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Verify the Construct of Entrepreneurship Education using Confirmatory Factor Analysis

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Abstract: Entrepreneurship education plays a crucial role in nurturing future entrepreneurs and fostering entrepreneurial initiatives. While extensive research has been undertaken in this field, limited efforts have been made to systematically validate its underlying dimensions or to establish reliable measurement instruments. By reviewing and synthesising previous literature, this study draws upon the theory of change, social learning theory, and resource-based theory. Based on these theoretical foundations, entrepreneurship education is assessed across four key dimensions: entrepreneurial theory instruction, the effectiveness of expert interaction, entrepreneurial practice training, and institutional support policies within universities. A survey of 541 participants followed by confirmatory factor analysis (CFA) demonstrates that entrepreneurial theory instruction, expert interaction quality, practical entrepreneurial training, and university-level support mechanisms significantly shape the outcomes of entrepreneurship education.

Keywords: Entrepreneurship Education, Theory of Change, Social Learning Theory, Resource-based Theory, CFA.

1. Introduction

Entrepreneurship education is a vital factor influencing the quality of students' entrepreneurial endeavours after graduation. Existing research highlights that universities hold a central role in advancing entrepreneurship education (Ouragini et al., 2024). A review of prior studies indicates that this field can be broadly divided into two main dimensions, namely theoretical instruction and practical entrepreneurial training. Several scholars have emphasised different elements within these categories. For instance, Ma et al. (2024) argue that theory-based courses, interaction with experts, practice-oriented

activities, institutional support mechanisms, and the motivational effect of courses on entrepreneurial initiatives are essential indicators for assessing entrepreneurship education.

Similarly, Ouragini et al. (2024) highlight the importance of inspiration generated through theoretical courses, expert exchanges, and entrepreneurship-related subjects. Piperopoulos and Dimov (2014) stresses three components as particularly relevant, including theoretical courses, expert involvement, and practical activities, along with the ability to recognise opportunities. Alvarez et al. (2018) contend that theoretical courses, practice opportunities, and institutional support are crucial, while Hu and Li (2025) identify theoretical instruction and practical activities as valid measures. Sang et al. (2012) expand this by including student engagement as another important aspect. Daradkeh and Mansoor (2023) consider institutional support policies and opportunity recognition, in addition to theory and practice, as highly significant. Likewise, Duval-Couetil (2013) confirmed that theory-based learning, expert exchanges, practical entrepreneurial activities, and institutional support together form essential elements. Ma et al. (2024) also reinforce these four dimensions as reliable measures for evaluating entrepreneurship education.

Building on these perspectives, the present study aims to verify the main components that influence entrepreneurship education in the context of student start-ups. Current research consistently underscores the essential role of universities in fostering this process (Ouragini et al., 2024). From the literature, the scope of entrepreneurship education can be classified into theoretical learning and practical training. According to Ma et al. (2024), theory-based courses, expert communication, practice-related activities, institutional policies, and the inspirational value of courses for entrepreneurial activity are key factors. Ouragini et al. (2024) similarly stress the role of theory, expert communication, and the motivational effects of courses. Piperopoulos and Dimov (2014) add that opportunity recognition, alongside theory, expert engagement, and practice, constitutes critical dimensions of university-level entrepreneurship education.

Table 1: Key Dimensions of Entrepreneurship Education in Prior Studies.

No.	Authors	Entrepreneurship Theory Courses	Expert Communication	Entrepreneurship Education Supervision and Management	Entrepreneurial Practical Activities	School Entrepreneurship Policy Support	Inspiration	Student Engagement	Problem-Solving Skills	Opportunity Recognition Ability
1.	Ma et al. (2024)	√	√		√	√	√			
2.	Ouragini et al. (2024)	√	√						√	
3.	Piperopoulos and Dimov (2014)	√	√		√					√
4.	Yeh et al. (2021)	√		√				√		
5.	Monllor et al. (2023)	√			√	√				
6.	Wardana et al. (2020)	√			√	√			√	
7.	Hu and Li (2025)	√			√					
8.	Sang et al. (2012)	√			√		√			
8.	Daradkeh and Mansoor (2023)	√			√	√				√
10.	Duval-Couetil (2013)	√	√		√	√				
11.	Ouragini et al. (2024)	√	√		√	√				

