Academic Journal of Management and Social Sciences
ISSN: 2958-4396 | Vol. 7, No. 3, 2024

Investigating Determinants of Entrepreneurial Intentions among High Vocational College Students: Micro-Level Evidence from Entrepreneurship Education in China

Xianjie Peng [1], Hongxi Ma [2], Xiaonan Sun [3], Ruwei Nie [4], Junjie Tao [5, *]

[1] Institute of Vocational Education, Tongji University, Shanghai, CO 200092, China
[2] Institute of Vocational Education, Tongji University, Shanghai, CO 200092, China
[3] Faculty of Education, Beijing Normal University, Beijing, CO 100875, China
[4] Institute of Vocational Education, Tongji University, Shanghai, CO 200092, China
[5] Shanghai Aurora Vocational College, Shanghai, CO 201908, China

*** Corresponding author:** Junjie Tao (Email: jj.tao@aurora-college.cn)

Abstract: In tandem with the transformative trajectory of the Chinese economic landscape, entrepreneurship has emerged as a primary avenue for career development among graduates of higher education. This study adopts the theoretical framework of the Theory of Planned Behavior and employs a questionnaire survey methodology involving 1010 third-year students enrolled in higher vocational programs in Shanghai, China. The research delves into the critical determinants influencing entrepreneurial intentions among higher vocational students, as well as the intricate mechanisms underpinning these determinants. The findings underscore that the incorporation of entrepreneurship education within higher vocational institutions significantly and positively shapes students' proclivity towards entrepreneurial endeavors, fostering a heightened inclination for such activities post-graduation. Notably, entrepreneurial attitudes, perceived behavioral control, and entrepreneurial subjective norms are identified as exerting mediating roles in the intricate pathway through which entrepreneurship education interfaces with entrepreneurial intentions. Moreover, discernible gender differentials are observed in the aftermath of the influence of entrepreneurship education. Male higher vocational students exhibit conspicuously elevated path coefficients in relation to their entrepreneurial intentions, eclipsing those of their female counterparts. This discernment accentuates the nuanced nature of the impact of entrepreneurship education, contingent upon gender differentials among students. The outcomes of this study conclusively validate that the integration of entrepreneurship education during the higher vocational stage substantively contributes to a positive modulation of students' entrepreneurial intentions. However, the manifestation of this influence is subject to differentials among students of varying genders and academic majors.

Keywords: Entrepreneurship Education; Planned Behavior Theory; Entrepreneurial Intentions; Vocational College Students.

1. Introduction

Entrepreneurship education constitutes an educational endeavor designed to nurture students' ability to discern latent societal needs, amalgamate various resources encompassing technology, capital, and human capital, and achieve a synthesis of individual development and the creation of social value [1]. Within the framework of higher education in China, the implementation of entrepreneurship education is facilitated through a dual approach involving classroom instruction and practical exposure, serving the pivotal function of instilling entrepreneurial spirit, consciousness, and proficiency among students.[2] Distinguished from conventional undergraduate institutions, Chinese higher vocational colleges assume the crucial role of cultivating high-caliber technical and skilled professionals for societal advancement and providing essential technical support [2]. The evolution of entrepreneurship education in Chinese higher vocational colleges is undergoing a paradigm shift, transitioning from emulation of foreign or renowned domestic undergraduate models towards the establishment of entrepreneurship education courses and pedagogical methods that embody the distinct characteristics of vocational education [3]. Presently, the pedagogical strategies employed in entrepreneurship education within Chinese higher vocational colleges predominantly leverage the advantages inherent in professional education and the transmission of technical skills. This approach involves a simultaneous integration of theoretical and practical teaching methodologies, with the overarching objective of fostering entrepreneurial initiative among students, aligning with the exigencies of China's industrial development, and cultivating a nuanced understanding of entrepreneurial values and processes [4]. This strategic approach not only serves to augment the entrepreneurial competencies of higher vocational college students but also cultivates a judicious comprehension of entrepreneurial values, furnishing them with the requisite capabilities to support their prospective entrepreneurial endeavors. Concomitantly, it broadens the operational and developmental scope of higher vocational colleges, charting a new trajectory for internal educational reform and laying the groundwork for sustainable development [5]. Presently, entrepreneurship education in Chinese higher vocational colleges has culminated in a multifaceted ecosystem, encapsulating general education models activating students' entrepreneurial awareness, competition-based educational paradigms identifying students with entrepreneurial acumen, experiential education models stimulating students' entrepreneurial ideation, and project-based education models integrating school-enterprise

resources [6]. This evolutionary trajectory has concretized into a holistic entrepreneurship education ecosystem, spanning curriculum instruction, organizational management, and policy environments [7].

