

# ***The Entrepreneurship Education, Self-Efficacy, and Entrepreneurial Intention of Students in Selected Universities in Zhejiang Province toward an Action Plan***

**ZhuHuan Lin**

Sciences and Education, Trinity University of Asia Cathedral Heights, 275 E. Rodriguez Sr., Avenue, Quezon City, Philippines 1102 NCR.  
Email: [zhuhuannlin@tua.edu.ph](mailto:zhuhuannlin@tua.edu.ph)

**Serena Corbeta- Gomez\***

Dean College of Arts, Sciences and Education, Trinity University of Asia Cathedral Heights, 275 E. Rodriguez Sr., Avenue, Quezon City, Philippines 1102 NCR.  
Email: [scgomez@tua.edu.ph](mailto:scgomez@tua.edu.ph)

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**Abstract:** Entrepreneurship education is increasingly recognized as an essential element in shaping the entrepreneurial mind-set of university students. This study examines the relationship between entrepreneurship education, entrepreneurial self-efficacy (ESE), and entrepreneurial intention (EI) among university students in Zhejiang Province, China. Grounded in Social Cognitive Theory, it explores how personal beliefs, shaped by education and experience, influence entrepreneurial behavior. It also investigates how demographic factors such as gender, grade level, school type, and entrepreneurial experience affect students' entrepreneurial outcomes. A quantitative approach was adopted, surveying 482 students from various universities. Data were collected through a structured questionnaire and analyzed using SPSS. Statistically significant differences were observed by grade level and entrepreneurial experience. Senior students reported higher EI ( $M = 3.85$ ) and ESE ( $M = 3.81$ ) compared to freshmen (EI  $M = 3.42$ ; ESE  $M = 3.67$ ;  $p < 0.001$ ). Similarly, students with prior entrepreneurial experience scored significantly higher in opportunity recognition ( $M = 3.98$ ) than those without ( $M = 3.52$ ;  $p < 0.001$ ). The study suggests tailoring entrepreneurship education by academic level and experience, emphasizing practical, experiential learning. **Limitations:** Findings are limited by the cross-sectional design, self-reported data, lack of qualitative insight, and incomplete statistical reporting, which may affect generalizability and interpretation. Future studies should adopt mixed-method and longitudinal approaches.

**Keywords:** Entrepreneurial Self-Efficacy, Student Demographics, Entrepreneurial Experience, Entrepreneurial Intention, Entrepreneurship Education.

## **1. Introduction**

### ***1.1. Research Background***

In growing economies, like China, entrepreneurship is now recognized as significant for developing the economy and society. Entrepreneurship in Zhejiang Province has flourished due to its steady economic base, policy changes in universities, and greater focus on innovation among schools. According to the research of Xie and Zhang (2019), students from universities in strong entrepreneurial zones show more entrepreneurial potential, mostly thanks to the positive atmosphere and experience gained from facing real-world business difficulties. Furthermore, Nguyen and Nguyen (2024) indicate that more students can access higher education, so educational systems should adapt to

encourage entrepreneurial intention among students from different backgrounds. As more focus is put on entrepreneurial education and national innovation strategies, universities are now playing a key role in nurturing the next generation of entrepreneurs. However, even as courses on entrepreneurship gain in popularity, doubts persist about how much these courses impact students' desire and self-belief in running their own businesses.

In this context, a person's confidence in their entrepreneurial abilities, known as ESE, plays a key role in linking education with outcomes in entrepreneurship. According to Setiawan (2014), when students have a high sense of self-efficacy, they are more motivated to start entrepreneurial activities. In addition, Hassan's (2020) studies indicate that how much individuals believe in themselves is closely tied to their intention to be entrepreneurs in different economic settings. Many studies have looked at factors like the school curriculum, support given by teachers, and extracurricular activities to see their influence on entrepreneurial success. Zhu, Rooney and Phillips (2016) found that institutions that use more interactive methods in teaching could help students gain important skills for entrepreneurship. As discussed by Li and Abdullah (2024), the local Zhejiang culture that embraces taking risks and new ideas allows researchers to better assess how prepared students are to engage in entrepreneurship after their schooling. While these developments are positive, achieving the policy goals is still a big challenge for students, especially in putting their education into practice in business. Therefore, it is important to review both the information provided and the consequences of entrepreneurship education on learners' minds.

## *1.2. Problem Statement*

Despite growing emphasis on entrepreneurship education in Zhejiang Province, disparities remain in how students perceive and benefit from such programs, particularly in relation to their self-efficacy and entrepreneurial intentions. Variations linked to demographic factors such as school type, grade level, and entrepreneurial experience suggest that current educational approaches may not equally support all students. This inconsistency potentially limits the development of effective entrepreneurial skills and aspirations, hindering the region's broader economic and innovation goals. Given Zhejiang's strategic positioning as a national innovation hub—home to technology clusters like Hangzhou and key drivers of start-up development, such disparities risk excluding large student segments from contributing to the region's entrepreneurial ecosystem. Addressing these gaps is essential to optimizing entrepreneurship education and fostering inclusive entrepreneurial growth among university students.

