
| RESEARCH ARTICLE

Entrepreneurial Education and Intention: Basis for an Enhanced Entrepreneurial Mindset among Engineering Students at Guangdong Industry and Trade Vocational School, China

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| ABSTRACT

This research focuses on exploring the impact of entrepreneurial education on the entrepreneurial intentions of engineering students at Guangdong Industry and Trade Vocational School in China. The study aims to investigate how factors such as self-efficacy, motivation, and entrepreneurial education influence students' intentions to pursue entrepreneurship. By employing a quantitative descriptive research design, data was collected through structured questionnaires from a diverse sample of students. Statistical analyses, including multiple linear regression and Pearson correlation, were used to examine the relationships between variables. The findings revealed significant correlations between self-efficacy, motivation, entrepreneurial education, and entrepreneurial intention. The study underscores the importance of integrating entrepreneurial education into engineering curricula to foster a culture of innovation and entrepreneurship among students. These results have implications for educational institutions seeking to enhance students' entrepreneurial mindset and readiness for the business world.

| KEYWORDS

Entrepreneurial education, Entrepreneurial intention, Self-efficacy, Motivation, Engineering students, Quantitative research

| ARTICLE INFORMATION

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1. Introduction

1.1 Background of the Study

An entrepreneurial mindset refers to the inclination to discover, evaluate, and exploit opportunities. It is a mental attitude or inclination that is important for all students, regardless of their educational disciplinary focus area or career functional area (Power, E. J., 2019). Developing an entrepreneurial mindset is crucial for graduates of the future, as they are expected to change careers multiple times and work collaboratively across disciplines to solve commercial and societal challenges (Pidduck et al., 2023). Individuals with entrepreneurial mindsets are drawn to innovative opportunities and possess advanced skills in critical thinking, problem-solving, and working beyond traditional discipline boundaries (Daspit et al., (2023). The benefits of integrating interdisciplinary commercial challenge-led learning into higher education are evaluated as a new mode of knowledge production to develop an entrepreneurial mindset (Parashar, S. (2023). An entrepreneurial mindset is not only relevant for starting a business but can also be applied to acting strategically within an organization, addressing societal grand challenges, and improving one's personal life (Bosman, L., 2021).

Guangdong Province in China, formerly renowned as the "world's factory," has undergone a notable transformation from labor-intensive manufacturing to modern, high-tech industries. This shift necessitates a workforce with higher levels of technical skills, and technical schools are pivotal in fulfilling this demand. In Guangdong, there are 156 technical schools and colleges with an enrollment exceeding 558,000 students, a significant portion of whom originate from rural backgrounds and benefit from tuition-free education. To align with Guangdong's industrial evolution, supported by the World Bank, three technical colleges in the

province have undertaken substantial curriculum and pedagogical reforms, introduced innovative educational approaches, and enhanced the capacity to nurture a skilled workforce. These institutions have fostered collaborations with local industries and implemented inventive methods to ensure that students acquire skills that not only meet the requirements of the business sector but also remain adaptable to the ever-changing workplace dynamics (World Bank, 2020, June 3).

Over the previous decade, scholars have increasingly turned their attention to studying the factors that support sustainable economic growth in developing nations. Among these factors are structural change factors and education on environmental quality (Shahzad et al., 2022; Zhang et al., 2022).

Entrepreneurship, with its capacity to foster economic growth and market innovation while also generating more job opportunities to enhance employment, is considered a potent instrument for social and economic transformation. Encouraging individuals to create new ventures is thus seen as key to global efforts to attain prosperity and eradicate poverty (Shane S, Venkataraman S., 2000).

One crucial step in promoting entrepreneurship activities is the development of entrepreneurship education programs. These programs have acquired the attention of numerous scholars as they equip individuals with the necessary knowledge to make decisions oriented toward the future (Iwu CG et al. 2021). In China, the "massive entrepreneurship and innovation" policy has made entrepreneurship education an essential way to encourage sustainable development, making it a hot topic in both entrepreneurship and education research fields.

Entrepreneurship plays a crucial role in promoting economic and social development in China. The Chinese government and universities have implemented entrepreneurship education initiatives to further foster economic growth and social mobility. These initiatives aim to enhance young people's entrepreneurial knowledge, skills, and intention to pursue entrepreneurial careers (Hasse, 2020).

The possession of enterprises performs a critical function in the strategic administration paradigm, which encourages economic growth in particular areas and countries (Hassan et al., 2020a, 2020b). Entrepreneurs' development of ideas and their transformation into commercial enterprises contributes to economic prosperity. The growth of diverse firms is meaningful and necessary as it generates employment, propels innovation, and enhances efficiency in numerous economic areas (Rehan et al., 2019). Entrepreneurship can also assist in alleviating dynamic economic fluctuations in countries and establish a self-sufficient philosophy that contributes to the general welfare of the nation.

However, despite these efforts, the entrepreneurial intention of Chinese college students remains relatively low. This raises the question of how entrepreneurial education can effectively increase entrepreneurial intention among young people in China. Additionally, the role of entrepreneurial competitions and entrepreneurial self-efficacy in augmenting entrepreneurial education on entrepreneurial intention is worth exploring.

Research and studies have shed light on the current state of entrepreneurship education in China and its potential for future development. It is important to analyze the existing situation, compare it to international models such as the US system, and identify areas for improvement (Gao and Qin, 2022). The financial crisis has impacted nearly every region worldwide, resulting in countries struggling to maintain economic stability during the global pandemic. The potential for entrepreneurship to alleviate economic instability has been highlighted, and it can lead to economic expansion, job creation, innovation, and efficiency in different economic sectors. Despite the government's and other entrepreneurial organizations' concentrated efforts, entrepreneurship remains precarious. Moreover, the recent outbreak has generated a noteworthy conversion in the lifestyles and consumer patterns of individuals (Mazhar et al., 2021). Individuals have experienced massive setbacks in the form of job loss and business failure, which have severely impacted the overall economy (Purbasari et al., 2021). The youth in the country display a strong inclination towards entrepreneurship, as per Hoang et al. (2020), resulting in the creation of new businesses that provide job opportunities for others, as stated in the Wardana et al. (2020) study. However, many parents and educational institutions do not give due importance to this matter.

The education sector is a primary hub for fostering and training young entrepreneurs (Hameed and Irfan, 2019), but it is not doing this effectively, being more interested in training students for job-oriented than entrepreneurial careers. Therefore, the overall

motivation to launch entrepreneurial initiatives is low among youngsters, which affects the country's prevailing economic conditions.

Engineering education is a critical component of preparing the workforce for the ever-evolving and dynamic industrial landscape in China. Guangdong Industry and Trade Vocational School, nestled in the heart of Guangdong Province, plays a pivotal role in shaping the future of engineering students within the region. As the demands of the global marketplace continue to shift, it becomes increasingly important to understand the unique challenges and opportunities that engineering students face in their educational journey. This research aims to delve into the experiences, aspirations, and skill development of engineering students at Guangdong Industry and Trade Vocational School.

This research is situated within the context of engineering education at Guangdong Industry and Trade Vocational School in China, where the confluence of academic rigor and family business legacies offers a unique perspective on the intersection of education and entrepreneurship. Family businesses have played a pivotal role in China's economic development, and this study aims to bridge a notable research gap by exploring how students with family business backgrounds navigate their engineering education. By delving into their experiences, challenges, and aspirations, the research seeks to offer valuable insights for educators, policymakers, and family business stakeholders, shedding light on the potential for educational programs that recognize and leverage the strengths of these students while bridging the gap between traditional family business practices and the evolving demands of the engineering field. The research employs a quantitative approach, including surveys, to provide a comprehensive understanding of this subgroup, ultimately contributing to the broader discourse on engineering education and family business dynamics in China.

This research endeavor seeks to explore the significance of individuals' entrepreneurial self-efficacy (ES) and entrepreneurial motivation (EM) in the cultivation of favorable entrepreneurial intention (EI) among engineering students at the esteemed School of Mechanical and Electrical Engineering in Guangdong Industry and Trade Vocational School, situated in China. Additionally, this investigation will assess the impact of entrepreneurial education (EE) on the relationship between these variables and EI, employing the comprehensive framework of the theory of planned behavior to augment their entrepreneurial mindset.

1.2 Statement of the Problem

This research endeavors to investigate the function of factors that determine entrepreneurial education and intention to augment the entrepreneurial mindset of engineering students in Guangdong Industry and Trade Vocational School, China. Specifically, it aims to answer the following questions:

1. What is the level of agreement among the respondents toward educational education in terms of:
 - 1.1. Entrepreneurial self-efficacy; and
 - 1.2. Entrepreneurial motivation?
2. Is there a significant relationship between entrepreneurial self-efficacy and entrepreneurial motivation toward entrepreneurial education among the respondents?
3. What is the level of agreement among the respondents regarding entrepreneurial education and entrepreneurial intention?
4. Is there a significant relationship between self-efficacy and motivation toward entrepreneurial education among the respondents?
5. Is there a significant relationship between entrepreneurial education and entrepreneurial intention among the respondents?
6. Based on the results of the study, what entrepreneurial mindset program may be recommended to enhance entrepreneurial education at Guangdong Industry and Trade Vocational School, China?

1.3 Hypotheses

The following hypotheses can be proposed for the study on the relationship between self-efficacy and motivation toward entrepreneurial education among engineering students of Guangdong Industry and Trade Vocational and Technical College in China and the relationship between entrepreneurial education and entrepreneurial intention:

H1: There is no significant relationship between self-efficacy and motivation toward entrepreneurial education among the respondents.

H2: There is no significant relationship between entrepreneurial education and entrepreneurial intention among the respondents.

1.4 Scope and Limitations

The study presents a research design that adopts a quantitative descriptive approach. The primary objective of this research endeavors to investigate the function of factors that determine entrepreneurial education and entrepreneurial intention to augment the entrepreneurial mindset of engineering students at the School of Mechanical and Electrical Engineering who are enrolled at the Guangdong Industry and Trade Vocational School in China located at Baiyun Campus Address: No. 688, Guangcongjiu Road, Zhongluotan Town, Baiyun District, Guangzhou. Website: <https://www.gdgm.edu.cn/>

For the academic year 2022-2023, the study encompasses all levels of courses offered at the vocational school, totaling 500 students distributed across 12 different subjects. It strives to comprehensively examine the dynamics of entrepreneurial education and its impact on the entrepreneurial mindset, self-efficacy, motivation, and intention of these engineering students.

Furthermore, the research timeline spans three months, commencing in December 2023 and concluding in February 2024. This timeframe is dedicated to the systematic collection of data and its subsequent analysis. The study employs meticulously designed survey questionnaires, which have been crafted with great care, drawing upon an extensive literature review that centers on the domains of entrepreneurial self-efficacy, entrepreneurial motivation, entrepreneurial education, and entrepreneurial intention.

The responses to the survey questionnaires will be methodically aggregated and meticulously organized by the principal investigator. This rigorous data analysis process is intended to provide valuable insights into the relationship between entrepreneurial education and the development of an entrepreneurial mindset among the engineering students at Guangdong Industry and Trade Vocational School.

1.5 Significance of Study

The proposed study on entrepreneurial education on entrepreneurial intention among youth in China, with a focus on the role of self-efficacy and motivation, has the potential to benefit various stakeholders.

Guangdong Provincial Education Authorities: Policymakers at the provincial level in Guangdong, such as the Department of Education, would be interested in this research. They are responsible for shaping educational policies and strategies within the province and could use the findings to inform the development of entrepreneurship education programs and policies.

Local Business and Industry Associations: These associations can benefit from understanding how entrepreneurship education can help cultivate a new generation of entrepreneurs in Guangdong, which may contribute to the growth and diversification of local industries.

Local Government Bodies and Economic Development Agencies: Policymakers at the municipal and regional levels within Guangdong can also find value in the research as it may inform their economic development strategies, especially if they seek to promote entrepreneurship as a means of driving economic growth and innovation.

Local Education Institutions in Guangdong: Vocational and technical colleges, universities, and other educational institutions in Guangdong would be key stakeholders. Educators at these institutions can utilize the insights from the research to enhance their entrepreneurship education programs and teaching methods.

Students and Young Entrepreneurs in Guangdong: Young people studying at vocational and technical colleges or universities in Guangdong who aspire to become entrepreneurs would be the primary beneficiaries. They can benefit from the study's findings by gaining a better understanding of how self-efficacy and motivation impact their entrepreneurial intentions, which can guide them in their career choices and preparations for entrepreneurship.

Researchers. The study can contribute to the existing literature on entrepreneurship education and its impact on entrepreneurial intention. By analyzing the role of self-efficacy and motivation in this relationship, the study can provide new insights into the factors that shape young people's entrepreneurial aspirations.

Future Researchers. Future researchers can benefit from this study by using its findings as a basis for further research on the relationship between entrepreneurial education and entrepreneurial intention, replicating the study's methodology, addressing its limitations, and exploring the role of other factors in shaping attitudes toward entrepreneurship.

1.6 Definition of Terms

It is essential to establish a clear understanding of the key terms that underpin the study. These definitions serve as the foundation upon which the investigation is built.

Entrepreneurial Education. Refers to education for entrepreneurial attitudes and skills.

Entrepreneurial Intention. One's desire to start one's own business. Individuals with high entrepreneurial intentions may finally decide to create a new venture.

Entrepreneurial Mindset. The entrepreneurial mindset - defined as the ability and willingness to sense, act, and mobilize, responding to a judgmental decision under uncertainty - has recently been embraced by both academia and practice as a useful concept capturing individuals' "entrepreneurialness".