The entrepreneurial choices and quality of entrepreneurship among graduates from higher vocational colleges in China exert significant influence on the country's economic and employment structures[8]. Entrepreneurship education, tailored to meet the demands of industrial development within these institutions, plays a pivotal role in enhancing the entrepreneurial capabilities of students, instilling proper entrepreneurial values, and contributing high-caliber entrepreneurial talents to the workforce [4]. Notably, between 2020 and 2022, enrollment in Chinese higher vocational colleges experienced a sustained expansion, exceeding 4.133 million individuals, with an estimated student population reaching approximately 16 million in 2023. Amidst a global economic crisis and a gradual deceleration in economic growth rates, the limited capacity of existing industries to provide employment opportunities has prompted Chinese policymakers to view the cultivation of entrepreneurs as a strategic avenue for stimulating new job growth. Recognizing higher vocational colleges as essential educational service organizations, the Chinese government, in the midst of economic structural transformation and upgrading, places significant emphasis on elevating the quality of vocational education. This strategic focus aims to enhance the institutions' ability to serve industry development and facilitate student employment, marking a crucial facet of the ongoing reform efforts [9]. Under the influence of industrial transformation, the Chinese labor market exhibits a nuanced and integrated demand for workers with diverse knowledge and skills. A discernible reduction in demand is observed for workers adapted to singular industry forms, concurrently with an ongoing increase in the demand for workers capable of adapting to more advanced industry forms with comprehensive vocational skills and knowledge structures[10]. Consequently, a substantial migration of talent is witnessed towards manufacturing industry segments characterized by higher added value. In sectors such as modern manufacturing, strategic emerging industries, and modern service industries, over 70% of new employees originate from graduates of vocational colleges. According to forecasts by the Chinese Ministry of Human Resources and Social Security, a shortage of 29 million talents is anticipated in key areas of the new generation manufacturing sector by 2025, including a deficit of 3 million talents in areas such as intelligent robots and high-precision CNC machine tools. In the domain of service consumption, the Chinese government, in the post-pandemic era, prioritizes stimulating domestic market consumption as a catalyst for national economic development. As new consumption patterns driven by digital technology, such as online sales, mobile payments, and the integration of online and offline channels, mature, the tertiary sector, encompassing consumer services and media communication industries, presents substantial employment and entrepreneurial opportunities for graduates of higher vocational colleges. [11] The 2022 China Youth Entrepreneurship Development Report reveals that individuals with vocational college diplomas constitute 36.2% of entrepreneurs, with over 40% of entrepreneurs in the new consumption sector hailing from vocational college backgrounds. Efforts directed at leveraging existing resources for the cultivation of modern, comprehensive talents through entrepreneurship education in higher vocational colleges have proven effective [12]. However, challenges persist in the implementation process, including deficiencies in curriculum quality construction, inefficient technology transfer, and outdated entrepreneurship resource integration systems [13]. Remarkably, over 57% of young entrepreneurs embark on their entrepreneurial endeavors due to challenges in securing ideal employment or dissatisfaction with existing jobs, suggesting an untapped potential for enhancing the stimulation of students' proactive entrepreneurial intentions within higher vocational entrepreneurship education.

Entrepreneurial activities, recognized as a paramount driver of economic growth, have garnered substantial interdisciplinary attention spanning fields such as organizational management, sociology, and education.[14] In the 1990s, Icek Ajzen introduced the Theory of Planned Behavior, a conceptual framework widely embraced for elucidating the intricate mechanisms influencing individuals' behavioral intentions[15]. This theory has found widespread application in entrepreneurial research, given the multifaceted nature of entrepreneurial behavior, where individual entrepreneurial intention serves as a robust indicator of anticipated future entrepreneurial actions. The Theory of Planned Behavior conceptualizes individual behavior as concrete actions taken, directly influenced by behavioral intentions, which, in turn, are shaped by attitudes, entrepreneurial subjective norms, and perceived behavioral control[16]. A more positive personal attitude, judicious social network pressure, and heightened control over resources and skills significantly augment behavioral intent, consequently leading to goal-oriented actions[17]. Building upon the Theory of Planned Behavior, empirical evidence from surveys conducted on French higher education students underscores the efficacy of entrepreneurship education in enhancing students' entrepreneurial intentions [18]. Similarly, investigations involving 754 Chinese graduating undergraduates reveal that entrepreneurship education significantly shapes entrepreneurial attitudes, perceived behavioral control, and entrepreneurial intentions[19]. While extant research on entrepreneurship education in the Chinese context predominantly focuses on general undergraduate and higher education levels, there remains a notable scarcity of analyses concerning entrepreneurial actions within higher vocational education cohorts, and empirical research in this domain is conspicuously underdeveloped.