No.	Authors	Entrepreneurship Theory Courses	Expert Communication	Entrepreneurship Education Supervision and Management	Entrepreneurial Practical Activities	School Entrepreneurship Policy Support	Inspiration	Student Engagement	Problem-Solving Skills	Opportunity Recognition Ability
12.	Fayolle and Gailly (2013)	√	√		√	√			√	

Yeh et al. (2021) argue that theoretical courses, management of entrepreneurship programmes, and student engagement are significant indicators. Monllor et al. (2023) point to the importance of theory, practice, and institutional support, while Wardana et al. (2020) note that problem-solving capabilities, together with theory and practice, hold a prominent place. Other scholars, such as Hu and Li (2025) and Sang et al. (2012), reiterate the value of theoretical instruction, practical activities, and student involvement. Daradkeh and Mansoor (2023) again highlight theory, practice, support policies, and opportunity recognition as central factors. Duval-Couetil (2013) confirms that these four elements—courses, expert exchanges, practice, and institutional support—remain crucial, and Ouragini et al. (2024) similarly affirm their importance. Finally, Fayolle and Gailly (2013) suggest that in addition to these aspects, problem-solving ability should also be considered. Drawing on this comprehensive review, the study consolidates the components of the entrepreneurial ecosystem that underpin entrepreneurship education (as outlined in Table 1).

2. Literature Review

A synthesis of the reviewed literature indicates that four dimensions are consistently highlighted by scholars in evaluating entrepreneurship education within universities. These comprise theoretical instruction, represented by entrepreneurship courses and expert engagement, and practical aspects, encompassing entrepreneurial activities and institutional policy support. Consequently, these four recurring elements are adopted as the primary criteria for assessing entrepreneurship education at the university level.

2.1. Entrepreneurship Theory Course

Entrepreneurship theory courses represent a conventional instructional approach in which lecturers introduce the concepts of entrepreneurship using a social science perspective, often supported by case study analysis. Evaluation of these courses centres on students' perceptions of the quality of the curriculum, particularly regarding its capacity to equip them with adequate entrepreneurial knowledge and skills (Piperopoulos & Dimov, 2014). The effectiveness of such courses should therefore be assessed through students' evaluations of their design and delivery. According to Yeh et al. (2021), entrepreneurship theory courses must prioritise participants' learning outcomes, while feedback on course quality should inform the refinement of the curriculum. Beyond evaluating instructional quality, it is equally important to determine whether the courses provide participants with inspiration concerning

entrepreneurial thinking and direction Yeh et al. (2021). The ability of these courses to inspire students to pursue entrepreneurial initiatives is regarded as a key criterion in measuring their effectiveness.

Similarly, Hu and Li (2025) observed that, in addition to imparting knowledge and skills, entrepreneurship education should also motivate students to consider starting their own ventures, thereby serving as another vital indicator of effectiveness. Furthermore, the importance of diversity and interdisciplinarity within entrepreneurship education has been strongly emphasised. Students, particularly those enrolled in science and engineering institutions, often possess advanced technological expertise but face limitations in business operations. For this reason, entrepreneurship education, combined with opportunities for experiential learning, is essential for the development of entrepreneurial competence, a process largely dependent on how universities cultivate students' abilities (Sang et al., 2012).

2.2. Quality of Expert Communication

Within entrepreneurship research, the concept of "expert communication quality" refers to the overall assessment of the attributes and outcomes demonstrated by entrepreneurial experts, such as successors, business leaders, and senior consultants, when engaging with relevant audiences including entrepreneurs, potential entrepreneurs, and students. Universities often facilitate this process by inviting accomplished entrepreneurs, industry specialists, and investors to deliver lectures or participate in classroom discussions, enabling them to share practical experiences and sector-specific knowledge. Such interactions provide students with opportunities to gain insight into real market dynamics and to strengthen their applied entrepreneurial competencies (Ouragini et al., 2024). Ma et al. (2024) further argue that the involvement of academic experts and established entrepreneurs in delivering talks significantly enhances interaction between students, as potential entrepreneurs, and the expert community. This engagement not only supports knowledge transfer but also enables students to access valuable resources such as collaborative networks, market intelligence, and entrepreneurial expertise, thereby establishing a strong basis for future entrepreneurial endeavours and improved performance outcomes.

