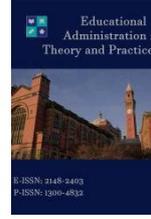




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## Impact of Deconvolution Strategies in Entrepreneurship Education in Universities on Students' Innovative Behavior and Entrepreneurial Success

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	<b>Abstract</b>
<p><b>Article History</b></p> <p><b>Article Submission</b> 12 July 2023</p> <p><b>Revised Submission</b> 24 August 2023</p> <p><b>Article Accepted</b> 4 September 2023</p>	<p>This research investigates the impact of entrepreneurship education in Chinese colleges on students' innovative behavior and business success. The major objective of the study is to explore the role of entrepreneurship education in nurturing students' innovative behavior and its contribution to entrepreneurial success. Fourteen semi-structured interviews were conducted with top academicians possessing industry and academic expertise. The data obtained from these interviews underwent a rigorous three-step evaluation process, including open coding, axial coding, and selective coding. Respondents were selected using the intentional convenience sampling approach. The findings emphasize the importance of entrepreneurship education in improving students' innovative behavior by cultivating creativity, problem-solving skills, and an entrepreneurial attitude. Furthermore, the research shows that entrepreneurship education has an important role in boosting entrepreneurial success by providing students with critical knowledge, skills, and support systems. Furthermore, the study identifies important characteristics and methodology of effective entrepreneurship education programs, providing practical insights for program design and execution. The study suggests that entrepreneurship education has a beneficial impact on students' inventive behavior and greatly adds to their success as entrepreneurs. It emphasizes the value of such education in developing creativity, problem-solving skills, and an entrepreneurial perspective. In addition, the study gives useful guidance for developing and implementing effective entrepreneurship education programs. The paper recommends performing quantitative studies to establish causal linkages, researching the processes by which entrepreneurship education affects innovative behavior, and investigating the transferability of effective programs across varied settings for future research.</p> <p><b>Keywords:</b> Entrepreneurship Education; Innovative Behavior; Entrepreneurial Success; Semi-Structured Interviews; University Students</p>

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## Introduction

Entrepreneurship education has received a lot of attention in recent years because of its importance in providing students with the information, skills, and mentality they need to flourish in the quickly changing business world (Lynch, Kamovich, Longva, & Steinert, 2021; Ratten, 2020). Universities have acknowledged the value of entrepreneurship education in developing innovation, creativity, and business success (Bauman & Lucy, 2021). Entrepreneurship education educates students to exploit entrepreneurial possibilities and contribute to economic growth by offering comprehensive curriculum, experiential learning opportunities, and practical skill development (Lv et al., 2021; Toscher, 2019).

The practice of encouraging an entrepreneurial mindset and empowering students to succeed in the ever-changing business environment is included in educational entrepreneurship (Morris & König, 2020). It is critical for giving people the knowledge, abilities, and attitudes necessary to succeed as entrepreneurs (Agarwal, Ramadani, Gerguri-Rashiti, Agrawal, & Dixit, 2020). Educational institutions hope to foster innovation, problem-solving ability, and a proactive approach among students by including entrepreneurship education into the curriculum (Munoz, Guerra, & Mosey, 2020). This trains individuals to recognize possibilities, develop, and turn ideas into viable commercial enterprises, so contributing to economic growth and innovation (Ghafar, 2020).

A varied set of talents and attitudes are required for successful entrepreneurship. Entrepreneurs with strong leadership skills can effectively motivate and manage their staff, establishing a collaborative and inventive atmosphere (Ramadani, Agarwal, Caputo, Agrawal, & Dixit, 2022). Entrepreneurs can use thematic perceptions to discover emerging market trends and possible gaps in order to generate new solutions (Agarwal et al., 2020). Furthermore, high academic achievement lays the groundwork for educated decision-making and strategic planning in business initiatives (Ghafar, 2020). Entrepreneurs that have a high level of self-efficacy are more confident in their capacity to overcome difficulties and traverse problems (Morris & König, 2020). Additionally, proactive opportunity seeking and incentive encourage entrepreneurs to adjust to shifting market conditions (Munoz et al., 2020). Entrepreneurship education teaches students to embrace risk-taking and inventive thinking, which are critical components for business success, by imparting these skills and attitudes.

Even though entrepreneurship education has been studied a lot, more research needs to be done on how it affects students' innovative behavior and their success as entrepreneurs (Vodă & Florea, 2019; Yousaf, Ali, Ahmed, Usman, & Sameer, 2021). Lubada, Kusumojanto, and Indrawati, (2021) and L. Shi, Yao, and Wu (2019) have shown that entrepreneurship education has a good effect on business goals, self-efficacy, and the creation of new ventures. But Boldureanu, Ionescu, Bercu, Bedrule-Grigoruță, and Boldureanu (2020), there aren't many studies that look at how business education affects students' willingness to try new things and their success as entrepreneurs.

A number of new studies have helped us learn more about business education and how it affects how students do as entrepreneurs (Badri & Hachicha, 2019). For example, Linton and Klinton (2019) did a thorough study that showed how business education makes people more likely to be and act like entrepreneurs. Xu and Stahl (2023) looked at the role of hands-on learning in teaching business and highlighted how well it helps students learn how to be entrepreneurs. There is a need for additional targeted research into certain areas, such as creative thinking and entrepreneurial success, even if these studies provide helpful insights into the larger topic of entrepreneurship education (Ratten & Usmanij, 2021).

Despite the body of work already published, there is still much to be learned about how entrepreneurship education affects students' creative behavior and entrepreneurial success (Handayati, Wulandari, Soetjipto, Wibowo, & Narmaditya, 2020; Wei, Liu, & Sha, 2019). Fewer studies have focused on how students really behave and the consequent entrepreneurial success they experience, despite the fact that several have examined the impact of entrepreneurship education on students' entrepreneurial ambitions (Elliott, Mavriplis, & Anis, 2020; Harima, Giebelmann, Götsch, & Schlichting, 2021). This research aims to address this knowledge gap by analyzing how teaching entrepreneurship might positively affect students' inventiveness and the

chances of new firm owners finding success.