Against this academic backdrop, the current study selects students from higher vocational colleges in Shanghai as its research subjects. Leveraging the Theory of Planned Behavior, the study seeks to construct a comprehensive and nuanced framework for understanding the myriad factors influencing the formation of entrepreneurial intentions through entrepreneurship education in Chinese higher vocational institutions. Drawing upon survey data collected from these institutions, the study employs meticulous model analysis to scrutinize antecedent variables that wield influence over the formation of entrepreneurial intentions. The overarching goal is to furnish nuanced recommendations for the enhancement of entrepreneurial behavior among higher vocational college students, thereby contributing to the optimization of the effectiveness of entrepreneurship education at this distinctive educational stage.

2. Theoretical Framework and Research Hypothesis

The Theory of Planned Behavior, a conceptual framework delineating individual behavioral attitudes, entrepreneurial subjective norms, and perceived behavioral control, proves instrumental in predicting shifts in entrepreneurial intentions [20]. This theoretical underpinning assumes particular significance when evaluating the outcomes of entrepreneurship education programs designed to cultivate students' entrepreneurial spirit, enhance their entrepreneurial awareness, and augment their entrepreneurial competencies. Entrepreneurial intention, characterized as a psychological state steering an individual's focus, energy, and actions toward a specific entrepreneurial objective, is deemed a foundational precursor for the materialization of entrepreneurial endeavors [21]. Within the context of university students, entrepreneurship emerges as a deliberate and infrequent behavior, often challenging to observe, and characterized by extended time intervals. Therefore, unraveling the intricacies of entrepreneurial intention becomes a crucial initial step in anticipating subsequent entrepreneurial actions [22]. Notably, the selection of entrepreneurial intention as a primary indicator significantly heightens the efficacy of predictive models concerning students' future entrepreneurial behaviors, surpassing those reliant on situational and personal characteristics. Hence, entrepreneurial intention emerges as a robust and dependable predictor of individual future entrepreneurial pursuits [23]. The higher the level of entrepreneurial intention exhibited by students, the greater the likelihood of their engaging in entrepreneurial activities in the future. Survey outcomes centered on Chinese general universities underscore the transformative impact of entrepreneurship education within higher education contexts. This transformative effect is manifested through the substantial reduction of irrational factors impeding student entrepreneurship. Concurrently, entrepreneurship education serves to elevate students' entrepreneurial intentions, fostering a more symbiotic relationship between entrepreneurial actions and the academic disciplines they pursue [24]. This substantiates the positive influence of entrepreneurship education, not only in dismantling barriers to entrepreneurial engagement but also in nurturing intentionality and aligning entrepreneurial endeavors with the students' chosen fields of study. In essence, entrepreneurship education emerges as a pivotal catalyst in shaping a conducive environment for fostering entrepreneurial aspirations among university students.

Entrepreneurship education assumes a critical role in bolstering individual confidence in entrepreneurial behavior by elucidating the merits of entrepreneurial actions, dispelling negative perceptions associated with entrepreneurship, and imparting strategies for effective risk control [25]. Within the sphere of higher vocational colleges, the implementation of entrepreneurship education becomes instrumental in endowing individuals with essential skills and knowledge indispensable for entrepreneurial endeavors. This, in turn, cultivates an augmented sense of self-efficacy and fosters the development of individual entrepreneurial intentions [26]. In the context of developing countries, where a deficiency in requisite entrepreneurial awareness often underlies entrepreneurial failures, effective entrepreneurship education emerges as a potent mitigating factor [27]. The robust implementation of entrepreneurship education affords students valuable opportunities to engage in practical tasks intrinsic to the entrepreneurial process. This encompasses delving into techniques for analyzing the feasibility of business opportunities, honing skills in crafting meticulous business plans, and gaining insights into the nuanced execution processes of entrepreneurial plans. Entrepreneurship educators, by incorporating influential entrepreneurs as guest speakers, serve as exemplars, providing students with tangible demonstrations of entrepreneurial success [26]. Furthermore, the strategic integration of course assignments, feedback mechanisms, encouragement, and peer influence within the pedagogical framework contributes to the creation of an environment conducive to entrepreneurship, thus enabling students to perceive a more fortified entrepreneurial support system in their academic journey [28]. Consequently, the following hypotheses are posited:

Hypothesis1: Entrepreneurship education exerts an influence on the entrepreneurial attitudes of students enrolled in higher vocational colleges.

Hypothesis 2: Entrepreneurship education shapes the perceived behavioral control of higher vocational college students in the realm of entrepreneurship.

Hypothesis3: Entrepreneurship education influences the entrepreneurial subjective norms held by students in higher vocational colleges.

Hypothesis4: Entrepreneurship education has a bearing on the entrepreneurial intentions of students enrolled in higher vocational colleges.

