

# The Impact of Entrepreneurship Education, Self-Efficacy, and Creative Thinking on Entrepreneurial Intention among University Undergraduates in Anhui Province

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**Abstract:** In the context of China's strategic push for "Mass Entrepreneurship and Innovation," fostering entrepreneurial talent has become a priority for higher education, particularly in developing inland regions like Anhui Province. This study empirically examines the determinants of Entrepreneurial Intention (EI) among university undergraduates by integrating the Theory of Planned Behavior and Social Cognitive Theory. Specifically, it investigates the influence of Entrepreneurship Education (EE), Entrepreneurial Self-Efficacy (ESE), and Creative Thinking (CT). Data were collected via a structured questionnaire from 426 undergraduates across five universities in Anhui Province. The results, analyzed using SPSS 26.0, indicate that Entrepreneurship Education significantly enhances intention, Entrepreneurial Self-Efficacy serves as the strongest predictor, and Creative Thinking plays a vital positive role. These findings suggest that universities in Anhui should transcend traditional theoretical teaching to adopt experiential learning models that bolster student confidence and creative capabilities. This research contributes to the literature by validating a multi-dimensional model within the specific socio-economic context of the Yangtze River Delta's inland region.

**Keywords:** Entrepreneurial Intention, Entrepreneurship Education, Self-Efficacy, Creative Thinking, Anhui Province

## 1. Introduction

### 1.2 Background

The global economic landscape has undergone a profound transformation in the 21st century, shifting from factor-driven to innovation-driven growth models (Porter, 2009; Xu et al., 2018). In this volatile environment, entrepreneurship is widely recognized as a critical engine for economic resilience, job creation, and technological innovation (Schumpeter, 1934; Wong et al., 2005).

Simultaneously, China's economy has entered a "New Normal" phase, transitioning from high-speed growth to high-quality development. To adapt to these structural changes, the Chinese central government has vigorously promoted the "Mass Entrepreneurship and Innovation" strategy since 2014 (Wang, 2024). This initiative is particularly urgent given the unprecedented pressure on the domestic labor market; with the number of university graduates in China exceeding 11 million annually, there is a "structural contradiction" in employment that traditional sectors cannot fully absorb, making graduate entrepreneurship a vital survival strategy for national stability (Wang & Zhang, 2025).

Anhui Province stands at the forefront of this regional transition. As a strategic hub in the Yangtze River Delta integration zone and a beneficiary of the "Rise of Central China" policy, Anhui has rapidly modernized its industrial base (Constantin & Volintiru, 2024). The provincial capital, Hefei, has emerged as a comprehensive national science center, boasting booming industrial clusters in quantum computing, new energy vehicles, and artificial intelligence. Consequently, the regional demand for high-quality entrepreneurial talent—capable of navigating complex market dynamics has surged.

In response, local universities have aggressively integrated innovation and entrepreneurship education (IEE) into their curricula under the "Double First-Class" initiative (Lv et al., 2021). However, despite the abundance of policy support and educational resources, a significant "intention-action gap" remains: while entrepreneurial awareness among students is high, the conversion rate into actual venture creation is relatively low compared to coastal provinces (Ye &

Kang, 2025). This disconnect necessitates a rigorous academic inquiry into the underlying factors specifically the interplay of education, self-efficacy, and creative thinking that drive undergraduates to bridge this gap.

### 1.3 Problem Statement

Despite the significant investment in entrepreneurship education and the proliferation of university-based incubators, a discrepancy remains between the high level of entrepreneurial interest and the actual rate of business creation among undergraduates in Anhui.

While existing literature has extensively covered entrepreneurial intention in developed coastal regions such as Beijing, Shanghai, and Guangdong (Liñán & Chen, 2009), there is a paucity of empirical research focusing on inland provinces like Anhui. Students in these regions often face different resource constraints and cultural attitudes toward risk compared to their coastal counterparts.

Furthermore, while the direct impact of education on intention is well-documented, the mechanism by which individual cognitive factors—specifically the interplay between creative thinking and self-efficacy—mediate this relationship in a developing regional context remains under-explored.