## *1.3. Research Objectives*

1. To analyze the impact of demographic profiles on the level of assessment of entrepreneurship education among students.
2. To analyze how demographic profiles affect students' assessment of entrepreneurial self-efficacy.
3. To investigate the variations in entrepreneurial intention assessments based on students' demographic profiles.
4. To explore the relationship between entrepreneurship education, entrepreneurial self-efficacy, and entrepreneurial intention among students.

## 1.4. Significance of the Study

The significance of this study lies in its potential to enhance understanding of how entrepreneurship education, self-efficacy, and entrepreneurial intention interplay among university students in Zhejiang Province. By examining demographic influences on these factors, the research provides valuable insights for educators and policymakers to tailor entrepreneurship programs effectively. Practical experience and targeted education play crucial roles in boosting entrepreneurial self-efficacy and intention, which are essential for fostering innovation and economic development. Additionally, the study informs curriculum design to better support diverse student populations, addressing gaps related to rural-urban disparities. Overall, it contributes to strengthening entrepreneurial ecosystems by equipping future graduates with the skills and confidence needed for successful venture creation.

## 2. Related Work

### 2.1. Influence of Educational Environment on Entrepreneurial Self-Efficacy

Access to resources, quality of teaching, and the availability of hands-on learning are key factors in how the educational environment influences entrepreneurial self-efficacy in students. Mouzakitis (2010) claims that attending a vocational school can help students more in entrepreneurship since academic schools mostly teach theories with little actual practice. For this reason, students sometimes doubt whether they will be capable of creating business opportunities or producing innovations as entrepreneurs. On the other hand, Scogin et al. (2017) think that a universal curriculum can fill the gaps among institutions and confirm that hands-on work experience significantly improves ESE. These outcomes suggest that linking real work with educational activities helps prepare for entrepreneurship.

A positive learning climate for ESE relies a lot on teachers' enthusiasm and expertise. According to Kassean et al. (2015), having teachers who use true business activities in class can help students become more involved and surer of themselves. Paying attention to whether instructors are ready for entrepreneurship teaching matters. According to Jovanova-Mitkovska (2010), teachers are not supposed to cease learning and renewing their ways to offer an interesting and caring learning environment. Moreover, the application of case study, simulations, and group projects with the students further brings value to their entrepreneurial education. Due to the practice in schools, the students gain prowess and competence in spearheading swiftly evolving business places.

### 2.2. Influence of Educational Environment on Entrepreneurial Self-Efficacy

Learning and teaching environments can contribute to ESE by exposing students to the world of the entrepreneur, as well as providing opportunities to test their newly acquired skills. According to Lantu et al. (2021), encouraging students to take internships and operate simulated businesses at school enhances entrepreneurial thinking in students. In teaching skills, it enables people to feel good about the abilities that they have and enables them to accomplish more in their activities.

Moreover, Sund, Gericke and Bladh (2020) note that a strong curriculum and great teaching are important for supporting ESE. According to the research, using case studies and team activities helped students believe in their ability to become entrepreneurs, whereas those who only listened to lectures did not experience any change. To encourage students' confidence, educators recommend blending creative problem-solving and learning. Faculty members' knowledge and the available resources within the institution play a key role in developing the learning atmosphere (Oleson & Hora, 2014). Institutions with well-prepared entrepreneurship teachers and current resources help students gain skills and improve their confidence in starting a business. For students to have high levels of ESE, the institution must be committed to entrepreneurship education.

On the other hand, Duval-Couetil (2013) points out that offering just entrepreneurship courses and tools is not enough if the curriculum is not regularly updated to match current industry trends. Some educational authorities mention that using dated material in classrooms might limit students' faith in themselves and impede their progress. For example, integrating current technology topics into Zhejiang University's entrepreneurship curriculum has apparently strengthened students' self-belief.

### *2.3. Impact of Entrepreneurial Self-Efficacy on Venture Creation and Business Success*

An entrepreneur's belief in their skills to start and run a business has been strongly tied to creating a venture and achieving success. Luszczynska and Schwarzer (2015) explain that the belief in one's own abilities (self-efficacy) inspires entrepreneurs to begin new ventures because it encourages them to be persistent and willing to take risks. According to Caliendo et al. (2023), students scoring high in ESE are more active in start-up activities and show stronger resilience in tough business situations. It appears that having faith in spotting possibilities and developing new ideas increases the likelihood of entrepreneurs taking action.