Entrepreneurial Motivation. Entrepreneurial motivation is an internal drive that encourages individuals to pursue entrepreneurial opportunities and develop new businesses. It is influenced by factors such as the need for achievement, autonomy, affiliation, power, subjective norms, attitude toward becoming an entrepreneur, perceived behavioral control, financial motive, creativity, and risk-taking.

Entrepreneurial Self-Efficacy. Entrepreneurial self-efficacy refers to an individual's belief in their ability to successfully engage in entrepreneurial activities. It is influenced by various factors such as personal experience, role models, social persuasion, and psychological and emotional conditions.

Level of Agreement. The level of agreement refers to the extent to which individuals or groups express a consensus or alignment of opinions, beliefs, attitudes, or feelings on a particular topic, statement, or issue. This study is assessed using Likert scales and semantic differential scales to gauge the degree of concordance among participants.

Theory of Planned Behavior. Refers to the process of defining and measuring the key components of the theory, namely, attitude, subjective norms, and perceived behavioral control.

1.7 Literature Review

1.7.1 Entrepreneurial Education

Entrepreneurship education refers to education for entrepreneurial attitudes and skills. Entrepreneurship education in China began in the 2000s. Under the demand of rapid economic growth, the Ministry of Education decided to first launch a pilot stage at nine leading universities across China, such as Renmin University of China, Tsinghua University, and Nanjing University. It aims to improve students' entrepreneurial ability and competence instead of just providing them with professional skills in traditional education. Since the policy of "massive innovation and entrepreneurship" was put forward in 2014, entrepreneurship education has attracted a great deal of attention in China.

It is very common to find an entrepreneurship curriculum in a university (Dou X et al., (2019). The data shows that 70.4% of colleges and universities hosted entrepreneurial activities, 66.7% of colleges and universities set up entrepreneurial clubs, and 59.7% of colleges and universities established entrepreneurship practice bases. Overall, students in China obtain entrepreneurial knowledge and enjoy the entrepreneurial atmosphere from several aspects, such as lectures and exams given by the course instructor, preparing business plans, pitch competitions (Dou X, Zhu, et al., (2019), meeting with guest speakers with actual entrepreneurial exposure, and business visits and field trips like other countries (Ahmad SZ et al., (2018).

However, entrepreneurship education in China is relatively young (Cui J, Sun J, Bell R, (2021). There are main issues of entrepreneurship education contradiction, such as the structure of teachers being somewhat irrational, teaching content is not comprehensive, and students have weak innovative ideas. It has not yet developed a universally recognized teaching model with best practices. Many universities and colleges in China cultivate their entrepreneurial education programs in their special ways. For example, Tongji University has established the College of Innovation and Entrepreneurship. Students studying in this college are from different disciplines. Frequent communication among students can promote the transformation of interdisciplinary scientific and technological achievements. The college also provides related policy releases and financing services. Experts inside and outside the college are hired to conduct guidance and regularly organize exchange meetings.

Students are encouraged to participate in the "Dream Cup" entrepreneurship competition to practice their entrepreneurial knowledge. Nanjing Forestry University integrates entrepreneurship education into traditional course teaching. The instructors adopt case teaching methods and organize students to visit enterprises. Harbin Engineering University has established the College of Entrepreneurship Education by establishing a curriculum teaching system, practical training system, and business incubation system. The college provides students with services and guidance in innovation and entrepreneurship competitions and sets up workshops to promote students' entrepreneurial practice activities. Above all, the methods for teaching entrepreneurship in universities and colleges in China varied extensively.

In addition to entrepreneurship education programs provided by state-owned universities, entrepreneurship training institutions run by individuals also provide related entrepreneurship training. For example, several training institutions in Shanghai provide entrepreneurship-related courses. Shanghai Entrepreneurship Education Training Center provides relevant entrepreneurship services. Therefore, individuals in China can obtain entrepreneurial knowledge from different sources.

Entrepreneurship education is a critical and vital component of creating and developing entrepreneurial attitudes/intentions. Entrepreneurship education involves interactive learning that is linked to business and community approaches to ensure experience-based learning methods (Ratten & Usmanij, 2020). The ultimate objective of entrepreneurial education is to ensure the change of students' mindset when it comes to innovation and risk-taking in business ventures. It should create effective outcomes that will drive changes in attitudes concerning craving the desire to start a new business venture or being innovative in an already existing enterprise. The appropriate entrepreneurship education should not teach students how to start a business, but as indicated by Nowiński et al. (2019), it should rather focus on enabling students to identify and recognize entrepreneurial opportunities and how to develop digital businesses. The provision of quality entrepreneurship education to college students is the greatest way to develop entrepreneurial spirits in these students, who will thus have the highest tendency to engage in developing new businesses. Previous studies have demonstrated the significant impact of entrepreneurship education on entrepreneurial intention (Iwu et al., 2019; Li & Wu, 2019).

1.7.2. Entrepreneurial Intention

The intention is usually regarded as the best predictor of planned behavior, especially behaviors that are not easily observed. Planned behaviors can be predicted by the intention to engage in a specific behavior. Entrepreneurial activities are representative of planned behaviors. Entrepreneurial intention is usually defined as one's desire to start one's own business. Individuals with high entrepreneurial intentions may finally decide to create a new venture (Meoli A et al., (2020). The determinants of entrepreneurial intention have attracted much attention from researchers. Researchers began to investigate the role of demographic variables. For example, gender is regarded as an important determinant. Entrepreneurs are perceived to have predominantly masculine characteristics; males have higher entrepreneurial intentions than females.

Entrepreneurial family background refers to those people whose close family members are involved in entrepreneurship, which will influence the children's entrepreneurial career choices. Students with an entrepreneurial family background have higher entrepreneurial intentions than those without such a background (Georgescu M. A., Herman E. (2020), Palmer C. et al., (2021). Personality factors, such as risk propensity and innovativeness, play important roles in the emergence of entrepreneurs. Recent studies argue that entrepreneurs are not born to be entrepreneurs, and individuals can be entrepreneurs through learning. Entrepreneurship education is an activity that improves students' entrepreneurial knowledge and skills and then finally enhances entrepreneurial intention.

However, existing research on the effect of entrepreneurship education on entrepreneurial intention has not achieved a consistent finding (Lyons E, Zhang L. (2018). Many researchers suggest that entrepreneurial education has a significantly positive impact on entrepreneurial intention [(Lyons E, Zhang L. (2018). Hou F et al. (2022), while some studies find no effects on entrepreneurial intention. Other studies have also shown that the relationship is significantly negative. To conciliate the contradiction, some scholars believe that the specific nature of entrepreneur courses may lead to different conclusions. For example, Piperopoulos and Dimov find that the relationship between self-efficacy beliefs and intention is negative in theoretically oriented courses and positive in practically oriented courses. Other authors argue that entrepreneurship education enhances entrepreneurial intention in the aspects of initiation, development, and active support.

The initiation of entrepreneurship education creates a creative atmosphere to develop ideas for new businesses, stimulates the entrepreneur's psychological emotions and motivations, and then further enhances an individual's entrepreneurial intention. In terms of the development of entrepreneurship education, entrepreneurship courses provide students with knowledge and skills. Integration and accumulation of new knowledge are conducive to opportunity recognition and then enhance the perception of opportunities to promote the emergence of entrepreneurial behavior. In terms of active support, entrepreneurship education may provide technical and financial resources. Perceived resource availability is an important factor of perceived feasibility, which in turn promotes entrepreneurial intention.

1.7.3. Entrepreneurial Mindset

The research on entrepreneurial mindset (EM) has gained significant attention due to its assumed impact on entrepreneurial behavior. EM is conceptualized as a combination of dispositional beliefs and opportunity beliefs. Dispositional beliefs refer to an individual's personal characteristics, such as self-efficacy and locus of control, which influence their entrepreneurial behavior. Opportunity beliefs pertain to an individual's perception of the feasibility and desirability of entrepreneurial opportunities, which also impact their entrepreneurial behavior. The paper highlights the importance of understanding EM and its components in order to better comprehend and predict entrepreneurial behavior (Pidduck, R. J. et al.,2023).

The entrepreneurial mindset - defined as the ability and willingness to sense, act, and mobilize, responding to a judgmental decision under uncertainty - has recently been embraced by both academia and practice as a useful concept capturing individuals' 'entrepreneurialness'. Yet, research still leaves room for understanding the entrepreneurial mindset completely and comprehensively (What is it? What does it entail? How and when does it work?). Moreover, research still seems to lack a way to meaningfully contextualize the entrepreneurial mindset, particularly within organizations. The latter is often described as corporate entrepreneurship (i.e., entrepreneurship within an organizational context) Hattenberg, D. (2022).

Hözlner, H., & Halberstadt, J. (2022) discussed the significance, antecedents, and elements of an entrepreneurial mindset, emphasizing its relevance in education and society. It explores the use of challenge-based learning (CBL) as a method to promote the development of an entrepreneurial mindset in higher education. The authors share their experiences with CBL and highlight its benefits in fostering an entrepreneurial mindset. The paper aims to show that CBL can lead to innovative formats and can be integrated into traditional educational settings, even in courses unrelated to entrepreneurship. It argues that fostering an entrepreneurial mindset is crucial for harnessing the opportunities of technological development and creating positive societal change. The authors suggest that CBL should be used more widely in education, not just in entrepreneurship education, due to its numerous advantages.

Integrating evidence-based decision-making into the engineering and technology classroom using Microsoft Power BI Desktop can help develop an entrepreneurial mindset among students. This approach can improve students' critical thinking skills and their ability to analyze and solve complex problems. By using freely available tools like Microsoft Power BI Desktop, educational institutions can provide students with practical experience in working with data and making evidence-based decisions. The findings of the study highlight the importance of addressing challenges related to time management and project requirements understanding to support student success. Educators can use the lessons learned from this study to design curricula and provide resources that promote the development of coping habits and stress management skills among students. The study also emphasizes the need to incorporate evidence-based decision-making into educational efforts related to data science, given the increasing focus on big data in the engineering and computer science fields (Bosman L.et al.,2022, October).

The entrepreneurial mindset is a poorly defined concept, often based on older theories that may be outdated or inconsistent with current theories and assumptions in the field of psychology. It presents a framework for analyzing the utility of entrepreneurial mindset attributes and provides both conceptual and empirical ties between the entrepreneurial mindset construct and attitude theory. Influencing the entrepreneurial mindset is explored using experiential education and engaged learning. It also discusses two examples of engaged entrepreneurship education and relates them to the elements of engaged learning. Also highlights three defining activities unique to entrepreneurship: identification, evaluation, and execution, which transform entrepreneurship from a knowledge base or skill set to a process. The paper emphasizes the importance of having practice-oriented instructors capable of blending practice with theory and frequent exposure to reputable practitioner guests in developing an entrepreneurial mindset. The paper suggests that the entrepreneurial mindset can be influenced through education, formal or informal, and experience Gough, V. (2020).

1.7.4. Entrepreneurial Motivation

Entrepreneurial motivation is an internal drive that encourages individuals to pursue entrepreneurial opportunities and develop new businesses. It is influenced by factors such as the need for achievement, autonomy, affiliation, power, subjective norms, attitude toward becoming an entrepreneur, perceived behavioral control, financial motive, creativity, and risk-taking (McCartan, A. et al., 2023; Saputra W. et al., 2023). Entrepreneurial motivation is important for individuals who want to enter the world of entrepreneurship and succeed in a competitive environment (Al Deir, C. et al., 2023). It is also associated with positive business outcomes, including business survival, earnings, job creation, innovation, and expansion activities (Caliendo et al., 2023). Additionally, entrepreneurial motivation is influenced by factors such as income expectations, entrepreneurial knowledge, personal independence, family environment, and creativity (Chong, D., 2022). Overall, understanding and fostering entrepreneurial motivation is crucial for individuals and organizations seeking entrepreneurial success.

Motivation is an intrinsic stimulus that drives an individual's ability to achieve a desired outcome. Researchers in human psychology have argued that motivated individuals aim to learn new ideas and explore hidden opportunities in the market (Faghih et al., 2021). The initiative to start an entirely new business requires prior knowledge and information. Individuals need to learn the appropriate techniques and explore new opportunities that will provide an advantage in starting their businesses. Those who are passionate and motivated to create independent businesses are likely to learn about market conditions, and institutes can play a vital role in providing entrepreneurial education to individuals who are willing to dedicate their time to an independent lifestyle (Thomassen et al., 2019).

However, learning initiatives are often associated with individual preferences and choices (Mahto and McDowell, 2018). Educational institutes, despite their immense efforts, cannot involve individuals in entrepreneurial learning activities who are not motivated or willing to launch local businesses (Tarigan et al., 2022). Moreover, individuals who are motivated and courageous enough to take risks in building such businesses need knowledge and learning platforms to enhance their entrepreneurial skills (Kah et al., 2022).

Therefore, EM is extremely important because it drives individuals to acquire EE and develop positive EI to launch independent businesses. These factors motivate individuals to strive for an independent entrepreneurial set-up so that they can enjoy freedom of expression and independent wealth creation. Entrepreneurs are recognized for their perseverance and dedication to highly creative ideas, complex timings, and success (Barba-Sanchez and Atienza-Sahuquillo, 2018).

This high level of task achievement motivation plays an important role in building individuals' positive EI (Hassan et al., 2021a). Entrepreneurs encourage dedicated people to commit to a project and strive for success because they can persuade others with their ideas and inventions. EM is undoubtedly a significant component in maintaining energy, and it is reasonable to argue that the motivation to develop business start-ups is critical to their success. Therefore, we concluded that EM is the primary factor motivating a person to acquire information about entrepreneurship (EE) and increase their EI (Faghih et al., 2021). Motivated entrepreneurs can better understand and retain their passion for establishing a business and encourage people to buy into their concept.