This gap highlights the need to understand whether current educational models effectively enhance the psychological and cognitive readiness of students.

### 1.4 Research Objectives

To address these gaps, this study aims to empirically examine the determinants of entrepreneurial intention among Anhui undergraduates. It seeks to quantify the specific impacts of Entrepreneurship Education (EE), Entrepreneurial Self-Efficacy (ESE), and Creative Thinking (CT) on intention. By identifying the strongest predictors of entrepreneurial behavior through quantitative analysis, this research provides evidence-based recommendations for policymakers and university administrators to optimize entrepreneurship education systems.

## 2. Literature Review and Hypotheses Development

### 2.1 Literature Review

Entrepreneurial Intention (EI) is widely acknowledged in academic discourse as the single best predictor of actual entrepreneurial behavior, serving as the crucial psychological link between ideas and action. Bird (1988) defined EI as a state of mind that directs a person's attention, experience, and action toward a specific business concept.

According to the Theory of Planned Behavior (TPB), which has become the dominant framework in this field, intention is the immediate antecedent of behavior. It is determined by three cognitive antecedents: attitude toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991). In the context of entrepreneurship, "perceived behavioral control" is conceptually synonymous with Entrepreneurial Self-Efficacy (ESE) the belief in one's capability to execute the target behavior (Bandura, 1997; Liñán & Chen, 2009).

Historically, early research primarily focused on personality traits, such as the need for achievement, risk-taking propensity, or locus of control. However, these trait-based approaches were often criticized for their low predictive power and methodological inconsistencies (Gartner, 1988). Consequently, scholars like Krueger et al. (2000) argued for a paradigm shift, positing that entrepreneurship is a planned, intentional behavior better explained by cognitive process models rather than static personality traits. This shift is pivotal for educators because while personality is relatively fixed, cognitive factors such as self-efficacy and creative thinking are malleable and can be enhanced through pedagogical intervention.

This cognitive perspective places Entrepreneurship Education (EE) at the center of the intention formation process. Souitaris et al. (2007) suggested that education programs do not merely transfer technical skills; they act as a socialization mechanism that raises intention by providing "inspiration" (changing attitudes) and "resources" (enhancing control). However, the effectiveness of EE is not uniform. Recent studies indicate that for education to successfully translate into intention, it must interact with specific individual competencies, particularly Creative Thinking. As Hamidi et al. (2008) noted, creativity is the engine of opportunity recognition, influencing how students perceive the feasibility of their entrepreneurial goals. Therefore, understanding the complex interplay between external education and internal cognitive drivers (self-efficacy and creativity) is essential for explaining the "intention-action" gap observed in higher education.

### 2.2 Theoretical Foundation

This investigation derives its theoretical foundation from the synthesis of two complementary frameworks: the Theory of Planned Behavior (TPB) and Social Cognitive Theory (SCT). Within this integrated conceptualization, Ajzen's (1991) TPB functions as the principal structural paradigm for explicating the formation of entrepreneurial intention. The theory postulates that intention constitutes the most immediate cognitive precursor to behavioral enactment, with its emergence governed by three antecedent determinants: attitude toward the behavior, subjective norms, and perceived behavioral control (PBC).

This study specifically emphasizes the construct of Perceived Behavioral Control, which refers to an individual's perception of the ease or difficulty of performing the behavior of interest. In the context of entrepreneurship, PBC is critical because the decision to start a business is often hindered not by a lack of desire, but by a perceived lack of capability or resources (Krueger & Brazeal, 1994).

To explain how these perceptions are formed and modified, this study incorporates Bandura's (1986) Social Cognitive Theory, specifically the concept of Triadic Reciprocal Determinism. SCT elucidates that human functioning is a product of the dynamic and bidirectional interplay between personal factors (cognitive, affective, and biological events), behavioral patterns, and environmental influences. Within this integrated framework, the variables of this study are mapped as follows: Entrepreneurship Education (EE) acts as the exogenous environmental influence, providing the necessary stimuli and mastery experiences. Entrepreneurial Self-Efficacy (ESE) and Creative Thinking (CT) represent the internal personal cognitive resources.