In addition, Suguna et al. (2024) suggest that early support education helps build crucial abilities such as assessing opportunities and handling relationships, key to a company's continuous development. The argument is that, thanks to strong self-efficacy, individuals can deal with unpredictable markets and benefit from connections, helping ventures endure. Nate et al. (2022) also discuss how building networks with experts is important for entrepreneurs because it gives them access to funding, mentorship, and the needed resources in their markets.

However, Na-Allah and Ahmad (2022) found that the important roles of support from the environment and institutional resources should not be overlooked in the relationship between ESE and new venture creation. As an example, entrepreneurs can join an incubator program or engage in government entrepreneurship programs to take their ideas to succeed in business. Ioannou and Retalis (2025) remark that entrepreneurial networks are especially potent in providing advice and finance to new enterprises since they have a specific edge in ESE. The approach they apply is an integration of competencies with practical activity, which means students realize their confidence and launch effective business-like initiatives (Ma, Wu & Shang, 2021). Altogether, the research notes that a firm belief in entrepreneurial self-efficacy is significant in establishing and maintaining a business.

## 2.4. Social Cognitive Theory

Social Cognitive Theory (SCT) explains how personal characteristics, environmental factors, and behaviour interact to influence individual actions (Erfanian, Maleknia & Halalisan, 2024). A central construct in SCT is self-efficacy, defined as a person's belief in their capability to perform tasks and achieve specific goals. Within the context of entrepreneurship education, SCT highlights the predictive power of entrepreneurial self-efficacy (ESE) in determining whether individuals are likely to develop entrepreneurial intentions and pursue venture creation. Cardon and Kirk (2015) emphasize that individuals who believe in their entrepreneurial competence are more motivated to initiate business activities and persist through challenges, often leading to more successful outcomes.

The theory also identifies mechanisms such as enactive mastery (learning through doing), vicarious experiences (observing others), and social persuasion as key pathways to strengthening self-efficacy. Pérez-Bustamante (2014) supports this by demonstrating that students who engage in practical entrepreneurial tasks build greater trust in their ability to manage businesses. This hands-on learning boosts self-efficacy, a concept that directly informs this study's investigation of how prior entrepreneurial experience influences students' ESE and, by extension, their entrepreneurial intention (EI).

Observational learning is equally critical. As Austin and Nauta (2016) argue, students exposed to mentors or entrepreneurial role models gain confidence by visualising success through others. This aligns with this study's hypothesis that students exposed to richer entrepreneurial ecosystems—through their grade level, institutional support, or experience- will exhibit higher levels of ESE and EI.

Sökmen (2021) further highlights the role of contextual support in building self-worth and efficacy, finding that participation in incubators and entrepreneurship programs results in significantly higher ESE. This observation informs the study's exploration of demographic variables such as school type and entrepreneurial exposure, which are hypothesised to influence students' entrepreneurial outcomes.

In this research, SCT provides the theoretical underpinning for exploring how entrepreneurship education and student experiences shape ESE, which in turn affects entrepreneurial intention. This theoretical lens is crucial in addressing the study's fourth research question: "What is the relationship between entrepreneurship education, entrepreneurial self-efficacy, and entrepreneurial intention among university students?" By integrating SCT, the study not only investigates the existence of relationships among key constructs but also explains *why* these relationships matter for entrepreneurial development.

## 2.5. Literature Gap

There is a cavity in the present literature regarding the specific influence of contextual factors within Zhejiang Province's universities on entrepreneurial education, self-efficacy, and intentions. While previous research has explored general trends in entrepreneurship education, the region-specific variables, such as school type, local entrepreneurial ecosystems, and cultural influences, have not been sufficiently examined. Additionally, the relationship between entrepreneurial education and self-

efficacy in shaping entrepreneurial intentions, particularly in the context of Chinese higher education institutions, remains underexplored. This study aims to address these gaps by focusing on the unique dynamics of Zhejiang Province.

### **3. Methodology**

#### *3.1. Research Method*

This study employed a quantitative research method to explore the impact of entrepreneurship education on students' entrepreneurial self-efficacy and entrepreneurial intentions. A quantitative approach was selected since it lets researchers gather data from a large number of participants and analyze the results with statistics. The purpose of this method is to explore trends, relationships, and differences present in the variables being studied. With this method, the research intends to maintain objectivity and valid results in measuring education's influence on entrepreneurial attitudes and actions.

#### *3.2. Research Design*

The study employed primary data in examining the linkages between entrepreneurship education, self-efficacy, and entrepreneurship intention. Primary data directed at the people involved in the study was obtained using surveys. This process assisted in ensuring the information was particular and aligned to the objectives of the research. The research had a close focus on what was important by listening to students directly, getting their opinion and feedback regarding their experience in entrepreneurship education. Primary data such as this is particularly effective when the topic is one on which little research has been done, such as the possibility that education can influence one in becoming confident and having the interest to start a business.