1.7.5. Entrepreneurial Self-Efficacy

Entrepreneurial self-efficacy refers to an individual's belief in their ability to successfully engage in entrepreneurial activities. It is influenced by various factors such as personal experience, role models, social persuasion, and psychological and emotional conditions (Deliana, M., 2023). Research has shown that entrepreneurial self-efficacy has a positive impact on entrepreneurial intention, which is a person's desire and motivation to start a business van Hugten, J. et al., 2023). Additionally, the relationship between entrepreneurial self-efficacy and entrepreneurial orientation, which is the willingness to take risks and innovate, has been explored (Taneja M. et al., 2023). It has been found that entrepreneurial self-efficacy positively affects entrepreneurial orientation, and this relationship can be strengthened by factors such as top management team collective efficacy and CEO-TMT interface (Peng, X., et al., 2023). Furthermore, entrepreneurial self-efficacy has been identified as a predictor of entrepreneurial intention among vocational college students, along with personality traits such as openness to experience, conscientiousness, agreeableness, and extraversion (Juhari, H. S. et al., 2023).

Self-efficacy was first proposed by Bandura in 1977. He believed that self-efficacy is an individual's self-assessment and judgment for the completion of a certain behavior. Self-efficacy was then introduced into the entrepreneurship field. Entrepreneurial self-efficacy (ESE) refers to the belief that individuals believe they can successfully perform various entrepreneurial roles and accomplish

various entrepreneurial tasks. Simply stated, individuals with high self-efficacy for a certain entrepreneurial task are more likely to persist in that task than those individuals who possess low entrepreneurial self-efficacy.

Self-efficacy is defined as the strong individual's personal belief in his or her skills and abilities to undertake, initiate, and complete a task successfully (Bandura, 1977). The perception associated with self-efficacy can be a motivating factor for individuals to exhibit entrepreneurial behavior, which can be influenced by contextual factors like education and past experiences. Education is fundamental to improving students' entrepreneurial self-efficacy, which provides them with the right attitudes, knowledge, and skills to withstand and cope with the challenges and complexities that come with entrepreneurial activities such as opportunity seeking, resource assembling, and providing leadership for businesses to succeed.

The enhancement of college students' entrepreneurial efficacy empowers them to endure longer, persist in the face of challenges, and map up plans and strategies to obtain greater entrepreneurial objectives. Individuals with higher levels of entrepreneurial efficacy have a higher possibility of becoming an entrepreneur. Prior studies have demonstrated that entrepreneurial efficacy has a direct positive and significant impact on entrepreneurial intention (Ahmed et al., 2020; Dheer & Lenartowicz, 2019).

Numerous studies have validated that ESE is significantly positive to entrepreneurial intention. However, recent studies also find that the relationship between ESE and entrepreneurial intention may be weaker or even nonexistent under some circumstances [Hsu DK et al., (2019)]. The general measure of ESE may be the reason for the inconsistent conclusion. Most of the research focuses on the general measure of ESE, which somehow impedes further development and effective application of the construct. In other words, a general measure of ESE fails to provide insight into what specific areas of ESE are most influential to EI.

It was argued that task-specific types of ESE may influence the ESE-EI relationship. Self-efficacy, as first conceptualized by Bandura, is a task-specific construct, and it is best assessed by assessing specific tasks and behaviors. The more task-specific the measure of ESE, the better predictive role efficacy will play in task-specific outcomes (McGee JE, Peterson M. (2019)). According to the types of tasks, ESE as opportunity-identification self-efficacy, relationship self-efficacy, managerial self-efficacy, and tolerance self-efficacy, and further explore their individual and unequal impact on entrepreneurial intention and nascent behavior. A study conducted in 2003 by Mueller and Goic adopted a four-phase venture creation process model originally proposed by Stevenson, Roberts, and Grousbeck in 1985 and constructed a separate measure of entrepreneurial self-efficacy for specific tasks associated with each of the four phases of the process, namely searching, planning, marshaling, and implementing. They empirically confirmed the construct's multi-dimensional nature and reported that an individual's level of entrepreneurial self-efficacy varied by phase. Based on the former study by McGee in 2009, the implementing phase is implemented with people and implementing with the finance phase. The searching phase refers to opportunity identification. The planning phase refers to converting opportunities into a visible business plan. The marshaling phase refers to assembling resources to create a new business. The implementation phase refers to managing business related to people and finance. ESE in these phrases means individuals have confidence in these tasks that come later in the new venture creation process, such as planning, marshaling of resources, implementing, and then creating a new venture.

Entrepreneurship education can improve ESE. It was argued that the EE-ESE relationship can apply to ESE in specific phrases. In the Planning phase, ideas and actions will be converted into a viable business plan. In addition to providing entrepreneurial knowledge and skills needed for the traditional role of entrepreneurship education, entrepreneurial awareness, motivation, and ideas will be inspired in this early starting phase to develop entrepreneurial self-efficacy further. In the searching phase, entrepreneurs will form ideas and discover unique opportunities. Entrepreneurship education helps entrepreneurs with related knowledge to develop new products, provide specific services, and learn the opportunities produced in entrepreneurship; individuals who receive entrepreneurship education will balance linear and nonlinear thinking modes and form thinking modes with the use of data based on evidence. It helps improve creative thinking ability, enhances the ability to explore and identify business opportunities, and finally improves entrepreneurial self-efficacy.

In the marshaling phase, entrepreneurs will have access to capital, labor, consumers, and suppliers to realize ideas. Entrepreneurship education not only provides individuals with experience and knowledge but also significantly improves risk assessment and identification, resource utilization, value creation, and relational network skills and provides a supportive environment for individual entrepreneurship. In the implementing phase related to people, an excellent entrepreneur should deal with the relationship with supply customers, employees, and providers of capital. The growth of enterprises requires entrepreneurs to have the ability to solve problems efficiently and quickly. Human capital in the field of entrepreneurship needs to provide specific

products and services and solve consumer problems. Entrepreneurship education needs to promote the formation of human capital in this field. Concerning the implementing phase related to finance, entrepreneurs are the main risk bearers of new ventures with financial pressure for the long-term growth and success of enterprises. It was believed that entrepreneurship education provides individuals with social network resources in specific technical areas, such as financial management and one-to-one support.

1.8 Synthesis

All the authors recognize the significance of the entrepreneurial mindset and its impact on entrepreneurial behavior and education. They emphasize the need to understand and promote this mindset. The authors underscore the importance of incorporating the entrepreneurial mindset in education. They suggest that promoting an entrepreneurial mindset is crucial for harnessing opportunities and creating positive societal change. The authors highlight the practical applications of developing an entrepreneurial mindset, such as challenge-based learning and evidence-based decision-making, as tools to foster this mindset among students. They discuss the role of experiential education and engaged learning in influencing the entrepreneurial mindset. They emphasize that practice-oriented instructors and exposure to real-world practitioners are valuable for developing this mindset.

Pidduck et al. (2023) focus on the two main components of EM: dispositional beliefs and opportunity beliefs, while Hattenberg (2022) and Hölzner & Halberstadt (2022) provide a broader perspective without explicitly dividing it into these components. Hattenberg (2022) specifically addresses the entrepreneurial mindset within organizations, referring to it as corporate entrepreneurship. In contrast, Pidduck et al. (2023) and Hölzner & Halberstadt (2022) concentrate on the relevance of the entrepreneurial mindset in education and society in general. Hölzner & Halberstadt (2022) propose the use of challenge-based learning (CBL) to develop the entrepreneurial mindset, while Bosman et al. (2022) suggest integrating evidence-based decision-making into the engineering and technology classroom. Pidduck et al. (2023) and Gough (2020) do not specify a particular methodology. Gough (2020) delves into the utility of entrepreneurial mindset attributes and their ties to attitude theory, providing a more theoretical perspective. In contrast, the other authors offer more practical approaches and examples.

Entrepreneurship education, entrepreneurial intention, motivation, and self-efficacy are central to the growth and success of businesses. Multiple studies have explored the relationships between these concepts. Drawing on the works of Ahmad et al. (2018), Ahmed et al. (2020), Dheer and Lenartowicz (2019), Hsu et al. (2019), and McGee and Peterson (2019), This synthesis evaluates their similarities and dissimilarities concerning entrepreneurial education, intention, motivation, and self-efficacy. By comparing and contrasting the perspectives of these authors, this aims to expand the understanding of these concepts and identify potential avenues for further research in entrepreneurship education and the development of entrepreneurial intentions.

All the authors define entrepreneurial motivation as an internal drive that encourages individuals to engage in entrepreneurship and establish new businesses. This common understanding underlines the fundamental importance of motivation in the entrepreneurial context. Each set of authors identifies various factors that influence entrepreneurial motivation. These factors include the need for achievement, autonomy, affiliation, power, subjective norms, attitude toward entrepreneurship, perceived behavioral control, financial motives, creativity, and risk-taking. This demonstrates a consensus on the multifaceted nature of motivation. Business Outcomes: The authors collectively recognize that entrepreneurial motivation is linked to positive business outcomes, such as business survival, earnings, job creation, innovation, and expansion activities. This aligns with their shared belief in the positive impact of motivation on entrepreneurial success.

While McCartan et al., Saputra et al., Al Deir et al., Caliendo et al., and Chong are all cited, their specific contributions and perspectives may differ. Although the authors all identify influencing factors, they may differ in the emphasis they place on specific factors or the contexts in which they apply. For instance, some authors may explore the role of financial motives, while others may focus on family environment or personal independence. The cited references span various publication years, which may reflect evolving perspectives and research on entrepreneurial motivation over time. It's essential to consider the context and research trends when interpreting their findings.

The authors share a common understanding of entrepreneurial self-efficacy as an individual's belief in their capacity to engage successfully in entrepreneurial activities. This shared definition underscores the fundamental importance of self-efficacy in entrepreneurship. The authors collectively acknowledge that entrepreneurial self-efficacy has a positive impact on entrepreneurial intention. This consensus highlights the role of self-efficacy in motivating individuals to pursue entrepreneurial endeavors. They

also concur on the relationship between entrepreneurial self-efficacy and entrepreneurial orientation. Specifically, they all recognize that higher self-efficacy positively influences an individual's willingness to take risks and innovate, which are key components of entrepreneurial orientation.

While the authors generally agree that entrepreneurial self-efficacy is influenced by factors such as personal experience, role models, social persuasion, and psychological and emotional conditions, they may differ in the emphasis placed on particular factors. Each author may provide unique insights into the relative importance of these influencing factors. The cited references encompass various research contexts, methodologies, and findings. The nuances of their research outcomes and the specific populations studied may vary, offering a diverse perspective on the relationship between self-efficacy, intention, and orientation. Some authors, such as Peng, X. et al., introduce additional elements like top management team collective efficacy and CEO-TMT interface, which can further influence the relationship between self-efficacy and entrepreneurial orientation. These additional factors provide a deeper understanding of the complex interplay involved.

The authors agree that entrepreneurial education positively affects entrepreneurial intention (Ahmad et al., 2018; Hsu et al., 2019). Both self-efficacy and motivation are identified by the authors as important factors in shaping entrepreneurial intention (Ahmed et al., 2020; Dheer and Lenartowicz, 2019; McGee and Peterson, 2019). The authors have utilized the Likert scale as a research tool to measure self-efficacy, motivation, and entrepreneurial intention (Hsu et al., 2019; McGee and Peterson, 2019). All authors aim to contribute to the existing literature on entrepreneurship and offer insights into effective approaches to enhancing entrepreneurial education (Ahmad et al., 2018; Ahmed et al., 2020; Dheer and Lenartowicz, 2019; Hsu et al., 2019; McGee and Peterson, 2019).

However, the authors have different definitions of entrepreneurship, entrepreneurial education, and entrepreneurial intention (Ahmed et al., 2020; Hsu et al., 2019; McGee and Peterson, 2019). The authors use different theoretical frameworks, approaches, methods, and sample sizes to study the relationship between different factors and entrepreneurial intention (Ahmad et al., 2018; Ahmed et al., 2020; Dheer and Lenartowicz, 2019; Hsu et al., 2019). The authors hold varying opinions on the most effective approaches to entrepreneurship education, with some advocating for practical and experiential learning, while others emphasize the role of formal education in developing entrepreneurial skills (Ahmad et al., 2018; Ahmed et al., 2020; Dheer and Lenartowicz, 2019; Hsu et al., 2019). The authors use different factors and tools to measure self-efficacy, motivation, and entrepreneurial intention. For example, some authors measure self-efficacy using tools such as the Self-efficacy Scale (SES), while others rely on proxy measures such as academic performance (Ahmed et al., 2020; Dheer and Lenartowicz, 2019; Hsu et al., 2019; McGee and Peterson, 2019).

Overall, these similarities and differences among the authors and their findings highlight the need for a broader perspective on entrepreneurship research and suggest that multiple factors influence entrepreneurial behavior in different contexts and situations.