Entrepreneurial individual attitude is the evaluative stance that entrepreneurs adopt towards entrepreneurial actions, reflecting the degree of positivity or negativity associated with such endeavors [29]. It entails a resolute belief in one's capability to successfully execute entrepreneurial behaviors, thereby assisting entrepreneurs in overcoming the myriad obstacles inherent in initiating and operating a business venture [30]. Individual attitudes serve as an effective mirror reflecting an entrepreneur's emotional disposition towards the risks of entrepreneurial failure. Positive entrepreneurs exhibit a heightened ability to maintain an optimistic outlook on entrepreneurial outcomes, demonstrating the courage to embrace market challenges and subsequently generating higher entrepreneurial intentions [31]. Entrepreneurial behavioral attitudes encompass both rational and non-rational facets [32]. On one hand, there exists a correlation between entrepreneurial behavior and the attitudes of entrepreneurial individuals. This correlation encompasses the individual's assessment of the economic returns, non-economic benefits, and transaction costs associated with entrepreneurship, contributing to the formation of their entrepreneurial behavioral attitudes [33]. On the other hand, entrepreneurial attitudes are intricately linked to an individual's psychological traits. Individuals with positive psychological characteristics such as high autonomy, strong achievement motivation, and robust entrepreneurial resilience are more predisposed to harbor positive attitudes towards entrepreneurial actions. Such individuals tend to exhibit a greater inclination to navigate and overcome the challenges associated with achieving entrepreneurial goals [34]. Therefore, a hypothesis is posited based on these premises:

Hypothesis 5: The entrepreneurial attitudes of higher vocational college students play an intermediary role in the impact of entrepreneurship education on entrepreneurial intentions.

Entrepreneurial subjective norms represent the external environmental pressures perceived by individuals when making decisions about entrepreneurial behavior. If entrepreneurs believe that engaging in entrepreneurship receives significant support from influential individuals or groups, the individual is likely to perceive lower entrepreneurial pressure [15]. Existing research indicates that the entrepreneurial subjective norms of Chinese students are primarily influenced by parents, relatives, and peers, with supportive subjective norms more readily enhancing entrepreneurial intentions [35]. Factors such as parents' social capital and social status significantly impact the entrepreneurial aspirations of college students [36]. Entrepreneurship education can effectively enhance the perception of support from family and friends among Chinese college students, thereby fostering the emergence of entrepreneurial behavior [37]. In the context of Chinese college students, there is a notable positive peer effect on entrepreneurial aspirations. If there are entrepreneurs within the peer group, the likelihood of college graduates expressing entrepreneurial intentions increases. Furthermore, the closer the relationship between peer entrepreneurs and college graduates, the higher the entrepreneurial intentions of the latter (citation needed). For entrepreneurs, peer role models in entrepreneurship exert both motivational and behavioral guidance effects, influencing individuals in the initiation and sustenance of entrepreneurial behaviors [38]. Additionally, engaging in entrepreneurial activities in China involves individuals perceiving the macro-environmental factors such as institutional support, government policies, and market conditions, which significantly influence their entrepreneurial intentions [39]. Therefore, the following hypothesis is proposed:

Hypothesis 6: Entrepreneurial subjective norms among higher vocational college students play an intermediary role in the pathway through which entrepreneurship education influences entrepreneurial intentions.

Perceived Behavioral control encompasses an individual's assessment of the difficulty or ease associated with engaging in entrepreneurial actions. Viewed through the lens of self-efficacy beliefs, it signifies entrepreneurs' perceptions regarding how dimensions such as time, resource control, and action resistance influence the facilitation or hindrance of entrepreneurial actions. Moreover, from an examination of control beliefs, entrepreneurs' self-evaluations of multiple abilities, including entrepreneurial plan formulation, entrepreneurial resource integration, personnel management skills, and entrepreneurial opportunity exploration, shape individual Perceived Behavioral control [40]. Entrepreneurs characterized by a heightened level of Perceived Behavioral control can sustain consistently robust entrepreneurial endeavors, perpetually fortifying their entrepreneurial intentions [18].

Hypothesis 7: The Perceived Behavioral control of higher vocational students serves as an intermediary factor in the influence of entrepreneurship education on the trajectory of entrepreneurial intentions.

In surveys conducted during both the youth and adulthood stages, gender stereotypes and social environmental factors, such as influences from social networks, contribute to discernible gender differences in individual entrepreneurial intentions [41, 42]. This is manifested by a higher prevalence of entrepreneurial aspirations among males compared to females. Extensive investigations into the entrepreneurial landscape among students in higher education stages in China reveal marked gender disparities [43]. Male students consistently exhibit higher satisfaction with entrepreneurship education and demonstrate greater entrepreneurial intentions than their female counterparts. The entrepreneurial intentions of students in higher vocational education are notably influenced by gender, potentially arising from entrenched occupational stereotypes that may affect the elevation of self-efficacy following exposure to entrepreneurship education [44]. Traditional Chinese cultural norms, emphasizing a conventional division of labor where men are expected to assume external roles and women to focus on domestic responsibilities, contribute to prevalent gender biases [45]. Women are often perceived as seeking stable work environments rather than engaging in entrepreneurial activities deemed riskier. Societal expectations placed on Chinese men in both professional and academic pursuits create higher social and economic pressures. Consequently, men are more motivated to engage in entrepreneurial activities, viewing entrepreneurship as a means to achieve substantial financial gains and fulfill their inherent value [43]. Entrepreneurial activities are inherently rooted in social networks, allowing entrepreneurs to leverage these networks to acquire entrepreneurial capital, knowledge, skills, and information [46]. Despite the growing number of female entrepreneurs [47], they still encounter challenges in effectively accessing suitable social network support [48]. Additionally, the absence of inspirational entrepreneurial role models further contributes to comparatively lower entrepreneurial intentions among women. Hence, the proposed hypothesis is as follows:

Hypothesis 8: Gender differences exist in the pathway through which higher vocational college entrepreneurship education influences students' entrepreneurial intentions.

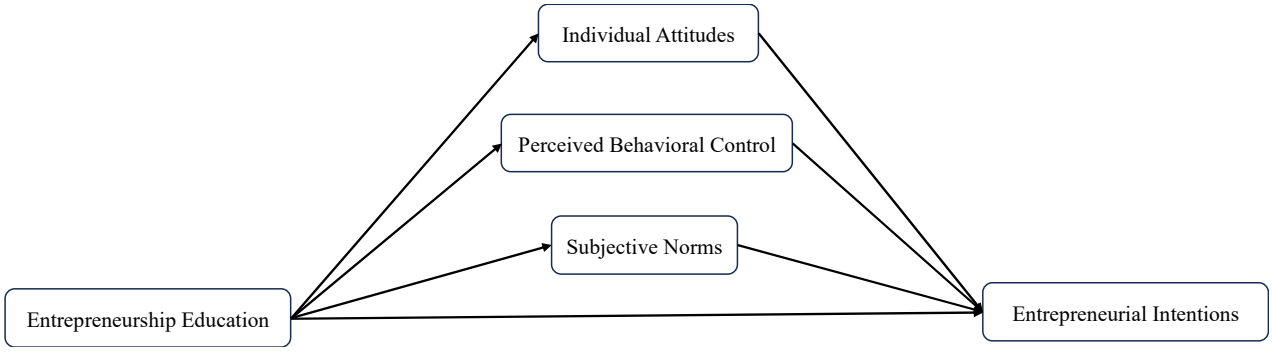

Figure 1. Research model

Based on Hypotheses 1-8, the researcher proposes a hypothetical model of entrepreneurship education in higher vocational institutions (see Figure 1). Entrepreneurship education directly influences the entrepreneurial intentions of higher vocational students. Simultaneously, individual attitudes, Perceived Behavioral control, and entrepreneurial subjective norms play partial mediating roles in the process through which entrepreneurship education impacts entrepreneurial intentions.

3. Literature References

3.1. Figures

The questionnaire for this study utilized adapted scales from established instruments and was administered and distributed through wjx.cn. To ensure the effectiveness of subsequent survey dissemination, a pre-survey was conducted with 200 respondents from a vocational college in Shanghai. This pre-survey involved the completion of a questionnaire and the collection of feedback. Items in the questionnaire that were difficult to comprehend or exhibited ambiguity were identified and removed. Additionally, a reliability and validity test were conducted on the pre-survey questionnaire. After standardizing each variable, a reliability test was performed using Cronbach's Alpha as an initial indicator. The reliability coefficient, ranging from 0 to 1 with a critical value of 0.6, demonstrated that the reliability of all measurement items was above 0.6, indicating satisfactory reliability. The standardized reliability coefficient for all measurement scales was 0.897, signifying high data reliability and good internal consistency. For overall variable validity, the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity were employed. Various indicators, such as KMO values, communalities, variance explained, and factor loading coefficients, all met reasonable thresholds, validating the validity of the factors. Consequently, the study proceeded to the next stage of examination.

Table 1. Descriptive Statistics Table for the Survey

		Number	Percentage
Gender	Male	569	56.35%
	Female	441	43.7%
Parental occupations	Enterprise employee	260	25.70%
	Worker	240	23.80%
	Party/government and public sector personnel	187	18.51%
	Farmer	163	16.14%
	Self-employed individual	160	15.84%
Major	Engineering and Manufacturing	411	40.69%
	Business and Management, Social Sciences	329	32.57%
	Services	270	26.73%

Upon entering the formal survey distribution phase, the questionnaire was primarily targeted at third-year students who had undergone innovative entrepreneurship education in 11 vocational colleges in Shanghai. In March 2023, a total of 1200 questionnaires were distributed using simple random sampling through wjx.cn in the 11 vocational colleges. After eliminating invalid responses, a total of 1010 valid questionnaires were retained, resulting in a response rate of 90.2%. Specific details are provided in Table 1.