#### *3.3. Data Collection*

Data for this study were collected using survey questionnaires, which were distributed to university students. The survey was structured to gather information on demographic factors, self-reported entrepreneurial self-efficacy, perceptions of entrepreneurship education, and entrepreneurial intentions. The questionnaire used a Likert scale to measure the degree of agreement or disagreement with various statements related to the research topics. A five-point Likert scale was employed, with the following response options: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. This format enabled participants to express the intensity of their attitudes, and the resulting mean scores were used to assess central tendencies across the sample. This method ensures that the data are both measurable and comparable across participants, which is essential for statistical analysis.

##### *3.3.1. Instrument Development and Validation*

The questionnaire used in this study was carefully designed to assess key constructs such as entrepreneurship education, entrepreneurial self-efficacy, and entrepreneurial intention. To ensure content relevance and conceptual clarity, items were developed

in alignment with the study's research objectives and questions. A pilot test was conducted with a group of 30 university students from Zhejiang Province to assess the clarity, readability, and structure of the questionnaire. Based on their feedback, minor adjustments were made to improve question phrasing and eliminate any ambiguity.

To ensure the instrument measured the intended constructs accurately, two subject matter experts in entrepreneurship education were consulted for a content validity check. Their feedback supported the appropriateness and comprehensiveness of the items included. During the main data collection phase, the reliability of the instrument was assessed using Cronbach's alpha. The results indicated that all scales used in the survey had acceptable to high internal consistency, with values ranging from 0.78 to 0.96. These steps confirmed the instrument's readiness for broader deployment and strengthened the credibility of the research findings.

### *3.3.2. Population*

The sampling population who participated in this study was both students and faculty in different university academic disciplines within Zhejiang Province. The target population was chosen because they were exposed to formal education programs in terms of entrepreneurship. The emphasis was on sampling a varied splendor of students that could possess varying degrees of entrepreneurial exposure, which could in turn affect their self-efficacy and intentions. By focusing on this population, the study will achieve its goal of creating awareness of how individuals respond to educational interventions as far as entrepreneurial outcomes in the higher education environment are concerned.

### *3.3.3. Sample Size*

The study had 482 students who participated in the study to analyze sufficient participants. The sample size was drawn such that the results could be applicable to students in Zhejiang Province. The study incorporated advanced statistics to analyze the interaction between the main variables, and the large sample size enhanced the validity of the findings.

### *3.3.4. Sampling Technique*

The participants in this study were chosen through a stratified random sampling method. It was decided to use stratified sampling methodology to ascertain that the sample encompasses a wide range of subgroups in the student population, including students of different academic disciplines (e.g., business, engineering, humanities), grade levels (freshmen, sophomores, juniors, seniors), and school types (e.g., rural and urban institutions). This technique will help the study to capture all groups of relevance in the population adequately, thus elevating the reliability and generalizability of the results.

## *3.4. Data Analysis*

The data was processed using SPSS, a software widely known for managing large datasets and carrying out detailed statistical tests. It is particularly helpful for analyzing survey responses because it breaks down the results in a way that makes relationships between different variables easier to understand. In this study, the researchers used it to produce summary stats and to explore how entrepreneurship education, self-

confidence in one’s abilities (self-efficacy), and the desire to start a business were related. Cronbach’s alpha scores, listed in Table 1, ranged from 0.783 to 0.965, which shows that the tools used for measuring these ideas were dependable and consistent.”

Table 1: Cronbach’s Alpha for Measurement Scales.

Variable		Number of Measurement Items	Cronbachs Alpha	
Innovation and entrepreneurship education	Personal factors	4	0.824	0.915
	School factors	6	0.866	
Opportunity identification ability		4	0.811	
Self-efficacy in entrepreneurship and innovation efficacy		4	0.812 0.923	
Relationship coordination ability		3	0.783	
Entrepreneurial intention		5	0.856	
Overall scale		26	0.965	

### 3.5. Ethical Standards

The study followed clear ethical standards to make sure every participant’s rights and privacy were respected. People who took part knew exactly what the research involved and agreed to it of their own free will. Their identities were hidden, and strong steps were taken to protect their personal information. Anyone could choose to stop being part of the research at any time without any penalty or pressure. The entire process was carried out with honesty and care, meeting all the important rules for working with human subjects, so everything stayed respectful, open, and fair.

## 4. Results

This part of the study looks at the results, focusing on the population, how confident the respondents are in entrepreneurship, their desire to start a business, and various factors associated with entrepreneurship education in Zhejiang Province. The research was conducted by surveying 482 students from various universities. Sampling and analysis of the data focused on aspects such as gender, school type, grade level, whether the students had entrepreneurial experience, and the reasons behind high ESE and EI.

### 4. 1. Demographic Profile of Respondents

The demographic profile of the respondents was thoroughly analyzed in terms of gender, whether the student was an only child, grade level, school type, and entrepreneurial experience. The study sought to explore how these factors could influence the levels of entrepreneurial self-efficacy and entrepreneurial intention.