1.9 Theoretical Framework

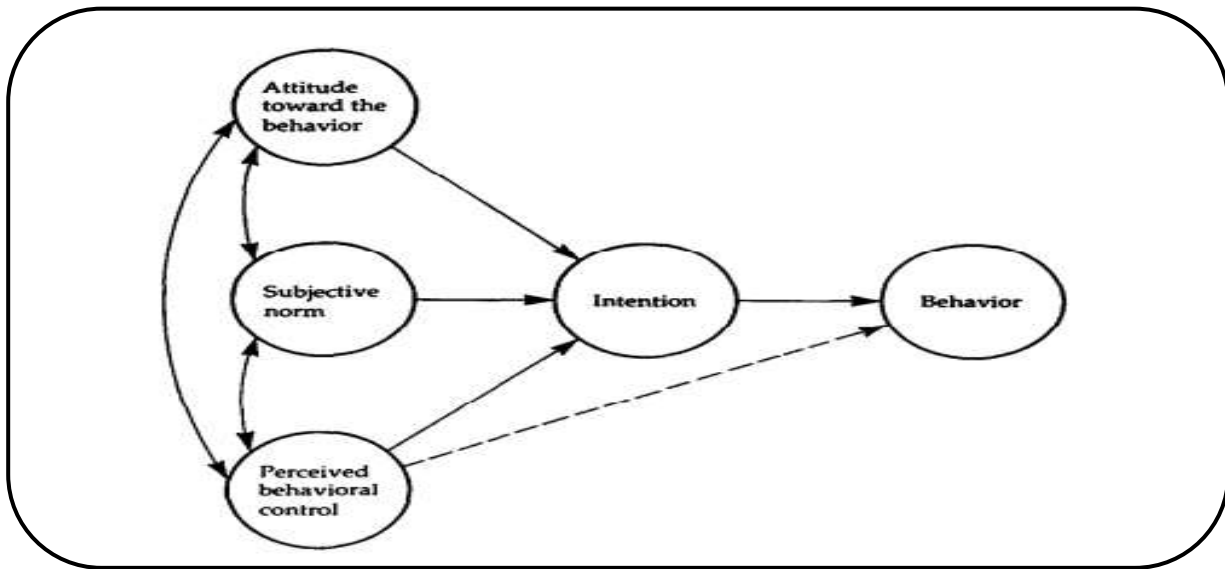
According to the theory of planned behavior by Ajzen in 1991, behaviors are influenced by intentions, which are determined by three factors: attitudes, subjective norms, and perceived behavioral control. The Theory of Planned Behavior (TPB) refers to the process of defining and measuring the key components of the theory, namely, attitude, subjective norms, and perceived behavioral control. The Theory of Planned Behavior (TPB) is an expectancy-value theory that provides a framework for the study of behavioral and normative beliefs affecting health behaviors. It is also possible for external factors to directly force or prevent behaviors, regardless of the intention, depending on the degree to which a behavior is controlled by the individual and the degree to which perceived behavioral control is an accurate measure of actual behavioral control. This relationship is shown with a dashed line in Figure 1.

Taking the example of adopting evidence-based instructional practices (EBIPs) as the desired behavior, we can define the factors as follows. Attitudes toward teaching and learning generally, and toward the use of EBIPs specifically, are both relevant in this context. Subjective norms can be considered social pressures and include both the perceived expectations of others and how much the individual values those expectations. Students, colleagues, and administrators all have expectations about how STEM faculty teach, so there are relevant subjective norms for all three groups. Perceived behavioral control is how an individual feels about performing a specific behavior in their context. Thus, it includes both self-efficacy with the use of EBIPs and external factors such as classroom environments, time, and resources. The more favorable the three factors are, the more likely the intention and action

are to occur. Ajzen presents some data that support the claim that intention is more predictive of behavior than attitudes alone in Chapter 6 of his book in 2005.

The Theory of Planned Behavior assumes that individuals act rationally, according to their attitudes, subjective norms, and perceived behavioral control. These factors are not necessarily actively or consciously considered during decision-making but form the backdrop for the decision-making process. In other words, people may not articulate a particular attitude, but it may nonetheless influence their decision-making. Research in this area aims to uncover these hidden values and ideas that influence decision-making. There is some controversy about the assumption of rationality because sometimes humans act emotionally, not rationally. Rather than saying humans behave rationally, some researchers call this "sense-making."

Figure 1: Theory of Planned Behavior



Source: Ajzen, I. (1991)

1.10 Conceptual Framework

The present study is grounded in the Theory of Planned Behavior (TPB), which serves as the foundational framework for the investigation of entrepreneurial intention (EI). TPB is characterized by three key conceptual elements: attitudes, perception of social norms, and perceived behavioral control. Within this framework, the impact of social norms on individual behavior is influenced by the prevailing social environment. An individual's intention to engage in a specific behavior is determined by factors such as their level of effort, planning, and inherent desire to act. Perceived behavioral control, as defined within TPB, represents an individual's perception of the ease or difficulty associated with performing a relevant behavior.

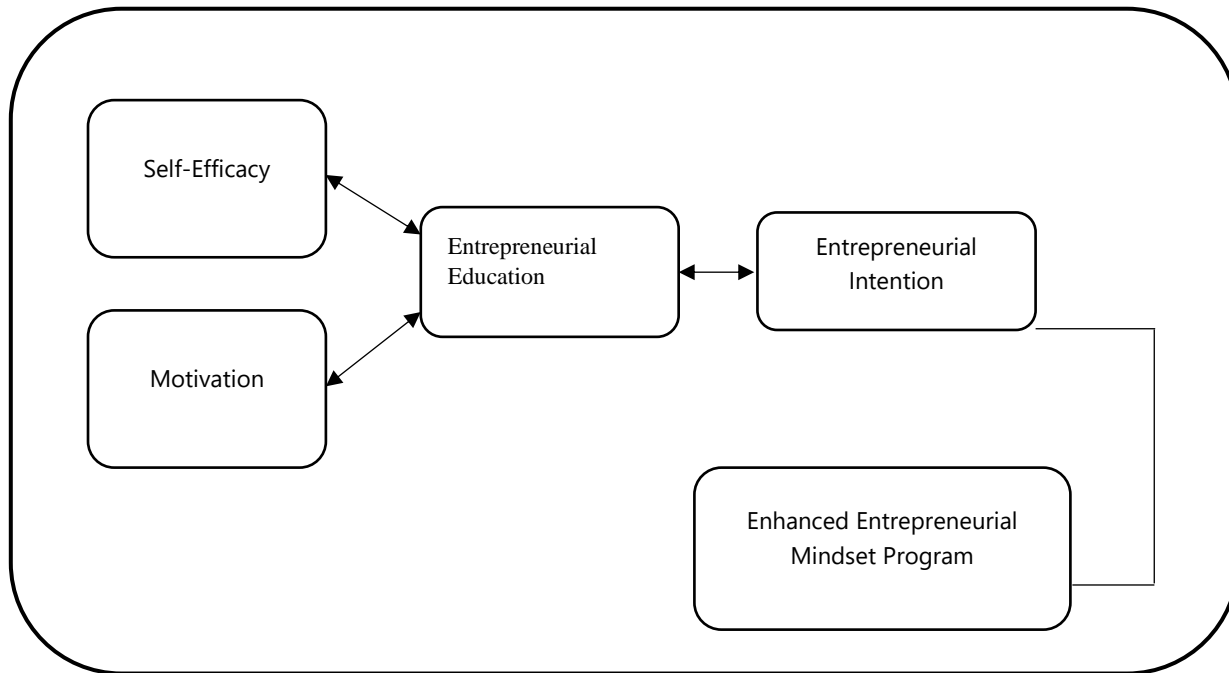
In addition to the TPB, the conceptual framework presented in this document suggests that the development of entrepreneurial intention (EI) is influenced by a multifaceted set of factors. These factors include self-efficacy, motivation, entrepreneurial education, entrepreneurial experience, and the enhancement of the entrepreneurial mindset. Self-efficacy, a core component, pertains to an individual's belief in their capacity to execute the requisite behaviors for entrepreneurship. Motivation, another vital element, plays a pivotal role in driving entrepreneurial intention. Entrepreneurship education is recognized for its potential to elevate both self-efficacy and motivation, thereby positively impacting entrepreneurial intention. Furthermore, effective entrepreneurial experience is contingent on self-efficacy and significantly contributes to a more profound comprehension of EI phenomena.

Moreover, the conceptual framework acknowledges the paramount importance of enhancing the entrepreneurial mindset, which is intricately linked to entrepreneurial intention. The entrepreneurial mindset embodies a unique way of thinking, approaching challenges, and embracing opportunities characteristic of individuals with entrepreneurial aspirations. The development and

cultivation of this entrepreneurial mindset are seen as integral components of the overall process, further reinforcing the multifaceted nature of factors contributing to the development of entrepreneurial intention.

In summary, this conceptual framework posits that self-efficacy, motivation, entrepreneurial education, entrepreneurial experience, and the cultivation of an entrepreneurial mindset collectively constitute the influential factors that contribute to the formation and enhancement of entrepreneurial intention among individuals.

Figure 2: Conceptual Framework



Author's Conceptual

2. Methods

This chapter provides a comprehensive examination of the methodologies that will be used in the investigation, including the research methodology, data collection techniques, sampling methodologies, and data analysis approaches. Additionally, it succinctly outlines the justification for the appropriateness of these methodologies in addressing the research questions and examining the study's hypotheses.

2.1. Research Design

The research design presents a quantitative descriptive study that seeks to examine the role of factors in determining entrepreneurial education and enhancing the entrepreneurial intention of engineering students in the Guangdong Industry and Trade Vocational School, China. The study will employ purposive and convenience sampling methods to identify younger individuals who demonstrate a strong desire to become future entrepreneurs. The study will collect numerical information on self-confidence, drive, business education, and business intention through the implementation of structured surveys and questionnaires. The study will primarily focus on students enrolled at Guangdong Industry and Trade Vocational School in China. Quantitative data will not be subjected to statistical analysis utilizing descriptive and inferential techniques, thereby elucidating patterns and relationships.

2.2 .Data Management

Data management is crucial in any research study, especially one that involves quantitative analysis. The study of students enrolled at Guangdong Industry and Trade Vocational School, China, and data management will play a significant role in ensuring the

accuracy and reliability of the results. In this study, it will involve several steps to ensure the accuracy and integrity of the collected data. These steps may include designing a data collection template, setting up a data collection system, ensuring data security and privacy, cleaning and organizing the data, and performing quality checks to identify and address any data inconsistencies or errors. The study will use statistics to perform data analysis, enabling the researchers to identify relationships, patterns, and statistics that can provide insights into the students' perspectives. Data management will also facilitate the interpretation of the study's findings to stakeholders.

2.3. Sampling Design

2.3.1. Sampling Population

The sample population for this quantitative study will consist of engineering students enrolled at the Guangdong Industry and Trade Vocational School in China. The study aims to collect data on their perspective on their entrepreneurial intention. Participants will be selected through a purposive and convenience method, and data will be collected through a survey. The study will also ensure the privacy and confidentiality of participants by securing their personal information and keeping them anonymous. The findings of this study will offer valuable insights to engineering students enrolled at the Guangdong Industry and Trade Vocational School in China.

The researcher will be using Raosoft to determine the minimum sample size required for this study. The results based on multiple linear regression with 3 independent and dependent predictors, self-efficacy, motivation, entrepreneurial education, and entrepreneurial intention, respectively, indicate that this study needs a minimum sample size of 218.

2.3.2. Respondents

The respondents for this study will be selected through a combination of purposive and convenience sampling approaches. These sampling techniques were chosen to ensure that the sample aligns with the specific research objectives and to maximize accessibility to potential participants. The study will employ purposive sampling, a non-probability sampling technique, to identify and select respondents who possess specific characteristics necessary for the research objectives. In this case, respondents will be chosen "on purpose" because they have attributes crucial to the study, such as a family business background. This approach allows for the targeted exploration of the intersection of engineering education and family business legacies. Convenience sampling, another non-probability technique, will be utilized to facilitate the accessibility of participants. This approach involves selecting respondents based on their ease of access and availability. Engineering students from Guangdong Industry and Trade Vocational School will be chosen for the study because they are readily available to the researcher and can provide valuable insights into the subject matter. The selection of respondents will be carried out in a manner that promotes diversity to capture a broad range of perspectives. This diversity will encompass various dimensions, including Age. The sample will encompass a spectrum of age groups, reflecting the different stages of the engineering education journey, from younger students to more mature learners. Gender: The study will seek a balanced representation of both male and female engineering students to explore potential gender-related variations in experiences and aspirations. Family Business Background: A significant portion of the respondents will have family business backgrounds, allowing for an in-depth examination of the interplay between family business legacies and engineering education. Types/Nature of Business: The family businesses represented in the sample will span a variety of industry sectors, encompassing both traditional manufacturing and service-oriented enterprises. Ownership: Respondents will come from family businesses with varying ownership structures, including shared ownership among family members and more concentrated ownership by an individual family member. These distinctions are pivotal in understanding their influence on students' experiences and career outlook. This comprehensive approach to respondent selection aims to ensure that the study captures a rich and diverse set of experiences and perspectives among engineering students at Guangdong Industry and Trade Vocational School. It enables a holistic exploration of the research objectives while providing valuable insights into the complexities of the intersection between engineering education and family business backgrounds.

2.3.3. Research Instrument

The research instrument used in this study will be a structured questionnaire that includes 20 items adapted from previous reviews on self-efficacy, motivation, entrepreneurial education, and entrepreneurial intention. The questionnaire was structured into four parts. The first part contained questions that aimed to gather information about the respondents' demographic profiles. The second part contained questions about the level of agreement among younger generation respondents toward educational education on entrepreneurial self-efficacy and entrepreneurial motivation. The third part contained questions about the level of agreement among the younger generation respondents regarding entrepreneurial education and, lastly, the level of agreement

among the younger generation respondents regarding entrepreneurial intention. The questionnaire consisted of questions designed on a 4-point Likert scale, which ranged from "Strongly Agree" to "Strongly Disagree," each with distinct verbal interpretations. The respondents for the questionnaire were drawn from a sample of 218 students who are currently enrolled at Guangdong Industry and Trade Vocational School. The questionnaire's validity and reliability were established through pretesting and piloting. The data collected from the respondents' questionnaire responses were subjected to analysis using descriptive statistics and other analytical methods.