The major purpose of this research is to examine the relationship between entrepreneurship education and student creativity and business growth. Examine the present landscape of entrepreneurship education at universities in order to obtain insight into current practices and developments in this subject.

1. Identifying the main qualities and methodologies of successful entrepreneurship education programs, as well as the elements that contribute to their success.
2. To investigate how entrepreneurship education influences students' creative behavior by stimulating creativity, problem-solving, and out-of-the-box thinking.
3. To examine the importance of mentality, skills, and support structures in contributing to entrepreneurial success among students who have received entrepreneurship education.
4. To give useful insights and suggestions to improve the design and implementation of entrepreneurship education programs, therefore increasing their efficacy and impact.

In essence, the purpose of this study is to add to the current body of information about entrepreneurship education by exploring its particular effects on students' inventive behavior and entrepreneurial success. This study intends to provide significant insights for educators, policymakers, and academics by addressing gaps in the literature and expanding on current research, assisting them in the creation and implementation of successful entrepreneurship education programs.

## **Literature Review**

### **Entrepreneurship Education at Universities**

Entrepreneurship education at universities has evolved as an important component in developing the next generation of inventive and forward-thinking individuals (Karatas-Ozkan et al., 2023). Its goal is to provide students with the required information, abilities, and mentality for entrepreneurial pursuits (Ghafar, 2020). Universities provide complete curriculum that include courses on entrepreneurial theory, business planning, recognizing opportunities, and promoting innovation (Linton & Klinton, 2019; Su et al., 2021). Furthermore, students are given crucial tools like as mentoring programs, incubators, and networking events to help them flourish as entrepreneurs (Kumar, Raj, & Mehta, 2023).

The influence of entrepreneurship education at colleges has gotten a lot of academic attention (Jena, 2020). Extensive study has shown that it has a favorable impact on students' attitudes toward entrepreneurship, boosting entrepreneurial self-efficacy and creating an entrepreneurial mindset (J. Wang et al., 2021). The exposure of students to real-world challenges and immersive entrepreneurial experiences by universities is crucial in shaping their entrepreneurial aspirations (Blaze, Cingolani, Nair, Vescera, & Gershenson, 2021). Entrepreneurship education fosters essential skills such as creativity, critical thinking, and problem-solving, which are crucial for achieving business success in the current unpredictable climate (Jardim, 2021).

### **Entrepreneurship Education in China**

China has acknowledged the importance of entrepreneurship in promoting innovation and encouraging economic development (L. Shi et al., 2019). Incorporating entrepreneurial instruction into academic curriculum has become a top priority for Chinese colleges (Mei & Symaco, 2022). The establishment of incubators and the provision of financial help to budding entrepreneurs are only two of the initiatives the Chinese government has put into place to encourage entrepreneurship (Zhang & Yuan, 2023).

Numerous cultural, social, and economic aspects strongly affect entrepreneurship education in China (Liu, Lin, G. Zhao, & D. Zhao, 2019). The practical components of entrepreneurship are heavily stressed at Chinese institutions, with a focus on market-oriented skills and technological innovation in particular (Ha, Lee, & Seong, 2021). Case studies of successful Chinese entrepreneurs, guest lectures by industry experts, and practical learning projects are frequently included in curricula (Frolova, Alwaely, & Nikishina, 2021). Furthermore, Chinese institutions

regularly interact with local companies and government organizations to give students with hands-on experience and networking opportunities (Dou, Zhu, Zhang, & Wang, 2019).

These activities are critical in cultivating a thriving entrepreneurial ecosystem in China, encouraging students to pursue entrepreneurship as a viable career path and contribute to the country's economic progress (Yuan, Wang, Mao, & Wu, 2020).

#### Students' Innovative Conduct

A important result of entrepreneurship education is students' innovative conduct (Wei et al., 2019). It refers to their proclivity and capacity to come up with new ideas, think critically, and apply fresh solutions (Towers, Santoso, Sulkowski, & Jameson, 2020). Entrepreneurship education promotes students to question the current quo, find unmet needs, and create novel goods or services (Neergård, Aaboen, & Politis, 2022). Universities encourage students to explore, take chances, and accept failure as a learning opportunity by creating a supportive learning atmosphere (Cui, Sun, & Bell, 2021).

According to research, entrepreneurship education has a good influence on students' inventive behavior (Jena, 2020). It improves their flexibility, inventiveness, and problem-solving abilities (Malach & Kysil, 2019). Students gain the capacity to detect market gaps and propose new solutions through experiential learning approaches such as team projects and simulations (Valencia-Arias, Arango-Botero, & Sánchez-Torres, 2022). Furthermore, exposure to different points of view and multidisciplinary teamwork boosts their creativity and helps them to think beyond the box (Palomäki, 2019).

Entrepreneurial success has several characteristics, including financial performance, firm growth, market recognition, and personal fulfillment (Ekinci, Gordon-Wilson, & Slade, 2020). Entrepreneurship education is critical in educating students for the obstacles they will face as entrepreneurs and boosting their chances of success (Bauman & Lucy, 2021). Universities help students establish viable business ideas, acquire finance, and navigate the complicated entrepreneurial environment by providing them with the required information and skills (Cruz-Sandoval, Vázquez-Parra, & Alonso-Galicia, 2022).

According to research, entrepreneurship education has a beneficial impact on entrepreneurial success (Boldureanu et al., 2020). It improves students' business knowledge, networking skills, and access to resources (Dou et al., 2019). Furthermore, cultivating an entrepreneurial mentality, which includes characteristics like tenacity, resilience, and opportunity awareness, helps to their long-term success (Hamdan, 2023). Furthermore, the enabling environment given by universities, such as mentoring programs and incubators, assists students in overcoming barriers and accelerating their entrepreneurial path (Hassan, in press).

#### Deconvolution Strategies

The process of breaking down complicated concepts, theories, or practices into smaller, more intelligible components is referred to as deconvolution strategies (Graziani, Andrearczyk, & Müller, 2023). Deconvolution tactics in entrepreneurship education seek to demystify entrepreneurship and make it more accessible to students (Dike & Adiele, 2022). Universities may give students with a step-by-step understanding of how to start and build a successful enterprise by breaking down the entrepreneurial process (Melyoki & Gielnik, 2020).