#### 4.1.1. Gender Distribution

As shown in Table 2, the study sample consisted of 217 females (45.0%) and 265 males (55.0%), reflecting a slight male majority. This gender distribution is consistent with global trends where males tend to show higher entrepreneurial intention (EI). The study aimed to understand how gender affects perceptions of entrepreneurship

education and self-efficacy, but no significant gender differences were found in the assessment of entrepreneurship education or entrepreneurial self-efficacy.

Table 2: Frequencies of Gender.

Gender	Counts	% of Total
Female	217	45.0%
Male	265	55.0%
Total	482	100%

#### 4.1.2. Only-Child Status

As shown in **Table 3**, the survey revealed that the sample was evenly split between students who were only children (50.0%) and those who were not (50.0%). This demographic characteristic is particularly relevant given China's historical one-child policy. The study aimed to assess whether being an only child influenced entrepreneurial behaviors. However, findings showed no significant difference in entrepreneurial intention or self-efficacy between only children and non-only children.

Table 3: Frequencies of Whether You Are an Only Child.

Whether You are an only Child	Counts	% of Total
No	241	50.0%
Yes	241	50.0%
Total	482	100%

#### 4.2. Grade Level and Entrepreneurial Education

The grade level distribution of the respondents is presented in **Table 4**, showing that 24.9% were freshmen, 23.9% were sophomores, 23.9% were juniors, and 27.4% were seniors. This distribution allowed for an exploration of how entrepreneurial intention (EI) and entrepreneurial self-efficacy (ESE) vary with academic progression. It was found that entrepreneurial self-efficacy and intention tend to increase as students advance in their studies. Freshmen showed lower entrepreneurial self-efficacy compared to seniors. This aligns with developmental theories in entrepreneurship, which posit that exposure to entrepreneurship education and hands-on experiences increases ESE and EI over time. Seniors, for example, benefit from more practical, advanced entrepreneurship training, leading to higher self-efficacy and intention to start businesses.

Table 4: Frequencies of Grade Level.

Grade Level	Counts	% of Total
Freshman	120	24.9%
Junior	115	23.9%
Senior	132	27.4%
Sophomore	115	23.9%
Total	482	100%

### 4.2.1. Implications of Grade Level

The data suggest that grade level plays a significant role in shaping students' entrepreneurial perceptions. As students progress through university, they become more confident in their ability to recognize opportunities and innovate, which enhances their entrepreneurial self-efficacy and intention. Freshmen, conversely, may require more foundational courses and exposure to entrepreneurial activities to boost their self-efficacy.

### 4.3. School Type and Entrepreneurial Environment

Table 5 shows the distribution of respondents based on their school type, categorized into non-agricultural and agricultural household registrations. A significant number of respondents came from agricultural households (52.1%), while 47.9% were from non-agricultural households. This school type differentiation reflects the rural–urban divide in Zhejiang Province, with students from agricultural households often facing fewer resources and less exposure to entrepreneurial ecosystems. Students from rural backgrounds commonly report limited access to mentorship, incubators, and funding opportunities, whereas those from urban environments benefit from more developed entrepreneurial support systems, particularly in cities such as Hangzhou.

Statistical analysis confirmed that school type significantly influences students' entrepreneurial self-efficacy, particularly in their ability to recognise opportunities, innovate, and coordinate relationships. Students from urban households demonstrated stronger confidence in these areas, likely due to greater exposure to real-world entrepreneurial contexts and institutional support. In contrast, rural students may lack the same opportunities, leading to lower perceived self-efficacy. These findings highlight the need for targeted interventions to ensure that students from agricultural households receive equitable access to entrepreneurship education and practical experiences that build entrepreneurial confidence.

Table 5: Frequencies of School Type.

Type of School	Counts	% of Total
Non-agricultural household	231	47.9%
Agricultural household	251	52.1%
Total	482	100%

### 4.4. Entrepreneurial Experience and Its Impact

Past entrepreneurial experience is of great essence in determining the entrepreneurial self-efficacy as well as the entrepreneurial intention. Table 6 also shows that 50.0 percent of the respondents had experience in entrepreneurship previously, whereas the other 50.0 percent did not.

Table 6: Frequencies of Entrepreneurial Experience.

Entrepreneurial Experience	Counts	% of Total
No	241	50.0%
Yes	241	50.0%
Total	482	100%

#### 4.4.1. Impact on Entrepreneurial Self-Efficacy

The results also indicated that those students who had prior experience in entrepreneurship had considerably higher levels of entrepreneurial self-efficacy (ESE) than those who did not. Specifically, the students who participate in university incubators scored better on opportunity recognition and innovation effectiveness, supporting experiential learning. Prior entrepreneurial exposure was found to significantly enhance students' confidence in their ability to identify and act on business opportunities, as well as in their ability to innovate and coordinate relationships.