2.3.4. Control Procedure

To maintain control in the study, measures will be implemented to ensure consistency and minimize potential biases. These measures may include providing clear instructions to respondents, conducting pilot testing of the questionnaire, implementing standardized data collection procedures, and monitoring the data collection process to identify and address any deviations from the established protocol. To test the content validity and language comprehensibility of the questionnaire, the researcher personally distributed a pre-test questionnaire to answer the questions. The preliminary designed questionnaire is in Appendix A.

2.4. Statistical Treatment

The collected data will be analyzed using IBM SPSS Statistics to derive meaningful insights and draw conclusions. The specific statistical treatments will depend on the research questions and objectives of the study. The researcher used Cronbach's alpha to assess the internal consistency or reliability of a set of survey items or questionnaires. It quantifies how closely related a set of items are as a group. The researcher will use Cronbach's alpha to ensure that the survey items used in the study are consistent and reliable in measuring the underlying constructs or variables (e.g., self-efficacy, motivation, entrepreneurial education, and entrepreneurial intention).

An alpha coefficient of 0.7 or above is often considered acceptable, indicating good internal consistency. If the alpha coefficient falls below this threshold, it suggests that some survey items may not be contributing reliably to the measurement of the construct, and these items may need to be revised or removed.

Descriptive statistics provide a summary of the main characteristics of the dataset and are essential for gaining a preliminary understanding of the data, identifying patterns, and exploring the central tendencies and variabilities within the variables. Multiple linear regression is a statistical technique used to examine the relationship between one dependent variable and two or more independent variables. In this context, multiple linear regression will be used to assess how the independent variables (e.g., self-efficacy, motivation, entrepreneurial education) collectively impact the dependent variable (entrepreneurial intention). Pearson correlation analysis is a statistical method used to measure the strength and direction of the linear relationship between two continuous variables. In this study, Pearson correlation will be applied to assess the pairwise relationships between variables. For instance, it can help determine the extent to which self-efficacy and motivation are correlated with entrepreneurial intention. The correlation coefficient can range from -1 (perfect negative correlation) to 1 (perfect positive correlation), with 0 indicating no linear correlation.

The application of these statistical treatments helps interpret the quantitative results. The results will be used to draw meaningful insights, make conclusions about the relationships between variables, and address the research objectives of the study.

2.5. Ethical Consideration

Throughout the entire duration of the study, the researcher will uphold the rights of all participants and adhere to the relevant requirements set forth by the UERC. The highest ethical standards will always be maintained to ensure the protection and well-being of all individuals involved in the study.

Conflict of interest. This study is for academic purposes only and has no commercial purpose. The researcher is not sponsored by any organization or individual, and the researcher has no financial interest in the subjects or participants of the study.

Privacy and Confidentiality. The researcher distributed paper questionnaires on the spot for the target respondents to fill in, and then the researcher collected the paper questionnaires. The data collected on the questionnaire were personally entered by the researcher and saved to an encrypted personal computer. These data would only be used for academic research. Once the research is completed, the researcher will permanently delete the data, and the collected paper questionnaires will also be destroyed through a shredder to prevent the disclosure of respondent information.

Informed Consent Process. Before the questionnaire was given, the researcher briefly informed the respondent of the main research purpose and school. The questionnaire would be completed voluntarily by the respondents and did not contain any information unrelated to the survey, such as the name of the respondent. At the same time, the researcher also expressed respect and gratitude to those who did not participate.

Vulnerability. The survey was used to obtain consumer opinions and did not have any inductive activities; however, to protect vulnerable groups, this study excluded them as respondents.

Recruitment. The study relies on data from students enrolled in Guangdong Industry and Trade Vocational School. These students have different profiles and entrepreneurial intentions.

Assent. The data collection for this study did not involve the opinions of minors.

Risk. The collection and collation of the data were handled by the researcher himself, respecting the participants' answers, not tampering with any information, and not involving any conflicts of interest. Therefore, there is no foreseeable risk.

Benefits. The participation of the respondents is of greatest help to the researcher's academics. To prevent participants from feeling threatened, the researcher expressed gratitude and promised to keep the information confidential and not disclose the original data.

Incentives or compensation. The researcher expressed sincere gratitude to the participants without giving the participants financial incentives or any compensation.

Community Considerations. This study did not cause any problems or negative effects on participants and communities.

3. Results

This section delineates the methodology employed by the researcher for data collection and processing after receiving the initial approval certificate from UERC. The analytical techniques utilized encompass weighted mean calculation, Pearson's correlation coefficient analysis, and multiple linear regression analysis.

Table 1.1 *Perspective on the level of agreement among younger generation respondents toward Entrepreneurial Self-Efficacy*

Entrepreneurial Self-Efficacy	Mean	Description	Interpretation
I believe that I have the necessary skills and abilities to perform different entrepreneurial tasks.	2.16	Disagree	Not Confident
I am confident in my ability to identify and evaluate potential business opportunities	2.24	Disagree	Not Confident
I am confident in my ability to make strategic business decisions.	2.22	Disagree	Not Confident
I am confident in my ability to assemble the necessary resources to start a business.	2.30	Agree	Confident
I am confident in my ability to lead, manage, and motivate others in the workplace.	2.10	Disagree	Not Confident
Entrepreneurial Self-Efficacy Weighted Mean	2.20	Disagree	Not Confident

Table 1.1 indicates that most respondents do not feel confident in their skills and abilities related to performing entrepreneurial tasks (mean: 2.16). This lack of confidence may stem from factors such as insufficient training, limited experience, or low self-perceived competence. Most respondents also lack confidence in their ability to identify and evaluate potential business opportunities (mean: 2.24). This indicates a potential gap in their knowledge or experience in recognizing viable business prospects. Respondents exhibit a lack of confidence in their ability to make strategic business decisions (mean: 2.22). This highlights a potential need for further education or training in strategic planning and decision-making processes. On a positive note, respondents generally express confidence in their ability to assemble the necessary resources to start a business (mean: 2.30). This suggests a level of comfort or expertise in resource management. However, most respondents lack confidence in their ability to lead, manage, and motivate others in the workplace (mean: 2.10). This underscores an area for improvement in leadership skills among the respondents. Overall, the data indicate a general lack of confidence among respondents in various aspects of entrepreneurial self-efficacy, including skills and abilities, identifying opportunities, making strategic decisions, and leadership (Deliana, M. (2023), Setyawan, N. A., & Wibowo, B. Y. (2023) and (Saputri, S. T. (2022). Addressing these gaps through targeted

education, training, and skill development programs could enhance their entrepreneurial capabilities and confidence levels (Tannady, H. (2023).

Table 1.2 Perspective on the level of agreement among younger generation respondents toward Entrepreneurial Motivation

Entrepreneurial Motivation	Mean	Description	Interpretation
I am highly motivated to achieve my goals and objectives.	2.00	Disagree	Not Motivated
I feel excited and enthusiastic when working towards my goals.	1.81	Disagree	Not Motivated
I am driven to achieve success in my personal and professional life.	1.72	Strongly Disagree	Not Very Motivated
I have a strong desire to excel and do my best in everything I do.	1.75	Strongly Disagree	Not Very Motivated
I am willing to put in extra effort and work hard to achieve my goals.	1.97	Disagree	Not Motivated
Entrepreneurial Motivation Weighted Mean	1.85	Disagree	Not Motivated

Table 1.2 shows that most of the respondents are not highly motivated in achieving their goals and objectives (mean= 2.00). This indicates that the lack of strong motivation on the part of the respondents could affect their interest in pursuing entrepreneurial activities. With this, most respondents do not feel eager and energetic when participating in activities related to their goals (mean = 1.81). Their energy levels might affect how they engage with and dedicate themselves to entrepreneurship. The Research result reveals a strong disagreement with items measuring personal or professional success as an indication of being driven (mean = 1.72). This means that many respondents were not motivated or had any driving force towards anything related to business enterprise. Again, research confirmed that people are less likely to have high expectations for themselves (mean = 1.75). Here, there is low motivation among participants because if students believe in themselves, then they will find the right ways to succeed academically. In general, it is seen that most of the respondents disagreed with statements like "I am willing to go beyond what is expected of me" or "I am always fully prepared". When indicating they do not intend to put any extra effort into reaching their objectives and aims (mean 1.97), this clearly shows that this group's unwillingness can make them fail at developing themselves further as entrepreneurs who can overcome difficulties faced by a new business setup. To sum up, all sets of data demonstrate consistently low motivational levels among participants regarding goal setting, excitement level while working on tasks relevant to one's objectives, striving for achievement, wishing excellence so badly in everything undertaken above average levels, and allowing oneself enough time so as not be overworked which combined constitute very little commitment towards hitting targets. (Mangada, M. E. (2023), (Faghih, N. et al (2021), (Haq, M. B. U. et al (2022), (Marčetić, M., Mušikić, S., & Dević, Ž. (2020). Addressing motivational factors through targeted interventions, coaching, and goal-setting strategies could help improve motivation levels and support entrepreneurial endeavors.

Table 2: Multiple Linear regression results on the relationship between entrepreneurial self-efficacy and entrepreneurial motivation toward entrepreneurial education among the respondents

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	103.783	2	51.892	209.810	.000 ^b
	Residual	53.175	215	.247		
	Total	156.959	217			

a. Dependent Variable: Entrepreneurial Education Weighted Mean

b. Predictors: (Constant), Entrepreneurial Motivation Weighted Mean, Entrepreneurial Self-Efficacy Weighted Mean

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.248	.096		2.572	.011

Entrepreneurial Self-Efficacy Weighted Mean	.303	.056	.302	5.399	.000
Entrepreneurial Motivation Weighted Mean	.604	.059	.572	10.223	.000

a. Dependent Variable: Entrepreneurial Education Weighted Mean

Table 2 shows a multiple regression that was calculated to predict respondents' entrepreneurial education and their self-efficacy and self-motivation. A significant regression equation was found ($F(2,215) = 209.810, p < .001$), with an R^2 of .661. Both self-efficacy and self-motivation were significant predictors. The results indicate that both self-efficacy and self-motivation play important roles in predicting respondents' entrepreneurial education scores. Self-motivation appears to have a stronger influence on entrepreneurial education compared to self-efficacy, as reflected in the standardized coefficients. The significant F-statistic and the high R-squared value suggest that the regression model effectively captures a substantial portion of the variability in entrepreneurial education scores, using self-efficacy and self-motivation as predictors. The multiple regression analysis conducted in various studies indicates that self-efficacy and entrepreneurial motivation significantly predict entrepreneurial interest and intention among students (Aboobaker N. et al. (2023); Abdolrezapour, P. et al. (2023), Sudhakara Babu, S., & Kullai Reddy, L. (2023). Specifically, self-efficacy and entrepreneurial motivation positively influence entrepreneurial interest and intention, with self-motivation showing a relatively stronger impact. These findings highlight the importance of psychological factors like self-efficacy and motivation in shaping students' entrepreneurial aspirations. The research underscores the need to enhance self-efficacy and resilience to boost academic motivation and entrepreneurial intentions, especially in the context of online education and emerging economies. The insights gained from these studies provide valuable information for designing educational programs that effectively cultivate entrepreneurial mindsets and intentions among students.

Table 3.1: *Perspective on the level of agreement among younger generation respondents toward Entrepreneurial Education*

Entrepreneurial Education	Mean	Interpretation
Entrepreneurial education has significantly assisted me in acquiring the skills and knowledge necessary to start and operate a business.	2.09	Disagree
The entrepreneurial education I have received has increased my confidence level substantially in pursuing entrepreneurial opportunities	2.01	Disagree
Entrepreneurial education has been valuable to me in enhancing my understanding of the business environment and dynamics of the market.	1.97	Disagree
Entrepreneurial education is more effective than traditional education in developing successful entrepreneurs.	2.10	Disagree
The entrepreneurial education I have received thus far has had a significant impact on me in cultivating an entrepreneurial mindset and attitude.	2.04	Disagree
Entrepreneurial Education Weighted Mean	2.04	Disagree

For the younger respondents' perspective on entrepreneurial education, Table 3.1 illustrates the findings. The study presents that the learners do not feel that entrepreneurship education is very helpful in equipping them with skills and knowledge critical in business start-up and operation (mean 2.09). This could imply an absence of practical relevance and applicability to real-world business scenarios stemming from gaps in educational content or delivery methods (mean 2.01). Moreover, there seems to be no consensus among the participants concerning whether entrepreneurship education significantly raises their confidence levels about entering new business ventures (mean 2.01); this might call for greater confidence-building activities or mentorship within the curriculum of such programs (mean 2.01). Furthermore, entrepreneurial education is seen to have not played a role in enhancing understanding of business environments and market dynamics by most respondents (mean 1.97). Indeed, with a mean score of 1.97, it seems that current teaching approaches are failing to include important aspects of the business landscape in their syllabuses. Majorities are opposed to entrepreneurial education being more effective than traditional one in producing successful entrepreneurs. This perception could stem from a lack of concrete evidence or visible outcomes demonstrating the superiority of entrepreneurial education, with a mean of 2.10. There is disagreement among respondents regarding the significant impact of

entrepreneurial education on cultivating an entrepreneurial mindset and attitude. This indicates a potential need for more emphasis on mindset development within the educational curriculum, with a mean of 2.04. There is a notable level of disagreement among younger respondents regarding the effectiveness, value, and impact of entrepreneurial education (Ahmad S. et al (2022). This suggests a perceived gap between educational experiences and desired outcomes in terms of skills acquisition, confidence-building, market understanding, and mindset development (Uemura, M., & Vasconcellos, L. (2022), Sitaridis, I. et al. (2020). The weighted mean of 2.04 confirms the overall trend of disagreement among younger generation respondents regarding the effectiveness and impact of entrepreneurial education. This indicates that there are areas where the educational program can be enhanced to better meet the expectations and needs of students interested in entrepreneurship.