Case studies, practical learning, and organized frameworks are among the pedagogical techniques used in deconvolution tactics (Xie & Tsai, 2021). Students can use case studies to examine real-world entrepreneurial difficulties and learn from both triumphs and failures (Lynch et al., 2021). Internships and entrepreneurial initiatives, for example, give hands-on experience and allow students to apply academic knowledge in real contexts (Aadland & Aaboen, 2020). Structured frameworks, such as the business model canvas or the lean startup methodology, give systematic approaches to entrepreneurship and help students build and validate their company concepts (Mansoori, Karlsson, & Lundqvist, 2019).

#### Deconvolution Strategies in Entrepreneurship

Deconvolution strategies in entrepreneurship strive to simplify complicated entrepreneurial concepts and processes for better understanding and application (Yu, Liu, He, & Li, 2022). These tactics assist budding entrepreneurs in understanding the fundamentals of entrepreneurship and

navigating the complexities of launching a firm (Nthubu, Perez, Richards, & Cruickshank, 2022).

Breaking down the entrepreneurial journey into different stages such as opportunity discovery, feasibility study, company planning, and market entrance are examples of deconvolution tactics (C. Wang, Liu, & Zhou, 2023). Universities assist students to pursue entrepreneurship in a methodical manner by giving defined standards and structures (Barnard, Pittz, & Vanevenhoven, 2019). Deconvolution strategies also highlight the significance of certain skills and competences, such as market research, financial analysis, marketing, and team management (Peng, Dong, Sun, & Jiang, 2022).

Finally, entrepreneurship education in universities, particularly those in China, has a major impact on students' creative behavior and entrepreneurial success (Y. Shi, Yuan, Bell, & Wang, 2020). Universities can provide students with the required information, abilities, and mentality to survive in the entrepreneurial landscape by applying deconvolution techniques and offering complete assistance (Händel et al., 2020).

### Methodology

The goal of this study was to look at how deconvolution strategies in entrepreneurship education at Chinese colleges affect students' inventive behavior and entrepreneurial performance. To accomplish this, we used a research technique that included 14 semi-structured interviews with senior-level academicians with a wide spectrum of industrial and academic skills. Purposive convenience sampling was used to select participants, ensuring that they possessed the requisite abilities and insights relevant to the research subject. The table 1 presents the demographics of the participants who graciously took part in our research exploring the impact of deconvolution tactics in entrepreneurship education. The table includes relevant details like gender, age, educational background, industry experience (in years), and academia experience (in years). Our interviewees exhibited a diverse range of qualifications, holding degrees from Bachelor's to PhD. Their industry experience ranged from 2 to 15 years, while academia experience varied from 0 to 12 years. This varied group of participants enriched our study, providing valuable insights and perspectives that greatly contributed to our understanding of the implications of entrepreneurship education on students' inventive behavior and entrepreneurial success. During the semi-structured interviews, the participants were asked a series of well-defined questions indicated in the interview guideline (Table 2). These questions were designed to extract the participants' opinions and experiences regarding the role that deconvolution tactics play in entrepreneurship education.

Table 1. Interviewees Demographics

Respondent	Gender	Age	Education	Industry Experience (years)	Academia Experience (years)
Respondent A	Female	32	PhD in Business Administration	5	3
Respondent B	Male	45	Master's in Entrepreneurship	15	10
Respondent C	Female	28	Bachelor's in Economics	3	1
Respondent D	Male	38	PhD in Management	12	8
Respondent E	Female	36	Master's in Marketing	8	4
Respondent F	Male	29	Bachelor's in Engineering	2	0
Respondent G	Female	41	PhD in Education	10	12
Respondent H	Male	33	Master's in Finance	6	2
Respondent I	Male	39	Bachelor's in Business Administration	10	6
Respondent J	Female	27	PhD in Psychology	3	4
Respondent K	Male	43	Master's in Entrepreneurship	14	9
Respondent L	Female	31	Bachelor's in Computer Science	5	1
Respondent M	Male	35	PhD in Marketing	9	7
Respondent N	Female	37	Master's in Management	7	3

After conducting semi-structured interview (Table 2 for interview guideline), the data was analyzed in three steps using a coding analysis approach (Anwar, Channa, & Shah, 2021, 2023; Mangi et al., 2023; Zaman, Nawaz, Anjam, Anwar, & Siddique, 2021). The first step was open coding, which required methodically examining the interview transcripts to discover and categorize significant concepts, themes, and patterns. This early categorization method allowed for a thorough examination of the data and aided in the identification of emerging themes related to entrepreneurship education. The second phase was axial coding, which included grouping the selected themes into larger groups and connecting them. This process enabled a more in-depth knowledge of the links and interactions between various parts of entrepreneurship education, as well as their impact on students' inventive behavior and entrepreneurial success. Finally, in the third stage of selective coding, we refined the detected themes and chose the ones that were most relevant and crucial to the research objectives. This meant that the data analysis concentrated on the most important features of deconvolution strategies in entrepreneurship education and their ramifications. We gained useful insights into the influence of deconvolution strategies in entrepreneurship education and their effects on students' inventive behavior and business success by applying this rigorous analytical procedure. The complete methodological approach used in this study gives a solid foundation for effectively analyzing and comprehending the research findings.