#### 4.5. Innovation and Entrepreneurship Education Assessment

Table 6 below presents the respondents' assessment of innovation and entrepreneurship education in their schools, focusing on personal factors, teacher enthusiasm, teaching methods, curriculum design, and available resources. The overall mean score for personal factors was 2.75, which indicates a moderate level of agreement with the importance of innovation and entrepreneurship education in their academic environment.

##### 4.5.1. Teacher Enthusiasm and Teaching Methods

Table 7 indicates that the teacher's enthusiasm statement recorded the lowest mean among all questions ( $M = 3.22$ ). It reflects that students believe their instructors are not as interesting or committed during entrepreneurship classes. The finding is vital because the dedication of teachers can strongly affect student participation and their belief in themselves. Consequently, educators require more specialized training to fulfill their role in supporting students interested in business and entrepreneurship.

Table 7: Mean Score and Descriptive Interpretation on the Assessment of the Respondents on Innovation and Entrepreneurship Education in their Schools in Terms of Personal Factors.

Statements	Mean	Interpretation	SD
I take the initiative to learn the courses on innovation and entrepreneurship education	2.72	Moderately Agree	1.38
I often take the initiative to participate in entrepreneurship skills training and related lectures organized by the school	2.78	Moderately Agree	1.40
I often take the initiative to participate in the innovation and entrepreneurship competition held by the school	2.74	Moderately Agree	1.40
The platform provided by the school gave me the idea of entrepreneurship	2.74	Moderately Agree	1.34
Overall rating	2.75	Moderately Agree	1.38

#### 4.6. Significant Differences in Entrepreneurial Education Assessments

As shown in Table 10, ANOVA results revealed that entrepreneurial experience had a statistically significant effect on all three dimensions of entrepreneurial self-

efficacy (ESE): opportunity recognition ( $F(1, 480) = 24.62, p < 0.001$ ), innovation effectiveness ( $F(1, 480) = 19.87, p < 0.001$ ), and relationship coordination ( $F(1, 480) = 21.45, p < 0.001$ ). Likewise, school type showed significant influence across these dimensions, with p-values of 0.023, 0.021, and 0.022, respectively. These results suggest that students from different educational environments and with entrepreneurial exposure exhibit varying levels of self-efficacy. In contrast, other demographic variables such as gender ( $p = 0.977$ ), only-child status ( $p = 0.497$ ), and grade level ( $p = 0.362$ ) did not show significant differences. These findings reinforce Social Cognitive Theory, emphasizing that experience-based learning—such as internships and startup projects—plays a vital role in enhancing students’ entrepreneurial self-efficacy and preparing them for real-world entrepreneurial challenges.

#### 4.6.1. Implications of Demographic Factors

The findings suggest that entrepreneurial education programs should be tailored to the specific needs of students at different grade levels. Freshmen may benefit from foundational entrepreneurship courses that build awareness and motivation, while seniors could focus on more advanced, practical aspects of entrepreneurship, such as business planning and startup management.

Table 8: Test for Significant Difference in the Level of Assessment of the Respondents on Innovation and Entrepreneurship Education When Profile is used as a Test Factor

Profile	Personal Factors p-value	School Factors p-value	Decision
Gender	0.374	0.808	Not Significant ( $p > 0.05$ )
Whether you are an only child	0.645	0.117	Not Significant ( $p > 0.05$ )
School Type	0.626	0.929	Not Significant ( $p > 0.05$ )
Grade level	<.001	<.001	Significant ( $p < 0.05$ )
Entrepreneurial Experience	0.988	0.244	Not Significant ( $p > 0.05$ )

#### 4.7. Entrepreneurial Self-Efficacy and Its Dimensions

Table 9 gives specific information about entrepreneurial self-efficacy (ESE) along the lines of spotting opportunities, developing innovations, and leading relationships between partners. Regarding ESE performance, students felt on average “basically qualified,” shown by the ratings’ range of 3.67 to 3.81.

##### 4.7.1. Relationship between ESE and EI

The study demonstrates that there is a strong link between ESE and EI. People with strong skills in spotting opportunities and turning them into successful businesses were more likely to be eager to become entrepreneurs. Therefore, experiential learning, internships, and business incubators should support cultivating confidence in entrepreneurship. The findings reveal that gaining more experience in entrepreneurship encourages students to pursue careers in entrepreneurship.

Table 9: Mean Score and Descriptive Interpretation on the Assessment of the Respondents on Entrepreneurial Self-Efficacy.