2.3. Entrepreneurial Practice Activities

According to Ouragini et al. (2024), entrepreneurial practice activities refer to the concrete operations or tasks in which university students engage during entrepreneurship education, allowing them to apply theoretical knowledge through experiential learning. These activities are specifically structured to strengthen students' ability to transfer classroom knowledge into real-world contexts. Ma et al. (2024) emphasise that initiatives such as university-organised visits to enterprises founded by successful entrepreneurs, or internships offered in collaboration with leading firms, provide students with direct exposure to industry operations and market practices, thereby deepening their practical understanding.

Practical learning is also advanced through structured events like business plan competitions and simulated entrepreneurship challenges, which are considered essential elements of entrepreneurial training. Ma et al. (2024) highlight that competitive environments foster the development of entrepreneurial competencies by enabling

students to enhance skills such as opportunity recognition, innovation, adaptability, and market evaluation. Participation in these activities can also facilitate access to financial resources, entrepreneurial mentorship, and expanded professional networks, which collectively improve students' entrepreneurial readiness. In addition, platforms such as makerspaces provide opportunities for interaction with entrepreneurs from diverse sectors, helping students overcome early-stage uncertainty and build confidence in their entrepreneurial pursuits (Alvarez et al., 2018).

Students may also test and refine their entrepreneurial ideas through participation in on-campus and external competitions, benefiting from constructive feedback provided by judges and peers. Business simulation contests, where students independently design and implement entrepreneurial projects from conception through execution, represent another valuable form of experiential learning. Such simulations replicate the entrepreneurial process, offering students realistic exposure to the challenges and demands of business development (Ouragini et al., 2024).

2.4. School Entrepreneurship Policy Support

The term "school entrepreneurship policy support" refers to the institutional measures and policies established by universities to foster innovation and entrepreneurship among students and staff. Such policies typically involve the provision of entrepreneurship education, financial assistance, allocation of resources, mentorship, and encouragement of entrepreneurial initiatives. The aim is to equip students with the requisite knowledge, skills, and opportunities to launch entrepreneurial ventures both within and beyond the academic setting (Daradkeh & Mansoor, 2023). Gianiodi et al. (2020) emphasise the importance of establishing reward systems in universities, as such mechanisms can stimulate teachers' and students' enthusiasm for entrepreneurship-related education and activities. Similarly, leadership programmes involving external entrepreneurial mentors can improve the likelihood of success for student ventures by providing critical guidance during the challenging early stages of business development. Wardana et al. (2020) argue that entrepreneurship practice education should integrate both practical training and institutional policy support, with particular attention to financial mechanisms that encourage student entrepreneurship. Consistent with this, Ma et al. (2024) highlight the significance of university funding policies in enhancing the effectiveness of entrepreneurship practice education and its subsequent influence on entrepreneurial outcomes.

As a specialised educational programme designed to cultivate entrepreneurial spirit, innovative thinking, opportunity recognition, and management skills, entrepreneurship education evolves dynamically under the influence of multiple theoretical perspectives. Its development has been marked by distinct stages. In the early stage, entrepreneurship education was closely linked to management education and primarily embedded within traditional business administration curricula (Gorman et al., 1997). Management theory, particularly Drucker (1954)'s contributions on management by objectives and systematic innovation, played a formative role by shaping course content and encouraging the initial emergence of entrepreneurship education.

With the expansion of the global economy, entrepreneurial activity became increasingly prominent, prompting greater attention to entrepreneurship education as an independent field distinct from management studies (Gartner, 1985; Gorman et al., 1997). During this expansion phase, scholarly discussions concentrated on curriculum

content and pedagogical approaches (Gartner, 1985; Gorman et al., 1997; Solomon et al., 1994; Teece, 1986). Gartner (1985) proposed that courses should incorporate elements such as business plan preparation, market analysis, and financing. Solomon et al. (1994) suggested that effective entrepreneurship education should also include practical opportunities such as interaction with successful entrepreneurs. Gorman et al. (1997) further underscored the importance of external entrepreneurial support in reinforcing practice-oriented courses. At this stage, programmes increasingly focused on cultivating specific entrepreneurial competencies and mindsets.

In the mature stage, globalisation accelerated entrepreneurial activity and heightened the importance of innovation in entrepreneurship education (Gibb, 1993). Evidence from the Kauffman Foundation in the United States, including its 2007 report on the role of start-ups in job creation, reinforced the urgency of strengthening entrepreneurship education. Gibb (1993) argued that greater emphasis should be placed on practice-oriented learning. Piperopoulos and Dimov (2014) categorised entrepreneurship education into theoretical and practical dimensions, with the former enhancing entrepreneurial knowledge and skills through classroom teaching, while the latter relied on collaboration with external stakeholders to provide market insights and professional mentoring. Alvarez et al. (2018) confirmed that such partnerships play a significant role in improving entrepreneurial performance.