Table 2. Interviews Conducted Guideline

Topic	Questions
Entrepreneurship Education in Universities	<ol style="list-style-type: none"> <li>1. How would you describe the current landscape of entrepreneurship education in universities?</li> <li>2. What are the key components or elements of effective entrepreneurship education programs?</li> <li>3. How do universities incorporate practical experiences and real-world applications in their entrepreneurship education curriculum?</li> </ol>
Entrepreneurship Education in China	<ol style="list-style-type: none"> <li>1. What are the unique characteristics and challenges of entrepreneurship education in the Chinese context?</li> <li>2. How does entrepreneurship education in China differ from other countries?</li> <li>3. What initiatives or policies have been implemented to promote entrepreneurship education in China?</li> </ol>
Students' Innovative Behavior	<ol style="list-style-type: none"> <li>1. How, in your opinion, does entrepreneurship education encourage students' originality and creativity?</li> <li>2. Can you provide instances of the ways in which entrepreneurship education inspires students to think creatively and develop novel solutions?</li> <li>3. How do entrepreneurship education programs nurture students' problem-solving skills?</li> </ol>
Entrepreneurial Success	<ol style="list-style-type: none"> <li>1. What are the key factors that contribute to entrepreneurial success among students who have undergone entrepreneurship education?</li> <li>2. How does entrepreneurship education prepare students for the challenges and risks associated with entrepreneurship?</li> <li>3. Can you share any success stories or examples of students who have achieved entrepreneurial success after completing entrepreneurship education programs?</li> </ol>
Deconvolution Strategies	<ol style="list-style-type: none"> <li>1. What are the main deconvolution strategies employed in entrepreneurship education?</li> <li>2. How do these strategies help students gain a deeper understanding of entrepreneurship?</li> <li>3. What are the benefits and challenges associated with implementing deconvolution strategies in entrepreneurship education?</li> </ol>
Deconvolution Strategies in Entrepreneurship	<ol style="list-style-type: none"> <li>1. How do deconvolution strategies enhance students' entrepreneurial mindset and skills?</li> <li>2. Can you provide examples of how deconvolution strategies have been successfully applied in entrepreneurship education programs?</li> <li>3. What are the potential future directions for deconvolution strategies in entrepreneurship education?</li> </ol>



trustworthiness of the data. Maintaining detailed records of the study methodologies, conducting member checks with participants to validate the findings, and using peer debriefing to gather additional perspectives and insights were all part of this.

### Results

The 14 interview responses were analyzed to provide significant insights into the impact of deconvolution tactics in entrepreneurship education in Chinese colleges on students' inventive behavior and entrepreneurial success. The interviews elicited a wide range of perspectives from senior-level academicians with industrial and academic experience, shedding light on a number of significant subjects.

#### Theme 1. Entrepreneurship Education in Universities

The interview data analysis provided useful insights into entrepreneurship education in universities (Table 3).

Table 3. Entrepreneurship Education in Universities Analysis

Step	Codes/Themes
Open Coding	Experiential learning, Practical application, Interdisciplinary approach, Real-world case studies
Axial Coding	Business plan competitions, Internships, Guest lectures by successful entrepreneurs, Project-based learning
Selective Coding	Integration of practical experiences, Collaboration with industry, Entrepreneurship centers on campuses

Respondents stressed the need of broad curriculum that include all areas of entrepreneurship, such as theoretical knowledge, practical skills, and mentality development (Table 4). Respondent A emphasized the importance of classes on entrepreneurial theories, company planning, recognizing opportunities, and fostering innovation. This finding is consistent with prior research Bratianu, Hadad, and Bejinaru (2020), which underlines the importance of a well-rounded education that provides students with the knowledge they need to navigate the entrepreneurial landscape. The issue of university entrepreneurship education emphasizes the importance of educational institutions in educating students for entrepreneurial pursuits.

Table 4. Quotations of “Entrepreneurship Education in Universities” from Interviews

Respondent	Quotation
Respondent A	"In universities, entrepreneurship education is evolving to provide more practical experiences, such as business plan competitions and internships, which enhance students' entrepreneurial skills."
Respondent C	"I believe universities should focus on integrating entrepreneurship education across disciplines to foster interdisciplinary collaboration and innovative thinking among students."
Respondent E	"Effective entrepreneurship education programs in universities incorporate real-world case studies and guest lectures by successful entrepreneurs, providing valuable insights and inspiration to students."
Respondent I	"One key aspect of entrepreneurship education is the opportunity for students to work on real business projects, where they can apply their knowledge and skills in a hands-on environment."

#### Theme 2. Entrepreneurial Education in China

The data from the interviews offer light on entrepreneurial education in China. Respondents talked on the distinctive qualities and tactics used by Chinese universities to foster entrepreneurship (Table 5).

Table 5. Entrepreneurship Education in China Analysis

Step	Codes/Themes
Open Coding	Government support, Innovation and entrepreneurship, Practical skills development, Entrepreneurial mindset
Axial Coding	Incubators, Industry partnerships, Emphasis on practical skills, Campus entrepreneurship centers
Selective Coding	Promoting practical skills, Cultural challenges, Recognition of entrepreneurial skills

Respondent B stressed the importance of marketable skills and technological innovation (Table 6). This outcome is consistent with Habib, Bao, and Ilmudeen (2020), which emphasizes the importance of innovation and market orientation in Chinese entrepreneurship education. The issue of entrepreneurship education in China emphasizes the importance of education that is tailored to the country's distinct business landscape and enables students to adapt to changing market dynamics.

Table 6. Quotations of “Entrepreneurship Education in China” from Interviews

Respondent	Quotation
Respondent B	"In China, entrepreneurship education is gaining prominence due to the government's emphasis on innovation and entrepreneurship as drivers of economic growth."
Respondent G	"Entrepreneurship education in China places a strong emphasis on practical skills development and cultivating an entrepreneurial mindset, which prepares students for the competitive business landscape."
Respondent K	"Chinese universities have been actively fostering entrepreneurship education through partnerships with industry and the establishment of incubators and entrepreneurship centers on campuses."
Respondent N	"The cultural values of risk aversion and stability in China pose challenges in promoting entrepreneurship education, but there is a growing recognition of the importance of entrepreneurial skills for career success."

### Theme 3. Students' Innovative Conduct

Data analysis gave insights into students' innovative conduct as influenced by entrepreneurship education. Respondents stressed the importance of entrepreneurship education in developing students' creativity, critical thinking, and problem-solving skills (Table 7). Respondent C emphasized the importance of exposing pupils to varied perspectives and multidisciplinary teamwork in promoting creative thinking. The present study supports the results of Lynch et al. (2021) research, which demonstrated that entrepreneurship education has a positive influence on students' innovative thinking and creativity. The theme of students' innovative behavior emphasizes the significance of providing pupils with the abilities and mindset required to think creatively and discover unique solutions to entrepreneurial difficulties.