The integration of these theories is justified by the significant conceptual overlap between Ajzen's (1991) PBC and Bandura's Self-Efficacy (Boyd & Vozikis, 1994). While TPB predicts the intention, SCT explains the learning mechanism. We posit that entrepreneurship education (Environment) enhances students' creative thinking and self-efficacy (Person), which in turn elevates their perceived control over the entrepreneurial process, ultimately crystallizing into a firm entrepreneurial intention (Behavioral Intention). This theoretical synthesis provides a comprehensive lens to examine the cognitive transition from "learning" to "intending."

## 2.3 Hypotheses Development

Entrepreneurship Education (EE) encompasses pedagogical activities designed to cultivate entrepreneurial knowledge and competencies. Drawing upon Human Capital Theory (Becker, 1964), educational interventions enhance individuals' cognitive capabilities and productive potential. Fayolle and Gailly (2015) demonstrated that well-designed entrepreneurship programs substantially modify students' attitudes and perceived behavioral control regarding entrepreneurial endeavors. In Anhui province, where entrepreneurship courses have been incorporated into university general education curricula, such exposure is anticipated to demystify the new venture creation process.

***H1: Entrepreneurship education has a significant positive impact on entrepreneurial intention (H1).***

Entrepreneurial Self-Efficacy (ESE) denotes an individual's confidence in their capacity to execute the diverse roles and responsibilities associated with entrepreneurship. Zhao et al. (2005) established self-efficacy as a pivotal motivational mechanism shaping career choices, goal commitment, and persistence. Individuals possessing elevated ESE tend to interpret entrepreneurial challenges as manageable opportunities rather than insurmountable obstacles. Given the market uncertainties characterizing Anhui's economic environment, such confidence constitutes an essential precondition for entrepreneurial action.

***H2: Entrepreneurial self-efficacy has a significant positive impact on entrepreneurial intention (H2).***

Creative Thinking (CT) involves generating novel, useful ideas—fundamental to opportunity recognition. Ranis and Fei (1961) characterized entrepreneurs as innovators disrupting market equilibrium. Hamidi et al. (2008) found creativity enables identification of market gaps and unique value propositions. In the Yangtze River Delta's technologically evolving context, creatively adept students are better positioned to envision viable business models.

***H3: Creative thinking has a significant positive impact on entrepreneurial intention (H3).***

## 3. Methodology

### 3.1 Participants and Procedure

The study employed a quantitative research design targeting full-time undergraduate students in Anhui Province. A stratified random sampling technique was utilized to ensure representation across different types of institutions, including comprehensive universities, universities of science and technology, and normal universities. The data collection was conducted from September to November 2024. A total of 500 questionnaires were distributed through both online platforms and physical classroom settings. After a rigorous screening process to remove incomplete responses and those with distinct patterns of straight-lining, 426 valid questionnaires were retained for analysis, yielding an effective response rate of 85.2%.

### 3.2 Measures

The survey instrument adopted established scales from existing literature to ensure validity. All items were measured on a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). Entrepreneurship Education was measured using four items adapted from Lüthje and Franke (2003). Entrepreneurial Self-Efficacy was evaluated using five items from Liñán and Chen (2009). Creative Thinking was assessed with four items adapted from Farmer et al. (2003). Finally, Entrepreneurial Intention was measured using six items from Liñán and Chen (2009).

### 3.3 Data Analysis Strategy

Data analysis employed SPSS version 26.0. The analytical procedure comprised: (1) descriptive statistics for respondent profiling; (2) reliability and validity testing via Cronbach's Alpha and Exploratory Factor Analysis (EFA); (3) Pearson correlation analysis for bivariate relationships; and (4) multiple regression analysis for hypothesis testing.

## 4. Data Analysis and Results

### 4.1 Demographic Profile

The demographic characteristics of the respondents are presented in Table 1. The sample shows a balanced gender distribution, with 54.2% male and 45.8% female participants. Regarding academic discipline, nearly half of the students (48.1%) are majoring in Engineering and Science, reflecting the strong polytechnic focus of higher education in Anhui. The distribution across year levels is relatively even, ensuring that the views of students at different stages of their academic journey are represented.