3.2. Measurements

The research model consists of five variables, namely entrepreneurship education, individual attitudes, entrepreneurial subjective norms, perceived Behavioral control, and entrepreneurial intentions. To ensure the reliability and validity of the questionnaire, all items in this study were adapted from existing validated scales and revised based on the actual development of entrepreneurship education in Chinese higher vocational institutions. All items were measured using a Likert 5-point scale, ranging from "strongly disagree" (1) to "strongly agree" (5). Statistical analysis of the questionnaire was conducted using the data analysis tool SPSS 26.0.

The entrepreneurship education scale employed in this study was developed by Liu Jiafeng. This instrument consists of three items designed to assess students' perceptions of the effectiveness of entrepreneurship education. The three items encompass an evaluation of the guidance provided by the school's entrepreneurship education for future entrepreneurial endeavors, the efficacy of imparting entrepreneurial skills and knowledge through school entrepreneurship education, and the stimulation of entrepreneurial enthusiasm as a result of the school's entrepreneurship education [49].

The personal attitude scale adopted in this study was developed by Linan and Chen. It comprises four items aimed at primarily measuring individuals' attitudes toward tools and emotional aspects after receiving entrepreneurship education. The items include: Being an entrepreneur implies more advantages than disadvantages to me; A career as entrepreneur is attractive for me; If I had the opportunity and resources, I'd like to start a firm; Being an entrepreneur would entail great satisfactions for me; Among various options, I would rather be an entrepreneur. (Cronbach α=0.855)

The perceived behavioral control questionnaire utilized in this study was compiled by Yan Ni et al[35]. This questionnaire consists of six items designed to measure students' perceptions, after receiving entrepreneurship education, regarding their control over resources, potential opportunities, and challenges associated with entrepreneurial endeavors. Sample items include statements such as "I believe engaging in entrepreneurship is my own decision," "I believe I have sufficient knowledge, skills, and experience to support my entrepreneurial activities," and "I can secure enough funding to support my entrepreneurial activities" (Cronbach's $\alpha = 0.825$).

The subjective norms scale, modified from the entrepreneurial support scale developed by Monica et al. [50], is designed to assess students' perceptions of injunctive norms and descriptive norms after undergoing entrepreneurship education. This scale includes three items: "Through entrepreneurship education, I can discern the support of family for my entrepreneurial ideas," "Through entrepreneurship education, I can more effectively perceive the support of friends for my entrepreneurial endeavors," and "Through entrepreneurship education, I can recognize the support of key individuals in other interpersonal networks for my entrepreneurial actions." (Cronbach α=0.842)

The entrepreneurial intention questionnaire employed in this study is derived from the questionnaire developed by Linan and Chen [51]. This dimension primarily assesses

students' fundamental perceptions of entrepreneurial intentions after undergoing entrepreneurship education. The questionnaire comprises six items, including statements such as "I am ready to do anything to be an entrepreneur," "My professional goal is to become an entrepreneur," and "I will make every effort to start and run my own firm." (Cronbach's α = 0.765).

4. Results

4.1. Reliability and Validity Analysis

In this study, SPSS 26.0 and AMOS 24.0 were employed to conduct reliability and validity tests on the five variables: entrepreneurship education, individual attitudes, perceived behavioral control, subjective norms, and entrepreneurial intentions.

4.1.1. Subsubsection

Reliability analysis is conducted to assess the consistency and internal reliability of the questionnaire results. In this study, Cronbach's α coefficient was employed to measure the reliability, where a coefficient scores above 0.7 is deemed acceptable, while a score below 0.7 is considered unacceptable.

The Cronbach's α coefficients for the entrepreneurship education scale, individual attitudes scale, perceived behavioral control scale, subjective norms scale, and entrepreneurial intentions scale were found to be 0.864, 0.855, 0.825, 0.842, and 0.765, respectively. All these coefficients surpass the threshold of 0.7, indicating that the scales exhibit good reliability.

4.1.2. Validity

Regarding the scale validity, an initial assessment was conducted using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's sphericity test. The KMO test yielded a coefficient of 0.897, and the Bartlett test chi-square value was 4329.488 with 190 degrees of freedom (df), resulting in a P-value of 0.000 (<0.01). These results indicate that the scale is highly suitable for factor analysis.

Principal component analysis was applied to the initial 22 items, revealing a total of 5 factors with eigenvalues exceeding 1 and cumulative explained variance of 67.2%. This suggests that the extraction of 5 factors from the original data adequately explains the variability represented by the 22 items.