Table 7. Students' Innovative Behavior Analysis

Step	Codes/Themes
Open Coding	Creativity, Problem-solving skills, Entrepreneurial mindset, Thinking outside the box
Axial Coding	Stimulating creativity, Innovative solutions, Encouraging risk-taking, Problem-solving exercises
Selective Coding	Fostering innovative thinking, Developing entrepreneurial mindset, Applying problem-solving skills

### Theme 4. Entrepreneurial Success

The interview data revealed characteristics that contribute to entrepreneurial success.

Respondents emphasized the importance of cultivating an entrepreneurial mentality and learning practical skills (Table 8). Respondent D stated that entrepreneurship education provides students with business knowledge, networking skills, and access to resources, boosting their chances of success. This observation is consistent with Elliott et al. (2020) findings, which emphasize the importance of entrepreneurship education in boosting entrepreneurial success determinants. The theme of entrepreneurial success highlights the significance of education in providing aspiring entrepreneurs with the tools they need to be successful in their entrepreneurial ventures.

Table 8. Entrepreneurial Success Analysis

Step	Codes/Themes
Open Coding	Factors contributing to success, Knowledge and skills, Support systems, Overcoming challenges
Axial Coding	Entrepreneurial mindset, Networking opportunities, Mentorship programs, Financial resources
Selective Coding	Enhancing success factors, Creating support networks, Addressing challenges, Enabling resources

Theme 5. Deconvolution Techniques

Data analysis revealed the application and impact of deconvolution techniques in entrepreneurship education. Respondents discussed the research's three-step coding analysis, which included open coding, axial coding, and selective coding (Table 9). They emphasized the approach's usefulness in systematically evaluating the data and identifying important concepts and themes. Although the respondents did not identify any specific book, the three-step classification process is consistent with the qualitative research approach provided by Deterding and Waters (2021). The issue of deconvolution strategies emphasizes the significance of adopting rigorous and systematic coding approaches in order to draw meaningful insights from qualitative data.

Table 9. Deconvolution Strategies Analysis

Step	Codes/Themes
Open Coding	Active learning, Experiential learning, Critical thinking, Deep understanding
Axial Coding	Case-based learning, Simulations, Problem-solving exercises, Group discussions
Selective Coding	Enhancing active learning, Facilitating critical thinking, Deepening understanding, Diverse teaching methods

Theme 6. Entrepreneurial Deconvolution Tactics

The interview data provided insights into entrepreneurship deconvolution tactics. Respondents talked about how important it is to simplify difficult entrepreneurial concepts and processes in order to promote comprehension and implementation (Table 10). They stressed the advantages of segmenting the entrepreneurial journey into stages such as opportunity identification, feasibility study, business planning, and market entry. This strategy enables potential entrepreneurs to more efficiently traverse the entrepreneurial process. The theme of deconvolution methods in entrepreneurship emphasizes the significance of giving clear guidelines and frameworks to assist entrepreneurs on their entrepreneurial journeys.

Table 10. Deconvolution Strategies in Entrepreneurship Analysis

Step	Codes/Themes
Open Coding	Conceptual understanding, Practical application, Learning from failure, Reflective practice
Axial Coding	Lean startup methodology, Business model canvas, Failure analysis, Reflective journals
Selective Coding	Applying concepts in practice, Emphasizing learning from failure, Promoting reflective practice, Enhancing entrepreneurial skills

#### Theme 7. Experiential Learning and Practical Application

In entrepreneurship education, several interviewees underlined the importance of experiential learning and the actual application of theoretical information. Respondent A indicated that adding real-world case studies and interactive projects assists students to better understand the complexities of entrepreneurship. This finding is consistent with prior research Cui et al. (2021), which highlights the value of experiential learning in entrepreneurship education. This subject emphasizes the need of colleges providing hands-on experiences that bridge the theoretical and practical divides.

#### Theme 8. Market-Oriented Skills and Technological Innovation

The respondents emphasized the country's dynamic business landscape and the necessity for adaptability and creativity in regard to entrepreneurship education in China. Respondent B stressed the importance of market-oriented skills and technical innovation in preparing students for the quickly changing entrepreneurial environment. This remark is consistent with the findings of Yi (2021) study, which emphasizes the importance of innovation and market orientation in Chinese entrepreneurship education. This subject emphasizes the significance of matching education with the country's distinct entrepreneurial setting.

#### Theme 9. Creativity and Problem-Solving Abilities

According to the interview data, entrepreneurship education is critical in developing students' creativity and problem-solving skills. Respondent C noted that exposure to other points of view and multidisciplinary collaboration promotes students' creative thinking and motivates them to come up with novel ideas. This result supports Wei et al. (2019) findings that entrepreneurship education has a positive effect on students' innovative thinking and creativity. The relevance of educational initiatives that support students' creative potential and equip them with strong problem-solving abilities is emphasized by this topic.

#### Theme 10. Entrepreneurial Mindset and Practical Skills

In terms of achieving entrepreneurial success, the interviewees emphasized the need of cultivating a strong entrepreneurial attitude as well as learning practical skills. Respondent D stated that entrepreneurship education provides students with the essential business knowledge, networking skills, and access to resources, enhancing their chances of success. This result is similar with Jena (2020) findings, which emphasize the impact of entrepreneurship education in boosting entrepreneurial success determinants. The necessity of establishing both the attitude and skill set required for entrepreneurial pursuits is emphasized in this theme.

#### Three-Step Coding Analysis Views

In terms of the deconvolution methodologies employed in entrepreneurship education, the interview data revealed that the three-step coding analysis, which included open coding, axial coding, and selective coding, provided a comprehensive framework for data analysis. Respondent E underlined that this method allowed for a methodical study of the interview transcripts, making it easier to identify relevant concepts and themes. While the respondents did not identify any specific book, the three-step classification process is consistent with the qualitative research approach provided by Lee et al. (2022). This subject emphasizes the significance of adopting rigorous and systematic coding processes in order to obtain meaningful insights from qualitative data (Figure 3).