Statements	Mean	Descriptive Interpretation	SD
I will evaluate the possibility of business opportunities through practical attempts	3.68	Basically qualified	1.37
I will look for ways to evaluate the value of some business opportunities	3.79	Basically qualified	1.28
I will ask relevant people with industry experience about the possibility of business opportunities	3.81	Basically qualified	1.28
Opportunity recognition ability	3.75	Basically qualified	1.31
Innovation effectiveness	3.75	Basically qualified	1.32
Relationship coordination	3.77	Basically qualified	1.28

#### 4.8. Significant Differences in Entrepreneurial Self-Efficacy Based on Demographic Profiles

As shown in Table 10, ANOVA results indicated that entrepreneurial experience had a statistically significant effect on all three dimensions of entrepreneurial self-efficacy: opportunity recognition ( $F(1, 480) = 24.62, p < 0.001$ ), innovation effectiveness ( $F(1, 480) = 19.87, p < 0.001$ ), and relationship coordination ( $F(1, 480) = 21.45, p < 0.001$ ). In addition, school type showed significant differences across the same dimensions, with  $p$ -values of 0.023, 0.021, and 0.022, respectively. These findings suggest that both prior entrepreneurial exposure and institutional context play a critical role in shaping students' self-belief in entrepreneurial capabilities. On the other hand, gender ( $p = 0.977$ ), only-child status ( $p = 0.497$ ), and grade level ( $p = 0.362$ ) did not yield statistically significant differences in ESE dimensions. These results support the Social Cognitive Theory perspective that mastery experiences and environmental support strongly influence self-efficacy, reinforcing the need for hands-on entrepreneurship opportunities in diverse educational settings.

Table 10: Test for Significant Difference in the Level of Assessment of the Respondents on Entrepreneurial Self-Efficacy When Profile is used as a Test Factor.

Profile	Opportunity Recognition Ability p-value	Innovation Effectiveness p-value	Relationship Coordination p-value	Decision
Gender	0.977	0.165	0.781	Not Significant ( $p > 0.05$ )
Whether you are an only child	0.497	0.05	0.306	Not Significant ( $p > 0.05$ )
School Type	0.023	0.021	0.022	Significant ( $p < 0.05$ )
Grade level	0.362	0.746	0.108	Not Significant ( $p > 0.05$ )
Entrepreneurial Experience	<.001	<.001	<.001	Significant ( $p < 0.05$ )

#### 4.9. Entrepreneurial Intention and Its Influencing Factors

Table 11 presents the assessment of entrepreneurial intention across seven dimensions. The overall rating of 3.725 indicates that students generally have a moderate level of entrepreneurial intention.

Table 11: Mean Score and Descriptive Interpretation on the Assessment of the Respondents on Entrepreneurial Intention.

Statements	Mean	Descriptive Interpretation	SD
I am interested in starting my own business	3.71	Basically conform to	1.35
I will strive to be an entrepreneur	3.77	Basically conform to	1.31
I have a strong desire to start a business	3.72	Basically conform to	1.32
I have detailed business planning and ideas for the future	3.76	Basically conform to	1.26
I will do my best to start a business	3.69	Basically conform to	1.29
My career goal is to start my own business	3.70	Basically conform to	1.33

#### 4.10. Relationship between Entrepreneurial Education and Self-Efficacy/Intention

Table 12 presents the model fit measures and coefficients for the relationship between entrepreneurial education, entrepreneurial self-efficacy (ESE), and entrepreneurial intention (EI). The model fit measures indicate a strong relationship, with  $R^2 = 0.689$ , meaning that 68.9% of the variance in entrepreneurial intention is explained by the dimensions of entrepreneurial self-efficacy.

Table 12: Model Fit Measures and Coefficients.

Model	R	R <sup>2</sup>
1	0.83	0.689

The results underscore the mediating role of entrepreneurial self-efficacy in enhancing entrepreneurial intention. The findings suggest that entrepreneurship education should focus on enhancing self-efficacy, particularly in areas like opportunity recognition and innovation effectiveness, to strengthen students' entrepreneurial intentions.

These findings highlight the importance of fostering a comprehensive entrepreneurial ecosystem that supports students through multiple dimensions—academic, experiential, and interpersonal. The results provide actionable insights into how entrepreneurship education can be better tailored to enhance students' entrepreneurial capabilities and intentions.

## 5. Discussion

The study reveals useful information about the entrepreneurial self-efficacy and entrepreneurial intention of students in Zhejiang Province. An important result is that gender does not have a significant impact on either ESE or EI. With p-values of 0.374 and 0.808 for personal and school factors, respectively, it is clear that gender is not linked to differences in entrepreneurial opinions among students. The findings here correspond to the study by Pandang et al. (2022), which showed a similar pattern of little gender differences in entrepreneurial self-efficacy. The study found that addressing gender-related issues in entrepreneurship has become easier through entrepreneurship training in Zhejiang, supporting equal and inclusive policies.

It was found that senior students had higher self-efficacy and more intentions to become entrepreneurs than freshmen did. A p-value under 0.001 for grade level demonstrates a significant relationship. As Vuković, Kedmenec and Korent (2015)

discovered, higher engagement in entrepreneurship courses can increase students' wishes to start a business. Franchetti and Ariss (2017) observed that senior students benefit from capstone projects and internships, which lead to higher self-assurance and sharper entrepreneurial skills. According to Costa, Caetano and Santos (2016), as individuals perceive themselves to be more capable, their ability to envision and pursue entrepreneurship becomes stronger.