From a theoretical perspective, entrepreneurship education can be interpreted through various lenses. Change theory conceptualises it as a transformative process through which students progress from lacking entrepreneurial capabilities to attaining the competencies necessary for success (Lewin, 1947). Innovation theory frames it as an educational approach that encourages students to pursue novel business opportunities, design new products or services, and develop innovative business models (Schumpeter, 1942). Meanwhile, the resource-based theory highlights the role of critical resources, including curriculum design, teaching expertise, practice environments, and professional networks, in shaping entrepreneurial outcomes. Access to high-quality resources improves learning conditions and enhances the likelihood of entrepreneurial success (Alvarez et al., 2018; Monllor et al., 2023).

3. Research Methodology

3.1. Selection of Research Objects

The research population consists of young entrepreneurs located in Sichuan Province. For this purpose, students and recent graduates from five representative universities were selected, with the criterion that their entrepreneurial activity should not exceed five years. The choice of these institutions is based on three key considerations: (a) they are ranked among the leading universities in China, (b) they have consistently achieved outstanding results in the China College Students' Innovation and Entrepreneurship Competition, reflecting the strong representativeness of their entrepreneurial achievements, and (c) they are comprehensive universities with broad disciplinary diversity. Information on student enterprises established within the past five years was obtained through the entrepreneurship associations of these universities.

According to Hair et al. (2019), an appropriate sample size should be no less than five times the number of measurement variables. In this study, 49 measurement items

were used, suggesting a minimum required sample size of 245. The survey results revealed a total of 883 student-run enterprises established within the last five years across the five universities. Referring to the sampling framework proposed by Krejcie and Morgan (1970), with a 3% margin of error and a 97% confidence level, the optimal sample size was determined as 541. The decision to select enterprises originating from universities with strong performance in entrepreneurship competitions is consistent with established practices in entrepreneurship research. Wu and Song (2021) and Li et al. (2023) highlight that such institutions, due to their robust infrastructure in innovation and entrepreneurship, serve as effective settings for assessing the influence of entrepreneurship education on actual entrepreneurial outcomes. Similarly, Huang and Chen (2020) argue that alumni enterprises from institutions with active entrepreneurial ecosystems provide more representative data when exploring the relationship between education, policy, innovation, and performance. Thus, the sampling approach used in this study aligns with methodological norms in empirical research on entrepreneurship education.

To ensure methodological rigour and strengthen the external validity of the findings, stratified random sampling was employed. This method is well suited to educational research because it accounts for heterogeneity among participants, improves the precision of parameter estimates, and enhances the generalisability of results (Tipton et al., 2014). In practice, the sample was proportionally distributed according to the number of eligible enterprises in each university, thereby ensuring representativeness across the institutions. Although convenience-based sampling may generate selection bias, this study strictly adhered to standardised procedures to reduce potential error (Berndt, 2020; Hair et al., 2019). Data collection was conducted using a unified online survey instrument. Entrepreneurship association staff at each university distributed the questionnaires simultaneously, inviting enterprise general managers to complete them. The uniformity of this process in terms of administration, environment, and respondent contact points ensured consistency and improved data quality as well as the robustness of the findings.

It is acknowledged that the deliberate selection of high-performing universities may introduce sample bias, as such institutions benefit from more developed infrastructures and greater policy support. Nevertheless, this purposeful sampling approach is supported by prior studies emphasising the importance of examining successful ecosystems in order to identify effective practices (Eisenhardt, 1989; Siggelkow, 2007). While this may reduce the applicability of the findings to all universities in China, it enhances the study's internal validity and offers a framework that can be tested in other contexts. Subsequent studies may extend this work by comparing universities across regions or institutional tiers to identify potential variations in the effects of education and policy.

Table 2: Demographic Characteristics of Respondents (N=541).