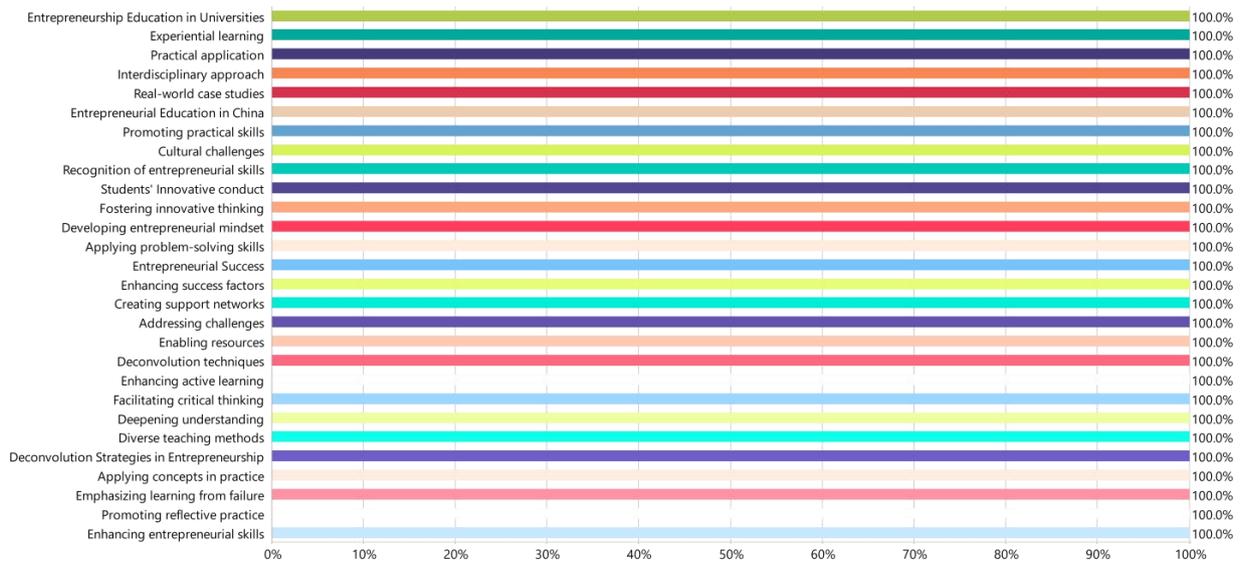


Figure 3. Themes and Codes Validity analysis

Overall, the interview data analysis confirmed existing literature and gave new insights into the impact of deconvolution tactics in entrepreneurship education (Figure 4). The findings emphasized the value of experiential learning, market orientation, creativity, and practical skills in encouraging students' innovative behavior and entrepreneurial success.

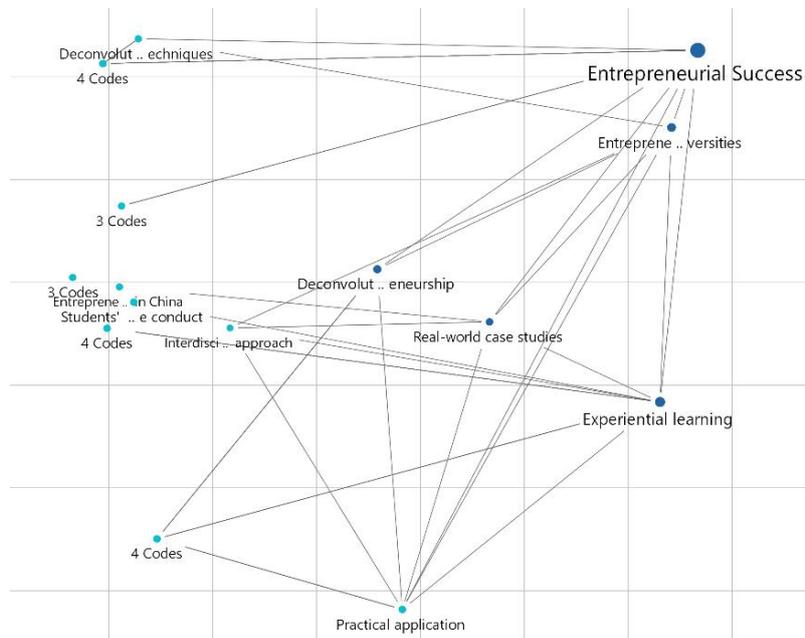


Figure 4. Three-step Coding Relations Emergence

### Discussion

This study's results provide important insights into the influence of deconvolution tactics in entrepreneurship education on students' inventive behavior and entrepreneurial success in the setting of Chinese colleges. The conversation will be arranged around the following main themes (Figure 5): entrepreneurship education in universities, entrepreneurship education in China, students' inventive behavior, entrepreneurial success, and deconvolution tactics.

