financial Self-Efficacy tend to exhibit greater willingness to take calculated risks, more objective risk and opportunity assessment, and calmer, more rational decision-making under uncertainty. From a Behavioral Finance Theory perspective, strong financial confidence helps individuals regulate negative emotions such as fear of loss and excessive anxiety, thereby reducing behavioral biases in financial decision-making. These findings align with prior studies demonstrating that financial self-efficacy significantly influences financial behavior and risk tolerance, while enhancing individuals' ability to cope



with financial pressure and business uncertainty (Anwar, 2025; Munir & Putri, 2025). This study confirms that Financial Self-Efficacy is a key psychological factor shaping students' Risk-Taking Ability as a foundational element of entrepreneurial courage.

The results (H4) show that Risk-Taking Ability (RTA) has a positive and significant effect on Entrepreneurial Courage, or Courage to Start a Business (ECB), as presented in Table 5, where the relationship $RTA \rightarrow ECB$ yields a path coefficient of 0.342, a t-value of 5.117, and a p-value of 0.000, indicating significance at the 95% confidence level. This finding is supported by the measurement quality of the RTA and ECB constructs in Table 2. The Risk-Taking Ability indicators show loading values ranging from 0.754 to 0.802 with an AVE of 0.604, while the Entrepreneurial Courage indicators demonstrate higher loading values (0.821–0.842) and an AVE of 0.708. In addition, respondent characteristics in Table 1 indicate that 58% of students have experience using digital transactions for business activities, and 67% manage digital finances independently, reflecting students' readiness to face real-world risk and uncertainty in business practices. These conditions empirically support the conclusion that the ability to take calculated risks is a crucial factor driving students' courage to start a business.

Theoretically, this finding aligns with Behavioral Finance Theory, which explains that individuals' risk-taking behavior is influenced by how they assess opportunities, manage uncertainty, and control emotional biases in decision-making. The indicators of willingness to take calculated risks, risk and opportunity assessment, and decision-making under uncertainty reflect students' rational engagement with risk, which translates into entrepreneurial action. Within the Theory of Planned Behavior (TPB) framework, Risk-Taking Ability strengthens perceived behavioral control and positive attitudes toward entrepreneurial behavior, thereby enhancing willingness to take risks, courage in initial decision-making, and readiness to face uncertainty as core components of Entrepreneurial Courage. These results are consistent with previous studies indicating that individuals with higher risk tolerance and stronger decision-making abilities tend to exhibit greater courage in starting a business, as they perceive potential failure as part of the entrepreneurial learning process (Kariza et al., 2025; Mahmood et al., 2024). This study confirms that Risk-Taking Ability is a critical behavioral determinant bridging cognitive and psychological factors toward students' actual entrepreneurial courage.

The results (H5) indicate that Risk-Taking Ability (RTA) positively and significantly mediates the effects of Entrepreneurship Education (EE), Digital Financial Literacy (DFL), and Financial Self-Efficacy (FSE) on Students' Courage to Start a Business (ECB), with an indirect coefficient of 0.118, t-value of 2.087, and p-value of 0.037 (significant at the 95% confidence level). However, a deeper examination of the specific indirect paths shows that the mediating role of RTA is more pronounced in the relationship between Financial Self-Efficacy and ECB than in the relationship between Entrepreneurship Education and ECB. This suggests that students' internal confidence in managing financial challenges contributes more strongly to the development of risk-taking capacity, which subsequently translates into entrepreneurial courage, compared to the more knowledge-oriented contribution of entrepreneurship education (Hasan et al., 2024; Mahmood et al., 2024; Ndofirepi, 2020). In practical terms, while EE provides cognitive understanding and exposure, FSE strengthens psychological readiness, making the $FSE \rightarrow RTA \rightarrow ECB$ pathway relatively more dominant. The R-square values of 0.624 for ECB and 0.587 for RTA further confirm that RTA serves as an important, though partial, explanatory mechanism within the model.