Personal Demographic	Amount (n)	Percentage (%)
1. Age Range		
18–20 Years	112	20.70
21–23 Years	105	19.41
24–26 Years	102	18.85
27–29 Years	109	20.15

Personal Demographic	Amount (n)	Percentage (%)
More than 30 Years	113	20.89
2.Educational Background		
Bachelor's Degree (Currently Studying)	108	19.96
Bachelor's Degree (Completed)	221	40.85
Master's Degree (Currently Studying)	94	17.38
Master's Degree (Completed)	118	21.81
3. Entrepreneurial Experience (Years)		
Less than 1 Year	180	33.27
1-3 Years	191	35.30
4-5 Years	170	31.42

Tables 2 and 3 present the demographic profile of the respondents (n = 541) alongside enterprise-related characteristics. In terms of age distribution, respondents are relatively evenly spread across categories. A majority hold a completed bachelor's degree (40.85%), followed by those with a master's degree (21.81%) and individuals currently pursuing a master's qualification (17.38%). With respect to entrepreneurial experience, most respondents report between one and three years of experience (35.30%), closely followed by those with less than one year (33.27%).

Table 3 illustrates that the surveyed enterprises span multiple sectors, including internet technology, cultural and creative industries, educational services, and biopharmaceuticals, demonstrating substantial industrial diversity. The largest shares are observed in retail trade (15.90%) and in environmental protection and new energy (15.71%). Regarding annual income, more than 70% of the enterprises report revenues above 100,000 RMB, which reflects a relatively strong level of economic performance within the sample. Collectively, these results indicate that the respondents are well-distributed across both demographic and industrial categories, thereby reinforcing the representativeness and reliability of the study.

Table 3: Business Characteristics of Respondents (N=541).

Business Characteristics	Amount (n)	Percentage (%)
1. Industry Distribution		
Internet Technology	77	14.23
Cultural Creativity	77	14.23
Educational Services	80	14.79
Accommodation and Catering Services	73	13.49
Retail Trade	86	15.90
Biopharmaceutical Industry	63	11.65
environmental Protection and New Energy Industry	85	15.71
2. Annual Income of the Enterprise		
Less than 100,000 RMB	78	14.42
100,000 - 300,000 RMB	81	14.97
310,001 - 500,000 RMB	112	20.70
510,001 - 700,000 RMB	97	17.93
710,001 - 900,000 RMB	77	14.24
Over 900,001 RMB	96	17.74%

3.2. Measures

This research employed a structured questionnaire in Chinese to investigate the principal determinants of entrepreneurial performance among young student entrepreneurs in Sichuan, within the broader context of China's ongoing industrial transformation. The instrument was organised into four distinct sections. Given the linguistic background of the participants, the survey was administered in Chinese to facilitate precise comprehension of the items and minimise potential language-related bias, thereby strengthening both the reliability and validity of the data collected (Comrey and Li, 2013).The questionnaire design was informed by established measurement frameworks widely applied in entrepreneurship education research (Monllor et al., 2023; Piperopoulos & Dimov, 2014). Comparable models have been employed and validated in prior studies examining the relationship between university-level entrepreneurial training and start-up performance (Daradkeh & Mansoor, 2023). To ensure methodological consistency and comparability, the study adopted a five-point Likert scale, an approach frequently utilised in the evaluation of entrepreneurship education programmes (Ma et al., 2024; Yeh et al., 2021).

As presented in Table 4, the Cronbach's alpha coefficients for the four principal dimensions—Entrepreneurship Education, Government Policy, Business Model Innovation, and Entrepreneurial Performance—fall between 0.871 and 0.941, with the overall reliability coefficient reaching 0.962. These results demonstrate high internal consistency, indicating that the instrument successfully captured the constructs under investigation. Respondents' perceptions were measured using a five-point Likert scale, where "1" represented strong disagreement and "5" indicated strong agreement with the questionnaire statements (Hair et al., 2019).

Table 4: Questionnaire Reliability.

The Variable used to Analyse the Confidence Value of the Query	Alpha Coefficient
1. Entrepreneurship Education	.904
2. Government Policy	.871
3. Business Model Innovation	.914
4. Entrepreneurial Performance	.941
Overview	.962

3.3. Data Collection

The primary data for this research were obtained through structured questionnaires administered over several weeks to enhance both reliability and validity. Prior to distribution, formal approval was secured from the heads of the entrepreneur associations of the five selected universities. The finalised survey instrument was then distributed directly to the participants by association staff, who also explained the study's objectives and context to encourage accurate and sincere responses. Upon completion of data collection, all responses were carefully reviewed to ensure completeness and accuracy. Questionnaires with missing or inconsistent information were excluded, and supplementary surveys were undertaken where necessary to achieve the required sample size.