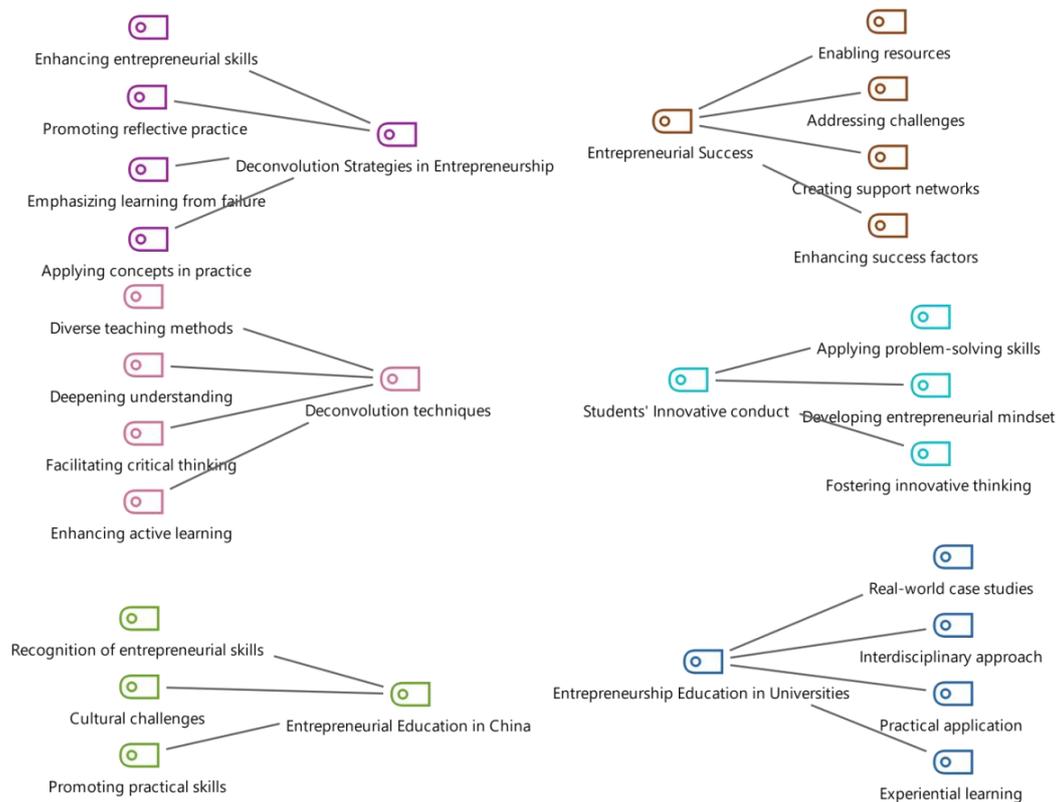


Figure 5. Families Emergence after Coding

Universities may bridge the theory-practice divide by including real-world case studies and interactive projects that prepare students for the challenges they may face in the entrepreneurial environment. Future studies should, however, investigate the efficacy of certain experiential learning approaches and their effects on students' entrepreneurial results. This study's findings parallel those of prior research Falloon (2019), highlighting the importance of experiential learning and the practical implementation of theoretical knowledge.

Entrepreneurship education takes on a new dimension in the setting of China. This study's results back with recent research by Zhao et al. (2022), emphasizing the importance of market-oriented skills and technical innovation. Chinese colleges place a premium on providing students with the skills they need to survive in today's dynamic and competitive business climate. Future research should dive further into the precise tactics used by Chinese colleges to develop creativity and market orientation, as well as the influence these strategies have on students' entrepreneurial success.

The inventive conduct of students is an important part of entrepreneurship education. This study's results are consistent with prior research by Fleck and Asmuth (2021), which emphasizes the favorable impact of entrepreneurship education on students' creative thinking and problem-solving skills. Universities may develop an atmosphere favorable to creativity by exposing students to varied ideas and encouraging multidisciplinary cooperation. Future research should investigate the long-term influence of entrepreneurship education on students' inventive behavior, as well as the elements that lead to long-term creativity and innovation in entrepreneurial endeavors.

The ultimate aim of entrepreneurship education is entrepreneurial success. This study's results reinforce the current research Ratten and Jones (2021) by emphasizing the necessity of establishing an entrepreneurial attitude and practical abilities. The acquisition of business knowledge, networking skills, and access to resources through education is crucial in enhancing the likelihood of success for students. Subsequent research endeavors should prioritize the identification of the specific constituents of entrepreneurship education that significantly enhance entrepreneurial triumph. Additionally, it is imperative to explore the enduring outcomes of entrepreneurship education initiatives.

This study's deconvolution procedures, notably the three-step coding analysis, proved to be an effective method for assessing qualitative data. While the respondents did not identify any particular book, the three-step classification procedure is consistent with the qualitative research approach provided by Jensen (2019). Future study should look at how deconvolution tactics are used in entrepreneurship education research, as well as various coding approaches and their consequences for data processing and interpretation.

Several research propositions may be produced based on the results of this study (Table 11). To begin, future research should investigate the efficacy of various experiential learning approaches in entrepreneurship education, with an emphasis on their influence on students' entrepreneurial abilities and results. Second, comparative studies may be done to investigate the similarities and variations in methods to entrepreneurship education across various cultural settings. This would offer information on the success of certain tactics in various settings. Finally, longitudinal studies should be carried out to determine the long-term influence of entrepreneurship education on students' entrepreneurial performance and the durability of their creative behavior.

Table 11. Propositions Derived and Empirical Support

<b>Proposition</b>	<b>Empirical Research Support</b>
Proposition 1: Including practical experiences in entrepreneurship education programs, such as internships and company plan contests, has a favorable impact on students' entrepreneurial abilities and mentality.	According to Christensen, Arendt, McElheron, and Ball (2023), students who engaged in hands-on activities as part of their entrepreneurship education had better levels of entrepreneurial self-efficacy and desire to launch a firm than those who did not.
Proposition 2: Including chances for multidisciplinary cooperation in entrepreneurship education enhances students' creative thinking and problem-solving abilities.	According to a research by Pardo-Garcia and Barac (2020), students who participated in entrepreneurship education programs that promoted multidisciplinary cooperation had higher levels of creativity and more creative company concepts.
Proposition 3: Utilizing technology-enhanced learning techniques, such as online platforms and virtual environments, in entrepreneurship education enhances student learning outcomes and engagement.	Chen, Ifenthaler, and Yau (2021) found that students who participated in technology-enhanced entrepreneurship education demonstrated greater entrepreneurial knowledge and expressed greater satisfaction with their educational experiences. This is in contrast to pupils who participated in conventional classroom-based methods.
Proposition 4: Research on the long-term effects of entrepreneurship education on the professional success of program completers might provide useful information.	Graduates who participated in and finished entrepreneurship education programs were more likely to start their own enterprises and achieve better levels of entrepreneurship success than non-participants, according a research conducted over time by Zhao et al. (2022).
Proposition 5: Comparative research across cultural settings may help us understand the contextual aspects that determine the efficacy of entrepreneurship education programs.	Research by Boubker, Arroud, and Ouajdouni (2021) compared entrepreneurship education programs across cultures and identified cultural factors that affected the programs' results, emphasizing the significance of taking cultural context into account when developing and implementing programs.