Table 3.1.1: *Perspective on the level of agreement among younger generation respondents toward Entrepreneurial Intention*

Entrepreneurial Intention	Mean	Interpretation
I have a strong desire to start my own business soon.	2.09	Disagree
My goal is to become a successful entrepreneur who owns a thriving business.	2.05	Disagree
I see opportunities all around me and I feel confident in my ability to seize them.	2.05	Disagree
I am strongly committed to pursuing entrepreneurship as a viable career path.	1.99	Disagree
I am confident that I have the necessary skills and knowledge to turn my innovative ideas into successful business ventures.	1.75	Disagree
Entrepreneurial Intention Weighted Mean	1.99	Disagree

The results of Table 3.1.1 show the level of agreement among younger generation respondents toward entrepreneurial intention. The respondents generally disagree that they have a strong desire to start their own business soon. This suggests a lack of immediate inclination or urgency towards entrepreneurship among the younger generation, which showed a mean of 2.09. Similarly, respondents disagree that their goal is to become a successful entrepreneur who owns a thriving business. This indicates that entrepreneurship may not be their primary career aspiration at the moment, with a mean of 2.05. Respondents also disagree that they see opportunities all around them and feel confident in their ability to seize them. This indicates a lower level of confidence or awareness of entrepreneurial opportunities in their environment, with a mean of 2.05. There is disagreement among respondents regarding their strong commitment to pursuing entrepreneurship as a viable career path. This suggests that while they may consider entrepreneurship, they may not be fully committed to it as their primary career choice, with a mean of 1.99. Respondents also disagree that they are confident in having the necessary skills and knowledge to turn their innovative ideas into successful business ventures. This highlights a lack of confidence in their entrepreneurial abilities and readiness, with a mean of 1.75. The weighted mean of 1.99 confirms the overall trend of disagreement among younger generation respondents regarding their entrepreneurial intention. This suggests a current lack of strong intent or commitment toward pursuing entrepreneurship as a career path. Overall, the results indicate that the younger generation respondents currently do not exhibit a strong desire, goal, confidence in seizing opportunities, commitment, or confidence in their entrepreneurial abilities (Salavou, H. et al. (2023), Indiani, N. L. P., & Sontong, M. S. (2023). These findings suggest that there may be barriers or factors influencing their entrepreneurial intention, such as a lack of awareness, limited exposure, or perceived challenges in entrepreneurship (Ahmad, S. N. B., & Malik, I. (2023), Martins, J. M. et al. (2023). Addressing these barriers and providing support, education, and exposure to entrepreneurial opportunities could help foster a more positive entrepreneurial intention among the younger generation (Tahir M. et al (2022).

Table 4: *Pearson correlation results on self-efficacy and motivation toward entrepreneurial education among the respondents*

Correlations						
Construct	R*	d.f.	p-value	Strength of Correlation	Interpretation	Null Hypothesis Decision
Entrepreneurial Self-Efficacy - Entrepreneurial Education	.705**	218	.000	High Correlation	Significant	Reject the Null Hypothesis

Entrepreneurial Motivation - Entrepreneurial Education	.784**	218	.000	High Correlation	Significant	Reject the Null Hypothesis
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** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 depicts a Pearson correlation coefficient calculated for the relationship between respondents' Entrepreneurial Self-Efficacy and Entrepreneurial Motivation toward Entrepreneurial Education weight. A strong positive correlation was found ($r(216) = .705, p < .000$) and ($r(216) = .784, p < .000$), indicating a significant linear relationship between the two variables. The significant positive correlations between entrepreneurial education and both entrepreneurial self-efficacy and entrepreneurial motivation highlight the crucial role that educational programs play in fostering an entrepreneurial mindset. By enhancing entrepreneurial education programs through exposure to successful entrepreneurs, hands-on experiences, entrepreneurship-focused classes, funding access, and mentorship, educational institutions can foster entrepreneurial intentions among students (Cekule, L., Cekuls, A., & Dunska, M. (2023). Such initiatives not only benefit students by nurturing an entrepreneurial mindset but also contribute to broader economic growth and innovation, ensuring a highly capable workforce with critical thinking skills for the twenty-first-century workplace (Liston, M., Barry, G., & O'Sullivan, P. (2023).

Table 5: Pearson correlation results between entrepreneurial education and entrepreneurial intention among the respondents

Correlations						
Construct	R*	d.f.	p-value	Strength of Correlation	Interpretation	Null Hypothesis Decision
Entrepreneurial Education - Entrepreneurial Intention	.815**	217	.000	High Correlation	Significant	Reject the Null hypothesis

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

A Pearson correlation coefficient in Table 4 was calculated for the relationship between respondents' entrepreneurial education and entrepreneurial intention. A high positive correlation was found ($r(217) = .815, p < .001$), indicating a significant linear relationship between the two variables.

The correlation coefficient $r = 0.815$ indicates a strong positive linear relationship between entrepreneurial education and entrepreneurial intention among the respondents. A correlation coefficient close to 1 indicates a strong positive correlation, suggesting that as one variable (entrepreneurial education) increases, the other variable (entrepreneurial intention) also tends to increase. The p-value associated with the correlation coefficient is less than 0.001, which means that the correlation is statistically significant at a very high level of confidence ($p < 0.001$). This indicates that the observed correlation between entrepreneurial education and entrepreneurial intention is unlikely to be due to random chance and is likely to be a true relationship in the population. The high positive correlation ($r=0.815$) suggests that there is a strong tendency for individuals with higher levels of entrepreneurial education to also have higher levels of entrepreneurial intention.

The relationship between entrepreneurial education and entrepreneurial intention is crucial in fostering a culture of entrepreneurship. Research indicates that exposure to successful entrepreneurs, hands-on experiences, entrepreneurship-focused classes, funding access, mentorship, and a supportive environment are key factors in cultivating entrepreneurial intentions among students. Entrepreneurial knowledge moderates the relationship between motivational factors and intentions, emphasizing the significance of educational interventions in shaping entrepreneurial behavior. Practical and experiential learning activities, such as business plan competitions and internships, play a vital role in enhancing entrepreneurial intentions and providing hands-on experiences for aspiring entrepreneurs. Family entrepreneurial culture, personal savings, and role models also influence graduates' pursuit of entrepreneurship, highlighting the importance of familial and personal experiences in entrepreneurial decision-making. This collective evidence underscores the positive correlation between entrepreneurial education and intention, emphasizing the need for educational programs that focus on developing entrepreneurial skills and knowledge to promote entrepreneurial activities (Laila, Cekule, et al. (2023), Ilomo, M., & Mwantimwa, K. (2023), Magasi, W. H. et al. (2023), Sahputri, R. A. M. et al. (2023), Silveyra-León, G. et al (2023).

4. Discussion

This study undertakes a comprehensive exploration of the factors influencing entrepreneurial education and entrepreneurial intention among engineering students at Guangdong Industry and Trade Vocational School in China, aiming to enhance their entrepreneurial mindset. In this discussion, we not only analyze the conclusions drawn from its findings but also present actionable recommendations and highlight the broader implications for academia and practical applications in the field of entrepreneurship.

4.1. Conclusion

The analysis of various tables reveals critical insights into the challenges and opportunities in fostering entrepreneurial capabilities and intentions among individuals, especially among younger generations.

Entrepreneurship plays a crucial role in economic growth and innovation, attracting individuals aspiring to create impactful ventures. Challenges such as confidence, motivation, education, intention, and the alignment between education and entrepreneurial success are common among aspiring entrepreneurs. Research highlights the importance of confidence, with self-confidence being a determining factor for entrepreneurial success (Srinivasan, B. et al (2023).

It sheds light on the significant lack of confidence among respondents in various aspects of entrepreneurial self-efficacy. Stress factors, prior entrepreneurial failure, and social support play crucial roles in shaping fear of failure among entrepreneurs, highlighting the need to address these aspects to enhance confidence and capabilities (Al-Alawi, A. et al. (2023). It underscores the importance of addressing these gaps to enhance entrepreneurial capabilities and confidence levels. Skills, identifying opportunities, making strategic decisions, and leadership are key areas where improvements are needed to empower aspiring entrepreneurs.

Building on this, it reveals a concerning trend of low motivation among respondents regarding achieving goals and feeling excited and enthusiastic about entrepreneurial endeavors. This lack of strong motivation can significantly impact their drive to pursue entrepreneurial goals and succeed in personal and professional spheres. Moreover, the connection between motivation and leadership in entrepreneurial activities is highlighted, emphasizing the importance of a motivation system to ensure success in entrepreneurial endeavors (Tetiana, Vlasenko., Sergii, Stepanenko. (2023). Therefore, targeted interventions, coaching, and goal-setting strategies are essential to enhance motivation levels among aspiring entrepreneurs and drive them toward achieving their goals.

Psychological factors like self-efficacy and motivation significantly influence entrepreneurial interest and intention among students. These factors shape entrepreneurial aspirations and play a crucial role in academic and entrepreneurial success. Integrating psychological empowerment strategies into entrepreneurial education programs is essential to cultivate a mindset characterized by confidence, resilience, and goal orientation. Studies emphasize the need to enhance self-efficacy and motivation to boost students' entrepreneurial mindset and potential, ultimately contributing to economic growth and sustainability. By focusing on these psychological aspects, educational institutions can better prepare students for venturing into entrepreneurship and creating new opportunities for themselves and others. (Tannady, H. (2023), Ferreira-Neto, M. N. et al (2023).

Moving on, it indicates a trend of disagreement among younger respondents regarding the effectiveness and impact of entrepreneurial education. Perceived gaps in educational content, delivery methods, and outcomes related to skills acquisition, confidence-building, market understanding, and mindset development are evident. This suggests a need for enhancements and improvements in entrepreneurial education programs to better meet the expectations and needs of students interested in entrepreneurship. Younger respondents show varying perceptions of the effectiveness of entrepreneurial education, indicating a trend of disagreement. Perceived gaps in educational content, delivery methods, and outcomes related to skills acquisition, confidence-building, market understanding, and mindset development are evident. To address these gaps, integrating practical relevance, experiential learning, mentorship, and networking opportunities into educational programs is crucial. This integration can help bridge the identified gaps and empower aspiring entrepreneurs by providing them with the necessary tools and experiences to succeed in the entrepreneurial landscape (Sitaridis I. et al. (2020), Smirnov, S. (2023).

The entrepreneurial intention of younger generations is influenced by various factors such as psychological capital, motivation, family environment, income expectations, self-efficacy, peer support, institutional support, and entrepreneurial skills (Salavou H. et al. (2023). These factors play a crucial role in shaping the desire, confidence, commitment, and skills needed for entrepreneurship among students [Martins, J. M. et al. (2023). Addressing barriers like lack of awareness, exposure, and perceived challenges in entrepreneurship is essential to cultivate a positive entrepreneurial intention among the youth (Fitri, W. S. et al. (2023). Providing support, education, and exposure to entrepreneurial opportunities can help bridge the intention-action gap, empowering individuals to confidently pursue entrepreneurial paths. This holistic approach can enhance the entrepreneurial mindset and readiness of the younger generation to engage in entrepreneurial endeavors.

It also reveals a strong positive linear relationship between entrepreneurial education and entrepreneurial intention among respondents. This significant correlation underscores the pivotal role of entrepreneurial education in shaping individuals' intentions and aspirations toward entrepreneurship. Higher levels of entrepreneurial education are associated with higher levels of entrepreneurial intention, highlighting the importance of educational interventions in fostering a culture of entrepreneurship and driving entrepreneurial success.

In conclusion, the findings collectively emphasize the multidimensional nature of fostering entrepreneurial capabilities and intentions. Addressing challenges related to confidence, motivation, education, intention, and alignment between education and entrepreneurial success is crucial. Integrating practical relevance, experiential learning, mentorship, networking, and psychological empowerment strategies into entrepreneurial education programs can empower aspiring entrepreneurs to navigate challenges, seize opportunities, and succeed in their entrepreneurial endeavors. By bridging the gap between intention and action, educational institutions and stakeholders can contribute significantly to fostering a culture of innovation, resilience, and entrepreneurial excellence in society.

4.2. Recommendations

The following recommendations may offer an outstanding Entrepreneurial Mindset Program, equipping students with essential skills for success in today's competitive business landscape. The Entrepreneurial Mindset Program at Guangdong Industry and Trade Vocational College is a transformative opportunity to develop critical entrepreneurial skills and mindset for personal and professional growth.

Considering the research outcomes and the imperative to augment entrepreneurial education at Guangdong Industry and Trade Vocational College, a robust entrepreneurial mindset curriculum is advocated. This curriculum should encompass the following elements:

Enhancing Entrepreneurial Skills Development - To effectively prepare students for entrepreneurial endeavors, it is recommended to implement comprehensive workshops and training programs focused on essential entrepreneurial skills. These should include:

- Communication Techniques: Training in clear and persuasive communication.
- Problem-Solving Methodologies: Advanced methods to tackle business challenges.
- Decision-Making Processes: Strategic approaches to making informed decisions.
- Adaptability: Techniques to remain flexible and responsive in dynamic business environments.