The predominance of STEM majors is particularly significant as it aligns with the regional economic strategy of Anhui, which prioritizes technological innovation, thereby making the sample highly relevant for assessing high-potential entrepreneurship. Furthermore, the comprehensive coverage across grade levels helps to minimize age-related sampling bias, enhancing the external validity of the findings regarding how higher education influences intention over time.

**Table 1.** Demographic profile of respondents (N=426)

Variable	Category	Frequency	Percentage(%)
Gender	Male	231	54.2
	Female	195	45.8
Year of study	Freshman	85	20.0
	Sophomore	112	26.3
	Junior	124	29.1
	Senior	105	24.6
Major	Engineering/Science	205	48.1
	Business/Management	110	25.8
	Art/Humanities	111	26.1

### 4.2 Reliability and Validity Analysis

To evaluate the internal consistency of the measurement scales, Cronbach's Alpha coefficients were calculated. As shown in Table 2, the alpha values for all four constructs ranged from 0.815 to 0.903, all exceeding the recommended threshold of 0.70 (Nunnally, 1978), indicating high reliability. Specifically, the robust alpha coefficients imply that the items within each construct are highly correlated and measure the underlying theoretical concepts with excellent stability.

Furthermore, the construct validity was assessed using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity. The KMO value was 0.884, and Bartlett's test was statistically significant ( $p < 0.001$ ), confirming that the data structure was suitable for factor analysis. This "meritorious" level of sampling adequacy provides a solid statistical foundation, ensuring that the subsequent regression analysis is based on valid and distinct latent factors.

**Table 2.** Reliability and validity statistics

Construct	Items	Cronbach's Alpha ( $\alpha$ )	KMO value	Bartlett's test (Sig.)
Entrepreneurship education (EE)	4	0.842	0.884	0.000
Entrepreneurial self-efficacy (ESE)	5	0.891		
Creative thinking (CT)	4	0.815		
Entrepreneurial intention (EI)	6	0.903		

### 4.3 Correlation Analysis

Pearson correlation analysis was conducted to examine the linear relationships between the variables. Table 3 illustrates that Entrepreneurial Intention is significantly and positively correlated with Entrepreneurial Self-Efficacy ( $r = 0.645$ ,  $p < 0.01$ ), Entrepreneurship Education ( $r = 0.512$ ,  $p < 0.01$ ), and Creative Thinking ( $r = 0.488$ ,  $p < 0.01$ ). The robust correlation values affirm the theoretical proposition that cognitive factors and environmental stimuli move in tandem to shape student intentions, validating the integrated research framework.

These results provide preliminary support for the hypotheses and indicate that multicollinearity is not a concern, as the correlation coefficients are below the critical value of 0.75. Moreover, the fact that these coefficients are moderate rather than excessive suggests that each variable captures a unique aspect of the entrepreneurial mindset, ensuring they provide distinct, non-redundant contributions to the subsequent regression model.

**Table 3.** Pearson correlation matrix

Variable	1(EЕ)	2(ESE)	3(CT)	4(EI)
1. Entrepreneurship education (EE)	1			
2. Entrepreneurial self-efficacy (ESE)	0.453**	1		
3. Creative thinking (CT)	0.389**	0.512**	1	
4. Entrepreneurial intention (EI)	0.512**	0.645**	0.488**	1

Note: \*\* Correlation is significant at the 0.01 level (2-tailed).

#### 4.4 Regression Analysis

A multiple linear regression analysis was performed to evaluate the hypothesized relationships, with Entrepreneurial Intention serving as the dependent variable. The results, displayed in Table 4, reveal that the three independent variables explain 52.6% of the variance in entrepreneurial intention ( $R^2 = 0.526$ ). This level of explanatory power indicates strong model adequacy for behavioral research, effectively capturing primary antecedents of student intentions. The overall model achieved statistical significance, as evidenced by an F-value of 156.42 ( $p < 0.001$ ).