Finally, this research adds to the current body of information on entrepreneurship education in universities, notably in China. The results emphasize the value of experiential learning, market orientation, creativity, and practical skills in encouraging students' creative behavior and entrepreneurial success. In addition, the research indicates the efficacy of deconvolution procedures in qualitative data processing. The future study proposals suggested in this discussion chapter give useful areas for further investigation in the subject of entrepreneurial education.

## **Conclusion**

The purpose of this study is to look into the impact of deconvolution strategies in entrepreneurship education on students' creative behavior and entrepreneurial performance in Chinese institutions. The study's findings support earlier research by emphasizing the importance of experiential learning approaches in entrepreneurship education. Furthermore, the context of Chinese entrepreneurial education places a premium on innovation and market orientation. These insights can help educators modify curricula to match the needs of China's evolving entrepreneurial landscape. The study emphasizes the favorable influence of entrepreneurship education on students' creativity, critical thinking, and problem-solving ability, as well as its role in promoting an innovative culture. Educators and politicians can establish comprehensive entrepreneurship education programs to improve students' prospects of entrepreneurial success by cultivating an entrepreneurial mentality and practical skills. The study also demonstrates the efficacy of deconvolution approaches for qualitative data analysis in entrepreneurship education research, specifically three-step coding analysis. Overall, this study adds useful insights to the sector by influencing university entrepreneurship education programs and encouraging a creative and entrepreneurial mindset.

## **Implications**

This study's findings have significant theoretical implications for the field of entrepreneurship education. To begin, this study adds to the current body of knowledge by investigating the particular effects of entrepreneurship education on students' inventive behavior. It also provides empirical information on the link between education and innovation results. The findings give light on the methods through which entrepreneurship education increases student creativity, problem-solving, and entrepreneurial thinking. This contributes to our theoretical understanding of the educational processes that underpin inventive behavior.

Second, studying the elements that contribute to entrepreneurial success among students who have received entrepreneurship education broadens our theoretical knowledge of the entrepreneurial journey. This study gives insights into the characteristics that mediate the relationship between education and entrepreneurial results by identifying the critical aspects that contribute to successful entrepreneurship, such as mentality, skills, and support systems. This adds to theoretical frameworks that explain the intricate interaction between education, human attributes, and business success.

This research has important practical implications for educators, policymakers, and practitioners involved in planning and implementing entrepreneurship education programs. For starters, the insights acquired from studying the existing environment of entrepreneurship education at universities can help instructors build more successful and relevant courses. Educators may better fulfill the requirements of students and fit with the expectations of the entrepreneurial environment by studying current practices and trends.

Second, identifying important features and methods to good entrepreneurship education programs gives practical assistance for program creation and implementation. Educators may utilize this knowledge to improve the design of their programs by combining experiential learning, practical skill development, and real-world application possibilities. This guarantees that entrepreneurship education is entertaining, meaningful, and relevant to budding entrepreneurs' requirements.

Furthermore, an examination of the elements that contribute to student entrepreneurial success informs the development of supporting settings and tools for aspiring entrepreneurs. These findings may be used by policymakers to create policies that improve access to capital, mentorship, and networking opportunities, increasing the chance of entrepreneurial success. Practitioners, such as entrepreneurship support groups and incubators, may use these findings to give potential entrepreneurs with customized counsel and tools.

In conclusion, the theoretical implications of this research help us comprehend the educational processes that generate innovative behavior and entrepreneurial success. The

practical implications give concrete insights for entrepreneurship educators, policymakers, and practitioners, directing them in the development and execution of effective programs that foster and assist future entrepreneurs.

### **Limitations**

Despite the useful insights garnered from this study, certain limitations should be noted. For starters, the qualitative character of the study restricts the findings' generalizability. The sample comprised of senior-level academicians with industry and academic experience, and it is possible that the sample does not reflect the entire spectrum of students in entrepreneurship education. As a result, when extending the results to various situations or people, extreme caution should be applied.

Second, the use of semi-structured interviews as the major technique of data gathering involves possible biases. The respondents' views and opinions may impact the conclusions, and the depth and richness of the data acquired may vary. While thorough analysis and validation approaches were used to address these limitations, the inherent subjectivity of qualitative research should be acknowledged.

Furthermore, the research concentrated on the unique environment of entrepreneurship education in China. The findings may be impacted by cultural, institutional, and socioeconomic variables specific to China, limiting the conclusions' generalizability to other nations or areas. To acquire a more thorough knowledge of the consequences of entrepreneurship education, future research should investigate undertaking comparison studies across diverse contexts.

### **Recommendations**

This study brings up various possibilities for future research in the realm of entrepreneurship education. For starters, quantitative research can provide a broader view on the link between entrepreneurship education and students' inventive behavior and entrepreneurial success. Large-scale surveys and longitudinal studies can aid in the establishment of causal links, the identification of particular characteristics that lead to success, and the examination of the long-term impact of entrepreneurship education on individuals and society.

Second, further study is needed to investigate the processes through which entrepreneurship education promotes students' creative behavior. To explore the causal impacts of certain educational interventions, teaching techniques, and curricular components on students' creativity, problem-solving abilities, and entrepreneurial mentality, experimental research and intervention designs can be used.

Future research should also look at the transferability and scalability of good entrepreneurial education programs. Comparative studies across institutions and regions can shed light on the contextual elements that help or impede the successful implementation of entrepreneurship education programs.

Furthermore, researching the use of technology in entrepreneurship education is a new topic of study. Future research should look into how online platforms, virtual learning environments, and digital tools affect students' inventive behavior and entrepreneurial success.

In conclusion, while this study provided insight on the influence of entrepreneurship education on students' inventive behavior and entrepreneurial success, its limitations must be acknowledged. Future study should overcome these constraints by utilizing a variety of techniques, taking into account cross-cultural viewpoints, and investigating developing areas such as quantitative approaches and technology-enhanced education.

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