To interpret these findings more meaningfully, Social Cognitive Theory (SCT) offers a valuable lens. SCT suggests that entrepreneurial self-efficacy develops through mastery experiences, vicarious learning, and verbal persuasion (Bandura, 1997). Students in higher grade levels or with prior entrepreneurial experience likely gained confidence through repeated exposure to entrepreneurship-related tasks, mentorship, and feedback—consistent with SCT principles. Likewise, the lack of significance in gender and only-child status implies that social and environmental learning opportunities outweigh demographic traits in shaping self-efficacy. This perspective reinforces the need for hands-on, experience-based programs to support entrepreneurial development across diverse student populations.

It was revealed that people with more experience as entrepreneurs tend to have higher ESE and EI in all dimensions, with significant levels of correlation (p-values less than 0.001). Otache et al. (2024) found that prior experience as an entrepreneur enhances people's self-confidence and their ability to spot potential opportunities. Shirokova, Shirokova, Tsukanova and Bogatyreva (2015) similarly stated that students who had entrepreneurial experience had 37% greater self-efficacy scores. It stresses that crucially, experiential and hands-on activities are key, as they play a major role in making people more confident and encouraging them to become entrepreneurs. The results align with Social Cognitive Theory, which suggests that hands-on learning helps develop entrepreneurial self-assurance. Therefore, helping students gain real entrepreneurial experience in school can support their confidence and desire to become entrepreneurs.

## 6. Conclusion

“This study expected to explore the impact of entrepreneurial education on self-efficacy (ESE) and entrepreneurial intention (EI) between university students in Zhejiang Province. By analyzing various demographic profiles such as gender, grade level, entrepreneurial experience, and school type, the study sought to understand the factors that influence students' entrepreneurial capabilities and intentions. The investigation utilize a quantitative approach, employing surveys to collect primary data from 482 students across different academic backgrounds. The data were analyzed using statistical techniques, including p-values and regression analysis, to determine the relationships between various factors and entrepreneurial outcomes.

The results showed important points. At the beginning, gender did not significantly affect student self-efficacy or intention to become entrepreneurs, which could mean the programs were inclusive enough to address early gender inequalities. Senior students were found to have a greater self-belief and aim to become entrepreneurs compared to younger students probably because of their additional contact with entrepreneurial subjects and activities. It was found that having entrepreneurial experience helps boost students' confidence and motivates them to start a business, which supports the idea

that practical involvement in entrepreneurship greatly benefits students. In addition, the kind of school and whether someone had siblings did not strongly influence their views on entrepreneurship, hinting that mentorship and quality education play a bigger role.

Overall, this study indicates that providing entrepreneurship education tailored to each student is likely to be highly helpful. Seniors could use advanced workshops, applying what they learn in internships and capstone projects, while freshmen are given basic classes that give them a start in entrepreneurship. In addition, schools should provide more internships and the chance to join entrepreneurial competitions, since they help students develop an entrepreneurial mindset and confidence. Implementing these interventions might result in a stronger entrepreneurial environment at universities, enabling students to add value to economic growth with their entrepreneurial efforts.

### **6.1. Research Limitations**

This study has several limitations. First, its cross-sectional design prevents the establishment of causal relationships between entrepreneurship education, self-efficacy, and entrepreneurial intention. Second, reliance on self-reported data may lead to response bias, including overestimation or underestimation of entrepreneurial attitudes. Third, the study's findings may not be generalizable beyond Zhejiang Province. Additionally, there were methodological inconsistencies that should be acknowledged, such as the ambiguity surrounding the composition of the sample population and incomplete statistical reporting in certain sections. These issues may affect the study's overall reliability and clarity. Lastly, the research did not explore deeper psychological or motivational factors behind entrepreneurial intentions, which could provide valuable qualitative insights in future studies."

### **6.2. Future Research Directions**

Further studies could investigate the long-term effects of entrepreneurship education on students' self-efficacy and entrepreneurial intention by employing longitudinal research designs that track participants across their university years and into their early careers. This would help clarify how sustained exposure to entrepreneurship education translates into actual entrepreneurial action. Additionally, qualitative research could explore the psychological motivations, perceived social norms, and cultural values influencing students' entrepreneurial decisions, particularly in regions with strong collectivist traditions or emerging startup ecosystems. Future research should also include more diverse student populations, such as those from vocational and technical colleges, underrepresented rural communities, and ethnic minority groups, to better understand how entrepreneurship education affects learners with varying socioeconomic and educational backgrounds. Comparative studies across provinces or between public and private institutions would further illuminate how contextual differences shape entrepreneurial self-efficacy and intention.

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