The Rotating Component Matrix was utilized to determine the factor assignments for each item. As indicated in Table 1, all factor loadings are above 0.7, and each item aligns with its corresponding factor, affirming the construct validity of the scale. (See table 2)

Table 2. Rotating Component Matrix

	Component				
	1	2	3	4	5
Entrepreneurship Education 3	0.792				
Entrepreneurship Education 2	0.792				
Entrepreneurship Education 1	0.785				
Individual Attitudes 1		0.797			
Individual Attitudes 2		0.783			
Individual Attitudes 4		0.783			
Individual Attitudes 3		0.717			
Subjective Norms 1			0.803		
Subjective Norms 2			0.799		
Subjective Norms 3			0.770		
Perceived Behavioral Control 3				0.851	
Perceived Behavioral Control 1				0.848	
Perceived Behavioral Control 4				0.847	
Perceived Behavioral Control 2				0.820	
Perceived Behavioral Control 5				0.813	
Perceived Behavioral Control 6				0.811	
Entrepreneurial Intentions 5					0.805
Entrepreneurial Intentions 6					0.796
Entrepreneurial Intentions 1					0.785
Entrepreneurial Intentions 2					0.712
Entrepreneurial Intentions 4					0.706
Entrepreneurial Intentions 3					0.701
Extraction method: Principal component analysis.					
Rotation method: Kaiser standardized maximum variance method.					

Construct validity was assessed using AMOS 24.0 through analyses of five-factor, four-factor, three-factor, two-factor, and one-factor models. The results indicated that the five-factor model exhibited the most favorable fit, with a X2/df value of 2.65 (<3), RMSEA of 0.035 (<0.05), NFI of 0.915, CFI of 0.934, and RFI of 0.964, all surpassing the threshold of 0.9. These findings affirm that the construct validity of the model is deemed satisfactory. (See Table 3)

Table 3. Construct Validity

X2/df	RMSEA	NFI	CFI	RFI
2.65	0.035	0.915	0.934	0.964

From Table 4, it is evident that the factor loadings of the

latent variables, namely entrepreneurship education, individual attitudes, perceived behavioral control, subjective norms, and entrepreneurial intentions, corresponding to their respective items, all exceed 0.7. This indicates that each latent variable adequately represents the items associated with it. The average variance extracted (AVE) for each latent variable is greater than 0.5, and the composite reliability (CR) for each is above 0.8, signifying satisfactory convergent validity.

According to Table 5, it is discernible that significant correlations ($p<0.01$) exist among entrepreneurship education, individual attitudes, perceived behavioral control, entrepreneurial subjective norms, and entrepreneurial intentions. The absolute values of the correlation coefficients are all below 0.5 and are smaller than the square root of their corresponding average variance extracted (AVE). This observation suggests that there is a moderate level of correlation among the latent variables, while concurrently indicating a satisfactory degree of differentiation between them. Consequently, the discriminant validity of the scale is deemed ideal.

Table 4. Factor Loading, Average Variance Extracted and Composite Reliability

			Estimate	AVE	CR
A3	<---	Entrepreneurship Education	0.748	0.585	0.808
A2	<---	Entrepreneurship Education	0.812		
A1	<---	Entrepreneurship Education	0.732		
B4	<---	Individual Attitudes	0.956	0.807	0.944
B3	<---	Individual Attitudes	0.923		
B2	<---	Individual Attitudes	0.876		
B1	<---	Individual Attitudes	0.834		
C3	<---	Subjective Norms	0.793	0.676	0.862
C2	<---	Subjective Norms	0.819		
C1	<---	Subjective Norms	0.854		
D6	<---	Perceived Behavioral Control	0.921	0.742	0.945
D5	<---	Perceived Behavioral Control	0.912		
D4	<---	Perceived Behavioral Control	0.816		
D3	<---	Perceived Behavioral Control	0.834		
D2	<---	Perceived Behavioral Control	0.783		
D1	<---	Perceived Behavioral Control	0.892		
E6	<---	Entrepreneurial Intentions	0.793	0.712	0.937
E5	<---	Entrepreneurial Intentions	0.784		
E4	<---	Entrepreneurial Intentions	0.801		
E3	<---	Entrepreneurial Intentions	0.911		
E2	<---	Entrepreneurial Intentions	0.865		
E1	<---	Entrepreneurial Intentions	0.898		

Table 5. Correlations, AVE and Square Roots of AVE of Study Variables

	Entrepreneurship Education	Individual Attitudes	Entrepreneurial subjective norms	Perceived Behavioral Control	Entrepreneurial Intentions
Entrepreneurship Education	(0.585)				
Individual Attitudes	0.334**	(0.807)			
Entrepreneurial subjective norms	0.262**	0.326**	(0.676)		
Perceived Behavioral Control	0.206**	0.300**	0.305**	(0.742)	
Entrepreneurial Intentions	0.418**	0.447**	0.418**	0.431**	(0.712)
The square roots of AVE	0.765	0.898	0.822	0.861	0.844

**p<0.01, *p<0.05

AVE values are reported in the parentheses.