Facilitating Opportunity Recognition - It is crucial to introduce specialized modules and in-depth case studies aimed at equipping students with the ability to identify and evaluate business opportunities. This should cover:

- Market Analysis: Methods to analyze market needs and trends.
- Competitive Assessment: Tools to assess competition effectively.
- Business Idea Validation: Techniques for validating the feasibility of business ideas.

Strengthening Strategic Planning Education -To ensure students are well-versed in strategic planning, it is recommended to offer rigorous instruction that includes:

- Business Modeling: Training in creating and refining business models.
- Financial Management: Comprehensive financial planning and management techniques.
- Risk Assessment: Methods to identify, assess, and mitigate business risks.

Developing Leadership Skills - Programs should be developed to cultivate effective leadership abilities among students. These programs should focus on:

- Leadership Styles: Understanding and applying various leadership approaches.
- Team Management: Techniques for managing and leading teams effectively.
- Conflict Resolution: Strategies for constructively resolving conflicts.
- Motivation Techniques: Methods to inspire and motivate team members towards achieving organizational goals.

Improving Resource Management - To optimize resource utilization, detailed sessions on efficient resource management should be provided. These should include:

- Resource Allocation: Principles of effective distribution of resources.
- Budgeting Techniques: Detailed instruction on creating and managing budgets.
- Funding Options: Exploration of various funding sources and opportunities.
- Optimization Strategies: Approaches to maximize business efficiency and profitability.

Establishing Mentorship and Networking Opportunities - It is recommended to establish robust mentorship programs and create ample networking opportunities with industry professionals and alumni. This can be achieved by:

- Mentorship Programs: Facilitating regular interactions with experienced mentors.

- Networking Opportunities: Organizing events and platforms for students to connect with industry leaders and successful alumni.
- Real-World Insights: Providing practical guidance and insights through these connections to support students' entrepreneurial journeys.

To tackle the observed deficiency in motivation and elevate entrepreneurial education standards at Guangdong Industry and Trade Vocational College, it is proposed to integrate the subsequent components into an entrepreneurial mindset initiative:

Motivational Coaching - Implement comprehensive coaching programs aimed at deepening students' understanding of motivation, assisting them in setting ambitious yet achievable goals, and developing tailored strategies for maintaining focus and drive. These programs should include:

- Understanding Motivation: Providing insights into both intrinsic and extrinsic motivators to help students identify what drives them.
- Goal Setting: Offering structured guidance on setting and pursuing meaningful objectives.
- Focus Strategies: Teaching methods to maintain sustained attention and motivation throughout their entrepreneurial journey.

Effective Goal-Setting Strategies - To enhance productivity and achievement, it is essential to educate students on effective goal-setting techniques. This education should include:

- SMART Goals: Detailed instruction on formulating Specific, Measurable, Achievable, Relevant, and Time-bound goals to ensure clarity and attainability.
- Progress Tracking: Implementing tools and methodologies for monitoring progress and making necessary adjustments to stay on track.

Mindfulness and Well-being Practices - Integrate mindfulness and stress management workshops into the curriculum to promote a positive mindset and resilience among students. These workshops should cover:

- Mindfulness Practices: Teaching techniques such as meditation, mindful breathing, and awareness exercises to enhance focus and emotional balance.
- Stress Management: Offering strategies for recognizing, managing, and mitigating stress to maintain mental and physical well-being.

Inspirational Speakers - Regularly invite successful entrepreneurs and leaders to share their stories and success strategies with students. This initiative should encompass:

- Motivational Talks: Organizing sessions where speakers discuss their personal journeys, the challenges they faced, and how they overcame them.
- Success Strategies: Providing practical advice and insights on effective strategies for achieving success in entrepreneurial endeavors.

Peer Support Networks - Establish robust peer support groups and mentorship programs to foster a collaborative and supportive environment. This can be facilitated through:

- Peer Groups: Creating structured forums for students to share experiences, discuss challenges, and provide mutual support and encouragement.
- Mentorship Programs: Connecting students with experienced mentors who can offer guidance, support, and valuable industry insights.

Feedback and Reflection - Encourage a culture of continuous improvement through regular feedback and self-reflection practices. This should involve:

- Feedback Mechanisms: Implementing systematic opportunities for students to receive and provide constructive feedback from peers and mentors.
- Self-Reflection Practices: Teaching students techniques for self-assessment and reflection to critically evaluate their progress and adjust their strategies accordingly.

Drawing upon the regression analysis insights and the imperative to bolster entrepreneurial education at Guangdong Industry and Trade Vocational College, it is advised to implement a comprehensive entrepreneurial mindset program. This program should incorporate the following components:

Self-Efficacy Enhancement - To bolster students' confidence in their entrepreneurial abilities, it is recommended to offer a series of activities and workshops focused on skill development, goal setting, and self-reflection. These initiatives should include:

- Skill Development Workshops: Practical sessions to enhance key entrepreneurial skills.
- Goal Setting Activities: Structured exercises to help students set and pursue meaningful goals.
- Self-Reflection Practices: Regular opportunities for self-assessment to build self-awareness and confidence.

Self-Motivation Strategies - Integrate comprehensive coaching programs, goal-setting frameworks, and peer support systems to help students stay motivated, effectively tackle challenges, and maintain a clear focus on their entrepreneurial objectives. This approach should include:

- Coaching Sessions: Personalized coaching to help students identify their motivations and maintain their drive.
- Goal-Setting Frameworks: Instruction on setting achievable and measurable goals.
- Peer Support Networks: Establishing groups for mutual encouragement and accountability.

Resilience Building - Teach students resilience techniques, stress management strategies, and the development of a growth mindset to help them effectively cope with setbacks and view failures as learning opportunities. Key components should include:

- Resilience Techniques: Methods for building mental toughness and persistence.
- Stress Management Strategies: Techniques to manage and reduce stress.
- Growth Mindset Development: Encouraging an attitude that embraces challenges and values learning from mistakes.

Entrepreneurial Mindset - Offer courses designed to cultivate an entrepreneurial mindset by promoting creativity, innovation, critical thinking, risk-taking, and opportunity recognition. These courses should encompass:

- Creativity and Innovation: Exercises and projects that stimulate creative thinking and innovative solutions.
- Critical Thinking and Risk-Taking: Teaching students to analyze situations critically and make informed decisions.
- Opportunity Recognition: Modules on identifying and capitalizing on business opportunities.

Experiential Learning - Provide students with opportunities for hands-on application through internships, competitions, and practical projects. These experiences should be supported by mentorship and structured feedback to facilitate growth and development. This should include:

- Internships: Placements in real-world settings to gain practical experience.
- Competitions: Entrepreneurial contests to challenge and inspire students.
- Practical Projects: Real-world projects that require problem-solving and implementation.
- Mentorship and Feedback: Regular guidance and constructive feedback from experienced mentors to support ongoing development.

To bridge the identified disparities and elevate entrepreneurial education among younger participants at Guangdong Industry and Trade Vocational College, it is advisable to design a customized entrepreneurial mindset program. This program should prioritize the following components:

Enhancing Practical Relevance - To ensure the curriculum remains aligned with real-world applications, it is recommended to update course content regularly by incorporating case studies and simulations. These additions should:

- Case Studies: Include analyses of real-world business scenarios to illustrate practical applications of theoretical concepts.
- Simulations: Utilize interactive simulations to provide hands-on experience in managing entrepreneurial challenges and decision-making processes.

Building Confidence - Implement a series of activities, workshops, and mentorship programs specifically designed to build self-confidence and resilience among students. These initiatives should:

- Activities and Workshops: Facilitate practical exercises that encourage self-efficacy and resilience.
- Mentorship Programs: Connect students with experienced mentors who can provide personalized guidance and support, fostering a stronger sense of self-belief and determination.

Enhancing Market Understanding - Enrich the curriculum with comprehensive modules focused on market dynamics and strategic analysis to better prepare students for the competitive business environment. These modules should cover:

- Market Dynamics: In-depth exploration of market forces, consumer behavior, and industry trends.
- Strategic Analysis: Techniques for conducting thorough market analyses and developing strategic business plans.

Providing Comparative Analysis - Offer insights into the effectiveness of entrepreneurial education compared to traditional education by integrating comparative analysis into the curriculum. This should include:

- Comparative Studies: Modules that examine the strengths and weaknesses of entrepreneurial versus traditional educational approaches.
- Effectiveness Metrics: Research and data on outcomes such as student success rates, innovation, and business performance.

Developing an Entrepreneurial Mindset - Integrate targeted activities and coaching sessions aimed at fostering an entrepreneurial mindset, creativity, and resilience among students. These initiatives should include:

- Mindset Activities: Exercises designed to cultivate creative thinking, innovative problem-solving, and a proactive approach to opportunities.
- Coaching Sessions: Personalized coaching to help students develop the resilience and adaptability necessary for entrepreneurial success.

To enrich entrepreneurial education at Guangdong Industry and Trade Vocational College and cultivate a more favorable entrepreneurial mindset among the younger demographic, the following entrepreneurial mindset program is proposed:

Enhancing Awareness and Exposure - To provide students with real-world insights and inspiration, it is recommended to arrange regular events featuring successful entrepreneurs and industry experts. These events should:

- Guest Lectures and Panels: Host talks and panel discussions where entrepreneurs and experts share their experiences, challenges, and successes.
- Networking Opportunities: Facilitate networking sessions that allow students to interact directly with industry leaders, fostering connections and mentorship opportunities.

Facilitating Goal-setting and Vision Development - Conduct comprehensive workshops designed to help students clarify their entrepreneurial goals and visions. These workshops should:

- Vision Crafting: Guide students in developing a clear, compelling vision for their entrepreneurial journey.
- Goal Setting Frameworks: Teach effective goal-setting techniques that align with their long-term vision, ensuring goals are Specific, Measurable, Achievable, Relevant, and Time-bound (SMART).

Fostering Skill Development- Provide intensive training in key entrepreneurial skills through practical, hands-on workshops. These workshops should cover:

- Core Entrepreneurial Skills: Training on essential skills such as business planning, financial management, marketing, and operations.
- Interactive Learning: Use of simulations, role-playing, and real-life case studies to apply theoretical knowledge in practical scenarios.

Cultivating Mindset and Confidence - Offer personalized coaching and structured activities aimed at developing an entrepreneurial mindset and building confidence. These initiatives should include:

- Mindset Development: Activities that encourage creativity, innovation, and a proactive approach to problem-solving.
- Confidence Building: Coaching sessions focused on overcoming self-doubt, building resilience, and fostering a growth mindset.

Creating a Support Ecosystem - Establish a comprehensive support ecosystem comprising resources such as incubation centers and entrepreneurial clubs. This ecosystem should:

- Incubation Centers: Provide facilities and resources for budding entrepreneurs to develop and launch their startups, including office space, mentorship, and funding opportunities.
- Entrepreneurial Clubs: Form clubs and groups where students can collaborate, share ideas, and support each other's ventures through peer mentorship and networking.

To elevate entrepreneurial education at Guangdong Industry and Trade Vocational College and leverage the significant positive relationship between entrepreneurial education and entrepreneurial intention, it is recommended to implement the following entrepreneurial mindset program:

Implementing a Comprehensive Curriculum - To ensure students are well-prepared for entrepreneurial success, it is recommended to offer a robust curriculum that includes courses on key areas such as business planning, finance, marketing, innovation, and leadership. These courses should:

- Business Planning: Teach students how to develop detailed business plans that outline their business strategies and operational plans.
- Finance: Provide in-depth knowledge of financial management, including budgeting, investment, and financial analysis.
- Marketing: Cover essential marketing principles, strategies, and digital marketing techniques to help students effectively promote their businesses.
- Innovation: Encourage creative thinking and innovation, focusing on developing new products, services, and business models.
- Leadership: Develop leadership skills necessary for managing teams, making strategic decisions, and driving business growth.

Enhancing Experiential Learning Opportunities - To facilitate practical experience and skill development, it is essential to provide students with opportunities for experiential learning through internships, projects, and competitions. These opportunities should include:

- Internships: Offer placements in real-world business environments where students can gain hands-on experience and apply theoretical knowledge.
- Projects: Engage students in practical projects that require them to solve real business problems and develop viable solutions.

- Competitions: Organize entrepreneurial competitions that challenge students to pitch their business ideas and compete for funding and support.

Establishing Mentorship and Networking Programs - Create robust mentorship programs and networking events that connect students with industry professionals. These initiatives should:

- Mentorship Programs: Pair students with experienced entrepreneurs and business leaders who can provide guidance, advice, and support.
- Networking Events: Host regular events where students can interact with industry professionals, build connections, and gain insights into the entrepreneurial landscape.

Building a Support Ecosystem - Develop a comprehensive support ecosystem that includes resources such as incubators, accelerators, funding access, and networking platforms. This ecosystem should provide:

- Incubators and Accelerators: Offer structured programs that support startups through mentorship, resources, and funding opportunities.
- Funding Access: Facilitate access to various funding sources, including venture capital, angel investors, and grants.
- Networking Platforms: Create online and offline platforms where entrepreneurs can connect, collaborate, and share resources.

Focusing on Personal Development - Include workshops and activities aimed at building resilience, confidence, goal setting, and an entrepreneurial mindset within the program. These initiatives should focus on:

- Resilience Building: Teach techniques for coping with setbacks and maintaining perseverance in the face of challenges.
- Confidence Building: Offer activities that boost self-esteem and encourage students to take bold steps in their entrepreneurial ventures.
- Goal Setting: Provide frameworks for setting clear, achievable goals that align with their entrepreneurial vision.
- Mindset Workshops: Develop an entrepreneurial mindset by fostering creativity, innovation, and a proactive approach to problem-solving.