Participants were informed of their right to withdraw at any point due to personal or health-related reasons, with a response rate above 60% considered satisfactory (Krejcie & Morgan, 1970). To preserve confidentiality, an anonymous online questionnaire format was employed, thereby safeguarding respondent privacy. Following data collection, all records were securely destroyed. The data were systematically coded and entered into statistical software for processing, with appropriate analytical techniques applied to generate the research findings (Conrey and Lee, 2013; (Hair et al., 2019).

4. Data Analysis

The data analysis was carried out in two stages. In the first stage, a first-order CFA was conducted to assess the factor loadings of all measurement items, examine the relationships between the items and their corresponding dimensions, and evaluate the correlations among the different dimensions. In the second stage, a second-order CFA was performed on entrepreneurship education to determine the relative contributions of each dimension to the overarching construct and to assess the overall model fit and adequacy of the proposed measurement framework.

First - Order Confirmatory Factor Analysis of Entrepreneurship Education

CFA is typically conducted on the basis of established measurement theory to validate the underlying constructs (Kline, 2015). In this study, a first-order CFA was applied to the construct of entrepreneurship education, with factor loadings estimated to assess causal relationships. The construct of entrepreneurship education was operationalised through four sub-dimensions: entrepreneurship theory courses, entrepreneurial practice activities, expert communication, and school entrepreneurship policy support. Each of these dimensions was represented by three to four measurement items. The results indicated that the standardised regression weights for all items exceeded the recommended threshold of 0.50, thereby confirming adequate factor loadings (see Table 5). The analysis of the 12 measurement items demonstrated that all standardised regression coefficients within the entrepreneurship education scale were statistically significant, thus providing empirical support for the validity of the measurement model (see Figure 1).

Table 5: Loadings of the First-Order Confirmatory Factor Analysis.

Variables	Standard First-Order Loading*			
	Entrepreneurship Theory Course (ETC)	Quality of Expert Communication (QEC)	Entrepreneurial Practice Activities (EPA)	School Entrepreneurship Policy Support (SESP)
ETC 1	0.81			
ETC 2	0.74			
ETC 3	0.84			
QEC 1		0.89		
QEC 2		0.70		
QEC 3		0.74		
EPA 1			0.78	
EPA 2			0.91	
EPA 3			0.75	
EPA 4			0.79	

SESP 1				0.92
SESP 2				0.79
SESP 3				0.79

Second - Order Confirmatory Factor Analysis of Entrepreneurship Education

In the second-order CFA, the causal effects of entrepreneurship education on ETC, EPA, QEC, and SESP were estimated. The analysis produced factor loading estimates for the higher-order construct on each dimension, thereby confirming the hypothesised structure. Whereas the first-order CFA focused on the loadings of individual items, the second-order CFA assessed the overall model fit. The standardised regression weights were 0.84 for ETC, 0.72 for QEC, 0.72 for EPA, and 0.75 for SESP, indicating strong associations between all four dimensions and entrepreneurship education, thus supporting the robustness of the measurement model (see Figure 1).

All regression weights were found to be statistically significant at the $p < 0.001$ level (see Table 6), with factor loadings exceeding the recommended threshold of 0.50. These results provide strong support for the proposed hypothesis (H1). Furthermore, the model fit indices confirmed that the overall model demonstrated acceptable goodness-of-fit, with the detailed values reported in Table 7.

Figure 1: Confirmatory Factor Analysis of Dimensions Organizational Change.

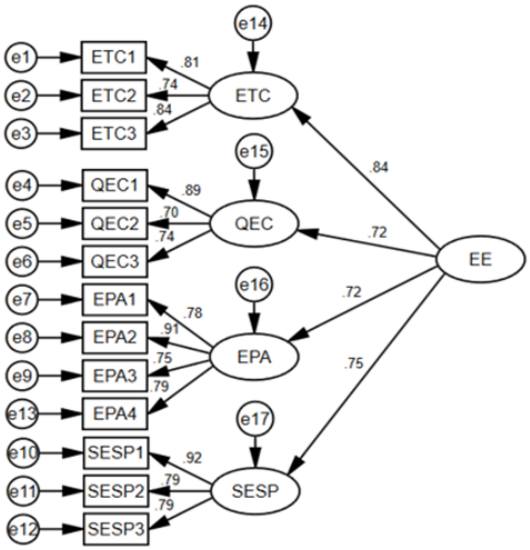

Table 6: Loadings of the Second-Order Confirmatory Factor Analysis.