Specifically, Entrepreneurial Self-Efficacy ( $\beta = 0.452$ ,  $p < 0.001$ ) emerged as the strongest predictor, followed by Entrepreneurship Education ( $\beta = 0.264$ ,  $p < 0.001$ ) and Creative Thinking ( $\beta = 0.187$ ,  $p < 0.001$ ). The dominance of the self-efficacy coefficient underscores a critical insight: while educational resources are necessary, the internal psychological belief in one's capability is the decisive factor in transforming potential into intent. Thus, H1, H2, and H3 are all supported.

**Table 4.** Regression analysis results

Model	Unstandardized coeff. (B)	Std. error	Standardized coeff. ( $\beta$ )	t-value	Sig. (p)	Outcome
(Constant)	0.412	0.105		3.923	0.000	
Entrepreneurship education (EE)	0.285	0.042	0.264	6.785	0.000	H1 supported
Entrepreneurial efficacy (ESE)	0.431	0.048	0.452	8.979	0.000	H2 supported
Creative thinking (CT)	0.198	0.039	0.187	5.076	0.000	H3 supported

### 5. Discussion

#### 5.1 Interpretation of Findings

The findings of this study provide robust empirical support for the integrated model of entrepreneurial intention within the specific context of Anhui Province. The results from the regression analysis highlight several critical insights.

First, the confirmation of Hypothesis 1 ( $\beta = 0.264$ ) validates the efficacy of the entrepreneurship education reforms implemented in Anhui universities. This aligns with the findings of Souitaris et al. (2007), suggesting that when educational programs provide relevant knowledge and inspiration, they effectively enhance students' intention to start businesses. It indicates that the current curriculum has successfully moved beyond mere theoretical instruction to fostering a genuine interest in entrepreneurship.

Second, the fact that Entrepreneurial Self-Efficacy acts as the most potent predictor ( $\beta = 0.452$ ) is consistent with Bandura's (1977) Social Cognitive Theory and Zhao et al.'s (2005) research. This finding is particularly salient for Anhui undergraduates. Unlike students in first-tier coastal cities who are surrounded by a mature entrepreneurial ecosystem, Anhui students may perceive higher risks associated with starting a business. In such an environment, the internal belief in one's capability becomes the decisive factor in converting interest into intention. It suggests that psychological empowerment is more critical than technical knowledge alone.

Third, the significant positive impact of Creative Thinking ( $\beta = 0.187$ ) underscores the evolving nature of entrepreneurship in the region. As Anhui transitions toward a technology-driven economy, the ability to innovate is becoming inextricably linked with entrepreneurial intent. This supports Hamidi et al.'s (2008) argument that creativity acts as a catalyst for recognizing business opportunities. Students who identify as creative are more likely to visualize themselves as entrepreneurs who can bring new value to the market.

## 5.2 Practical Implications

These findings offer clear directives for educators and policymakers. To begin with, university curricula must evolve from passive knowledge transmission to active, experiential learning. Given the dominance of self-efficacy, educators should prioritize "mastery experiences," such as simulation games, startup competitions, and micro-business projects, which allow students to build confidence through tangible achievements. Furthermore, creativity training should be embedded into entrepreneurship modules. Techniques such as design thinking should be employed to help students realize that creativity is a learnable skill that directly supports entrepreneurial goals. Finally, the Anhui provincial government should continue to support university-based incubators but should focus funding on projects that demonstrate high student participation and creative novelty, thereby reinforcing the feedback loop between education and practice.

## 6. Conclusion

This study has empirically examined the determinants of entrepreneurial intention among undergraduates in Anhui Province. The analysis of 426 valid responses confirms that Entrepreneurship Education, Entrepreneurial Self-Efficacy, and Creative Thinking are all significant drivers of intention, with self-efficacy playing the central role. These findings underscore the importance of a holistic educational approach that fosters not only cognitive skills but also psychological resilience and creative capability. However, this study is limited by its cross-sectional design, which precludes the establishment of causal relationships over time. Future research should consider longitudinal designs to track the transition from intention to actual behavior and conduct comparative studies between inland and coastal provinces to explore regional nuances.

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### Conflict of Interest

The authors declare no conflicts of interest.

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