4.3. Implications of the Study

Entrepreneurship is a crucial driver of economic growth, innovation, and societal change in today's dynamic landscape. Integrating entrepreneurial mindset programs into vocational college curricula has gained attention due to its potential to shape individuals' entrepreneurial aspirations, skills, and behaviors. This integration impacts educational policy, economic development, skill enhancement, research collaboration, personal development, entrepreneurial ecosystems, and long-term societal and economic outcomes.

One primary finding emphasizes the need for educational policy reform to include entrepreneurial mindset programs. This aligns educational objectives with business demands, preparing students for entrepreneurship challenges. It enhances academic experiences and equips students with skills for success. Addressing gaps in entrepreneurial self-efficacy fosters a more entrepreneurial culture, encouraging innovation, job creation, and economic growth. Skill enhancement focuses on critical thinking, problem-solving, communication, and leadership, which are vital for navigating entrepreneurship complexities.

Research collaboration with industry ensures programs meet real-world demands, providing valuable experiences and mentorship. Personal development addresses motivational factors like self-efficacy and goal setting, enhancing resilience and overall well-being. Improving motivation levels fosters a culture of innovation and ambition, increasing startup activity and economic vibrancy. Producing competent and motivated entrepreneurs contributes to economic growth and innovation, catalyzing positive change.

Continuous improvement and adaptation of programs are crucial for impactful entrepreneurial education. Integrating self-efficacy and motivation components enhances students' aspirations, intentions, and success as entrepreneurs. Understanding psychological factors like self-efficacy and motivation nurtures entrepreneurial talent and encourages innovative thinking, fostering an entrepreneurial culture characterized by creativity and resilience.

Practical application of research findings informs effective program design, enhancing students' entrepreneurial skills, attitudes, and success. Continuous evaluation ensures programs remain responsive to market demands and student needs. Educational institutions gain a competitive advantage by offering comprehensive entrepreneurial mindset programs, fostering innovation, job creation, and economic growth in their regions. Strategic planning and continuous improvement efforts prepare students for successful entrepreneurial careers.

Integrating entrepreneurial mindset programs into vocational college curricula has far-reaching implications for educational policy, economic development, skill enhancement, research collaboration, personal development, entrepreneurial ecosystems, and societal impact. Continuous improvement, collaboration, and addressing psychological factors play a transformative role in shaping individuals' entrepreneurial behaviors and fostering a culture of entrepreneurship, innovation, and economic prosperity.

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Appendix A

Survey Letter

Greetings!

Dear Respondents,

I am Zhenbo Yang, a student pursuing a Master's degree in Business Administration at Adamson University. Currently, I am engaged in a research study centered around the subject of "**Entrepreneurial Education and Intention: Basis for an Enhanced Entrepreneurial Mindset among Engineering Students at Guangdong Industry and Trade Vocational School, China**". I would greatly appreciate your willingness to partake in my survey.

This investigation aims to explore the significance of various factors in determining the impact of entrepreneurial education on the entrepreneurial intention of the younger generation in China. Your active involvement in this survey will aid me in acquiring a more comprehensive understanding of the present condition of students' entrepreneurial intentions.

The completion of the survey is expected to require approximately 10-15 minutes of your time. Rest assured, there are no known or anticipated risks associated with your contribution to this study. All information disclosed will be treated with utmost confidentiality and solely utilized for academic purposes. Should you have any inquiries or concerns regarding the utilization of your data, please feel free to reach out to me.

Thank you for considering my request and for your valuable contribution to this study.

Best regards,

Zhenbo Yang

MBA Student,

Adamson University

Appendix B

Survey Questionnaire

" Entrepreneurial Education and Intention: Basis for an Enhanced Entrepreneurial Mindset among Engineering Students at Guangdong Industry and Trade Vocational School, China ".

Instruction: The following questions investigate the factors in enhancing entrepreneurial mindset among engineering students at Guangdong Industry and Trade Vocational School, China.

I authorize and consent to the general use, collection, and sharing of my information with the research for the study.

Part I. Profile of the Respondents

Please check (✓) the answer corresponds to your data.

- | | | |
|--|---|---|
| Age | Gender | Year Level |
| <input type="checkbox"/> 18 – 23 years old | <input type="checkbox"/> Male | <input type="checkbox"/> 1 st Year |
| <input type="checkbox"/> 24 – 29 years old | <input type="checkbox"/> Female | <input type="checkbox"/> 2 nd Year |
| <input type="checkbox"/> 30 – 35 years old | | <input type="checkbox"/> 3 rd Year |
| Family Business Background | Ownership | |
| <input type="checkbox"/> Yes | <input type="checkbox"/> Sole Proprietorship | |
| <input type="checkbox"/> No | <input type="checkbox"/> Partnership | |
| | <input type="checkbox"/> Corporation | |
| | <input type="checkbox"/> Limited Liability Companies (LLCs) | |

- Types/Nature of Business
- Retail industry
 - Light Industry
 - Heavy Industry
 - Medicine
 - Education / Training
 - Agricultural (breeding/plantation)
 - Catering
 - Others. Please specify. _____

Part II. The perspective on the level of agreement among younger generation respondents toward entrepreneurial self-efficacy and motivation.

Instruction: Kindly check (✓) the number opposite each item on your level of agreement towards entrepreneurial self-efficacy and motivation using a 4-point Likert scale listed below:

Rating	Description	Verbal Interpretation
4	Strongly Agree	Very Confident / Highly Motivated
3	Agree	Confident / Motivated
2	Disagree	Not Confident / Not Motivated
1	Strongly Disagree	Not Very Confident /Not Very Motivated

Entrepreneurial Self-Efficacy	4	3	2	1
I believe that I have the necessary skills and abilities to perform different entrepreneurial tasks.				
I am confident in my ability to identify and evaluate potential business opportunities				
I am confident in my ability to make strategic business decisions.				
I am confident in my ability to assemble the necessary resources to start a business.				
I am confident in my ability to lead, manage, and motivate others in the workplace.				
Entrepreneurial Motivation	4	3	2	1
I am highly motivated to achieve my goals and objectives.				
I feel excited and enthusiastic when working towards my goals.				
I am driven to achieve success in my personal and professional life.				
I have a strong desire to excel and do my best in everything I do.				
I am willing to put in extra effort and work hard to achieve my goals.				

Part III. The perspective on the level of agreement among younger generation respondents toward entrepreneurial education.

Instruction: Kindly check (✓) the number opposite each item on your level of agreement towards the entrepreneurial education using a 4-point Likert scale listed below:

Rating	Description
4	Strongly Agree
3	Agree
2	Disagree
1	Strongly Disagree

Entrepreneurial Education	4	3	2	1
Entrepreneurial education has significantly assisted me in acquiring the skills and knowledge necessary to start and operate a business.				
The entrepreneurial education I have received has increased my confidence level substantially in pursuing entrepreneurial opportunities				
Entrepreneurial education has been valuable to me in enhancing my understanding of the business environment and dynamics of the market.				
Entrepreneurial education is more effective than traditional education in developing successful entrepreneurs.				
The entrepreneurial education I have received thus far has had a significant impact on me in cultivating an entrepreneurial mindset and attitude.				

Part III. The perspective on the level of agreement among younger generation respondents toward entrepreneurial intention.

Instruction: Kindly check (✓) the number opposite each item on your level of agreement towards the entrepreneurial intention using a 4-point Likert scale listed below:

Rating	Description
4	Strongly Agree
3	Agree
2	Disagree
1	Strongly Disagree

Entrepreneurial Intention	4	3	2	1
I have a strong desire to start my own business soon.				
My goal is to become a successful entrepreneur who owns a thriving business.				
I see opportunities all around me and I feel confident in my ability to seize them.				
I am strongly committed to pursuing entrepreneurship as a viable career path.				
I am confident that I have the necessary skills and knowledge to turn my innovative ideas into successful business ventures.				

**Appendix C
Questionnaire Matrix**

CONSTRUCT	QUESTION ITEM	AUTHOR/YR
Entrepreneurial Self-Efficacy (ESE)	I believe that I have the necessary skills and abilities to perform different entrepreneurial tasks.	Ahmed et al. (2020)
	I am confident in my ability to identify and evaluate potential business opportunities	Hsu DK, et al. (2019)
	I am confident in my ability to make strategic business decisions.	Dheer & Lenartowicz (2019)

	I am confident in my ability to assemble the necessary resources to start a business.	McGee JE, Peterson M. (2019)
	I am confident in my ability to lead, manage, and motivate others in the workplace.	Hsu DK, et al. (2019)
Entrepreneurial Motivation (EM)	I am highly motivated to achieve my goals and objectives.	Faghih et al. (2021)
	I feel excited and enthusiastic when working towards my goals.	Thomassen et al. (2019)
	I am driven to achieve success in my personal and professional life.	Mahto and McDowell (2018)
	I have a strong desire to excel and do my best in everything I do.	Tarigan et al. (2022)
	I am willing to put in extra effort and work hard to achieve my goals.	Barba-Sanchez and Atienza-Sahuquillo (2018)
Entrepreneurial Education (EE)	Entrepreneurial education has significantly assisted me in acquiring the skills and knowledge necessary to start and operate a business.	Dou X, et al., (2019)
	The entrepreneurial education I have received has increased my confidence level substantially in pursuing entrepreneurial opportunities	Ahmad SZ, et al., (2018)
	Entrepreneurial education has been valuable to me in enhancing my understanding of the business environment and dynamics of the market.	Cui J, Sun J, Bell R, (2021)
	Entrepreneurial education is more effective than traditional education in developing successful entrepreneurs.	(Ratten & Usmanij, 2020)
	The entrepreneurial education I have received thus far has had a significant impact on me in cultivating an entrepreneurial mindset and attitude.	Nowiński et al., (2019); Iwu et al., (2019); Li & Wu, (2019)
Entrepreneurial Intention (EI)	I have a strong desire to start my own business in the near future.	Meoli A, et al. (2020)
	My goal is to become a successful entrepreneur who owns a thriving business.	Georgescu M. A., Herman E. (2020)
	I see opportunities all around me and I feel confident in my ability to seize them.	Palmer C., et al. (2021)
	I am strongly committed to pursuing entrepreneurship as a viable career path.	Lyons E, Zhang L. (2018)
	I am confident that I have the necessary skills and knowledge to turn my innovative ideas into successful business ventures.	Hou F et al. (2022) -

**Appendix D
Guangdong Industry and Trade Vocational College Marketing Plan**

CATEGORY	DESCRIPTION
Business Summary	The program aims to offer a transformative opportunity for students at Guangdong Industry and Trade Vocational College to develop critical entrepreneurial skills and mindset for personal and professional growth. It will focus on practical workshops, mentorship, and networking opportunities to equip students with the tools needed for success in today's competitive business landscape.
Business Objective	The primary objective of the program is to empower students with essential entrepreneurial skills and mindset to thrive in dynamic business environments. By providing comprehensive training and exposure to real-world insights, the program seeks to cultivate a culture of innovation, creativity, and resilience among participants.
The Problem	Many students lack the necessary entrepreneurial skills and mindset required to succeed in the competitive business world. Traditional educational approaches often do not adequately prepare students for the challenges of entrepreneurship, leading to a gap in practical knowledge and experience.
Our Solution	Our solution is to implement a robust entrepreneurial mindset curriculum that includes workshops on communication techniques, problem-solving methodologies, decision-making processes, opportunity recognition, strategic planning, and skill development. By offering hands-on training and exposure to successful entrepreneurs, we aim to bridge the gap between theoretical knowledge and practical application.
Competitive Advantage	Our program stands out by offering a holistic approach to entrepreneurial education, combining theoretical learning with practical experiences. By providing access to industry experts, mentorship programs, and networking opportunities, we give students a competitive advantage in developing their entrepreneurial skills and mindset.
Target Market	The program is designed for students at Guangdong Industry and Trade Vocational College who are interested in pursuing entrepreneurial ventures or seeking to enhance their business acumen. Our target market includes individuals with a passion for innovation, problem-solving, and leadership.
Marketing Strategy and Objectives	<ul style="list-style-type: none"> • Utilize social media platforms and online advertising to promote the program and attract student participation. • Collaborate with local entrepreneurs and industry experts to host guest lectures, workshops, and networking events. • Develop partnerships with businesses and organizations to provide real-world project opportunities for students. • Measure success through increased student engagement, positive feedback, and successful entrepreneurial ventures launched by program participants.
Financial Requirements:	<ul style="list-style-type: none"> • Allocate funds for program development, including curriculum design, workshop materials, and guest speaker fees. • Budget for marketing and promotional activities to raise awareness and attract students to the program. • Consider potential revenue streams such as program fees, sponsorships, and partnerships to sustain the initiative in the long term.

Appendix E Curriculum Vitae

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EDUCATION

Aug 2021-present	Adamson University	MBA	Master
Sep 2007-Jun2011	South China Normal University	Electronic Information	Bachelor
Sep 2004-Jun2007	Dongyuan Middle School	General Education	

Research Project

Based on completing normal teaching tasks, I also invested in scientific research work to further deepen the depth and breadth of my major.

1. Wrote "Application of PLC Technology in Electrical Engineering and Its Automation Control".
2. "Application of Electrical Automation in Water Conservancy and Hydropower Engineering--Review of Engineering Information Mechanical and Electrical Comprehensive Automation Training Materials".
3. Papers such as "Research on Strategies to Improve College Students' Autonomous Learning Ability under Online Teaching Mode".
4. Publish 12 academic papers and teaching research papers in this major in domestic and foreign academic journals during the current position, of which 5 are sole authors or first authors.