Nevertheless, the mediating effect of RTA is not as strong as the direct effects of EE and FSE on ECB, indicating partial rather than full mediation. This implies that although risk-taking ability is a critical mechanism, other contextual and external factors may directly



shape entrepreneurial courage. In the context of Banyumas Regency—where major universities such as Universitas Jenderal Soedirman, UIN Prof. KH Saifuddin Zuhri, and Universitas Muhammadiyah Purwokerto have integrated entrepreneurship education into their curricula—students are widely exposed to entrepreneurial knowledge and digital financial services. However, cultural norms that prioritize employment stability (e.g., preference for civil service or formal-sector jobs), strong family expectations for secure income, and limited local market absorption for start-ups may constrain the translation of risk-taking propensity into actual entrepreneurial courage. From the perspective of the Theory of Planned Behavior and Behavioral Finance Theory, these external normative pressures and perceived environmental uncertainties can weaken the behavioral manifestation of risk-taking tendencies. Therefore, universities should not only strengthen students' financial self-efficacy and experiential risk-based learning but also create supportive ecosystems—such as mentoring, family engagement programs, and local incubation networks—to reduce perceived external constraints and amplify the transformation of risk-taking capacity into sustainable entrepreneurial action.

Conclusion

The results of the analysis indicate that Entrepreneurship Education (EE), Digital Financial Literacy (DFL), and Financial Self-Efficacy (FSE) have a positive and significant effect on Risk-Taking Ability (RTA), and that RTA in turn has a positive and significant effect on Students' Courage to Start a Business (ECB). Furthermore, RTA was found to positively and significantly mediate the relationships between the three independent variables and Entrepreneurial Courage. These findings underscore that entrepreneurial courage does not emerge instantaneously but develops through a process in which individuals build their ability to assess risk, manage uncertainty, and make rational decisions. Theoretically, this study reinforces the integration of the Theory of Planned Behavior (TPB), Social Cognitive Theory (SCT), and Behavioral Finance Theory (BFT) in explaining students' entrepreneurial behavior.

The practical implications emphasize the importance of shifting entrepreneurship education in universities from merely transferring knowledge to strengthening students' capacity for calculated risk-taking. Universities in Banyumas Regency should enhance practice-based learning, business simulations, and case studies that emphasize decision-making under uncertainty, while integrating digital financial literacy and technology-based risk management training. For policymakers and local government, these findings provide an empirical basis to support student entrepreneurship not only through increasing the number of new entrepreneurs but also by enhancing psychological and behavioral capacities, particularly Risk-Taking Ability, through ecosystem support such as business incubators, entrepreneurial mentoring, and collaboration with local fintech sectors.

Recommendation

This study implies several directions for subsequent investigation and practical follow-up. A longitudinal design would be valuable to observe how students' Risk-Taking Ability and Entrepreneurial Courage develop from their academic period through post-graduation, thereby clarifying whether risk propensity during university years translates into actual entrepreneurial action. As a follow-up recommendation for campus leaders and lecturers, entrepreneurship programs should move beyond theoretical instruction toward structured risk-based experiential learning, such as business simulations, start-up incubation, mentoring by practitioners, and reflective financial decision-making exercises that



systematically strengthen financial self-efficacy and calculated risk-taking. University management is also encouraged to build sustainable support ecosystems through collaboration with industry, alumni entrepreneurs, and local government to reduce students' perceived external risks. Further studies may adopt mixed-method approaches by combining quantitative surveys with in-depth interviews or case studies to explore more deeply the psychological processes and lived experiences of students in dealing with business uncertainty. It is also important to include contextual variables such as entrepreneurial mentoring, family support, campus organizational culture, and regional economic conditions to test the stability of the mediation model. In addition, comparative research—such as comparing students in metropolitan and non-metropolitan areas—would help determine whether the mediating role of Risk-Taking Ability is universal or more context-specific to regions like Banyumas, thereby strengthening both theoretical generalization and evidence-based policy design in higher education entrepreneurship.

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