Factors	R^2	Standard Second-Order Loading Organizational Change	P-Value
Entrepreneurship Theory Course (ETC)	0.702	0.838	***
Quality of Expert Communication (QEC)	0.519	0.72	***
Entrepreneurial Practice Activities (EPA)	0.523	0.723	***
School Entrepreneurship Policy Support (SESP)	0.56	0.748	***

Table 7: Model Fit Indices of Entrepreneurship Education.

Indices	Estimate	Standard
X^2	118.137	/
Df	61	/
X^2/Df	1.937	<5
RMSEA	0.042	<0.08
SRMR	0.032	<0.05
GFI	0.969	>0.9
AGFI	0.954	>0.9
CFI	0.986	>0.9

The CFA results confirmed that the factor loadings for all items within each sub-dimension were within the acceptable range. To further examine the validity and reliability of the constructs, Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE) were calculated (see Table 8). The AVE values for all constructs exceeded the 0.50 threshold, while Cronbach's alpha and CR values were consistently above 0.70. These results demonstrate satisfactory internal consistency and convergent validity, confirming that the measurement scales were both reliable and valid.

Table 8: Results of the Reliability and Validity Test.

Factors	Cronbach's α	AVE	CR
Entrepreneurship Theory Course (ETC)	0.837	0.64	0.84
Quality of Expert Communication (QEC)	0.815	0.61	0.82
Entrepreneurial Practice Activities (EPA)	0.882	0.66	0.88
School Entrepreneurship Policy Support (SESP)	0.869	0.70	0.87

5. Discussion and Conclusion

This study sought to examine the construct validity of the dimensions of organisational change. The results of the first-order CFA indicated that the factor loadings for each dimension demonstrated acceptable standardised regression weights, all exceeding 0.50. Consistently, the second-order CFA revealed that the factor loadings for the four dimensions, namely entrepreneurship theory course, entrepreneurial practice activities, expert communication, and school entrepreneurship policy support, were 0.84, 0.72, 0.72, and 0.75 respectively, confirming a strong association between these dimensions and organisational change. These findings align with the results of Piperopoulos and Dimov (2014), who emphasised the critical role of entrepreneurial theory education in enhancing the overall quality of entrepreneurship education. They also highlighted that entrepreneurial practice education and entrepreneurial theory education complement each other, jointly contributing to improving the effectiveness of entrepreneurship education. Furthermore, Daradkeh and Mansoor (2023) established the influence of government policies on entrepreneurship education, while Fayolle and Gailly (2013) demonstrated that effective communication with experts significantly enhances the quality of entrepreneurship education.

In light of the significant relationships identified between the entrepreneurship education construct and its dimensions, the construct and dimensions of change developed and tested in this study can be considered valid and effective instruments

for measuring organisational change.

5.1. Limitations and Future Research Directions

This study was conducted among college student entrepreneurs in Sichuan Province, China, and therefore the generalisability of its findings is limited. On this basis, two directions for further research are proposed.

First, future studies should investigate entrepreneurship education within an international context. Substantial cultural, economic, and educational differences across countries and regions inevitably shape both the implementation and the effectiveness of entrepreneurship education. For instance, in many Western countries, the emphasis is placed on fostering critical thinking and risk-taking, with entrepreneurship education designed to integrate practice with theory. Conversely, in certain Asian countries and regions, traditional cultural values encourage a stronger focus on building interpersonal networks and cultivating stable business strategies. Comparative international studies that examine the distinctive characteristics, strengths, and challenges of entrepreneurship education in diverse contexts would not only contribute to the development of a more comprehensive theoretical framework but also facilitate global cooperation and knowledge exchange. Such research could further offer practical insights for enhancing national entrepreneurship education systems.

Second, it is important to consider the influence of entrepreneurship education across different stages of the entrepreneurial process, which typically involves preparation, start-up, growth, and expansion phases. Each stage places varying demands on entrepreneurs' skills and knowledge. Systematic exploration of these stages would provide an evidence-based foundation for optimising entrepreneurship education curricula, thereby increasing entrepreneurial success rates and strengthening the long-term sustainability of enterprises.

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