To mitigate the potential impact of severe common method bias, the present study conducted the Harman's single-factor test to examine the presence of such bias. The results indicated the presence of five factors with eigenvalues surpassing 1, and the maximum factor variance explained was 16.57%, which falls below the threshold of 40%. Hence, it is concluded that there is no substantial evidence of severe common method bias in the dataset.

4.2. Descriptive Statistical Analysis and Correlation Analysis

According to the findings presented in Table 6, a positive correlation was observed between entrepreneurship education and entrepreneurial intentions ($\beta=0.418$, $p<0.01$), individual

attitudes (β=0.334, p<0.01), and perceived behavioral control (β=0.206, p<0.01), and entrepreneurial subjective norms (β=0.262, p<0.01). Moreover, individual attitudes exhibited positive correlations with entrepreneurial intentions (β=0.447, p<0.01), entrepreneurial subjective norms (β=0.326, p<0.01), and perceived behavioral control (β=0.300, p<0.01). Entrepreneurial subjective norms displayed positive associations with entrepreneurial intentions (β=0.418, p<0.01) and perceived behavioral control (β=0.305, p<0.01). Additionally, perceived behavioral control manifested a positive correlation with entrepreneurial intentions (β=0.431, p<0.01).

4.3. Hypotheses testing

Controlling for gender, parental occupation, and major, the outcomes are presented in Table 7. Model 8 reveals that the unstandardized coefficient for entrepreneurship education is 0.399 with a significance level of P<0.01, indicating a positive correlation with entrepreneurial intentions. Thus, Hypothesis H4 is assumed. Model 2 in Table 6 indicates that the unstandardized coefficient for entrepreneurship education is 0.3 with P<0.01, suggesting a positive correlation with individual attitudes, thereby supporting Hypothesis H1.

Model 6 in Table 7 shows that the unstandardized coefficient for entrepreneurship education is 0.236 with P<0.01, indicating a positive correlation with perceived behavioral control, supporting Hypothesis H2.

Model 4 in Table 7 indicates that the unstandardized coefficient for entrepreneurship education is 0.255 with P<0.01, suggesting a positive correlation with entrepreneurial subjective norms, supporting Hypothesis H3.

In Model 9 of Table 7, the unstandardized coefficient for individual attitudes is 0.236 with P<0.01, indicating a significant mediating effect. The unstandardized coefficient for entrepreneurship education is 0.231 with P<0.01, suggesting a significant direct effect. The bootstrap 95% confidence interval for both the direct and mediating effects of individual attitudes on the relationship between entrepreneurship education and entrepreneurial intentions does not include 0 (refer to Table 8), confirming the significant mediating effect of individual attitudes. Consequently, Hypothesis H5 is validated.

Similarly, in Model 9 of Table 7, the unstandardized coefficient for entrepreneurial subjective norms is 0.195 with P<0.01. The bootstrap 95% confidence interval for the mediating effect of entrepreneurial subjective norms does not include 0 (refer to Table 8), indicating a significant mediating effect. Therefore, Hypothesis H6 is substantiated.

In Model 9 of Table 7, the unstandardized coefficient for perceived behavioral control is 0.2 with P<0.01. The bootstrap 95% confidence interval for the mediating effect of perceived behavioral control does not include 0 (refer to Table 8), suggesting a significant mediating effect. Thus, Hypothesis H7 is affirmed.

Table 6. Means, Standard Deviations, and Correlations of Study Variables

	Mean	SD	Parents' occupation	Gender	Major	Entrepreneurship Education	Individual Attitudes	Entrepreneurial subjective norms	Perceived Behavioral Control	Entrepreneurial Intentions
Parents' occupation	1.720	1.046	1							
Gender	1.440	0.496	-0.036	1						
Major	1.330	0.650	0.819	-0.01	1					
Entrepreneurship Education	3.713	0.859	-0.035	0.054	-0.04	1				
Individual Attitudes	4.060	0.784	-0.155**	0.016	-0.152**	0.334**	1			
Entrepreneurial subjective norms	3.827	0.856	-0.149**	0.04	-0.128**	0.262**	0.326**	1		
Perceived Behavioral Control	3.612	1.015	-0.176**	0.021	-0.130**	0.206**	0.300**	0.305**	1	
Entrepreneurial Intentions	3.987	0.832	-0.166**	0.063	-0.122**	0.418**	0.447**	0.418**	0.431**	1

**p<0.01, *p<0.05

Table 7. Unstandardized Estimates (Standard Error) of Path Analyses Results

Variable	Individual Attitudes		Entrepreneurial subjective norms		Perceived Behavioral Control		Entrepreneurial Intentions		
Constant	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Control variables									
Parebtal profession	-0.067(.06)	-0.067(.05)	-0.107(.06)	-0.106(.06)	-0.204**(.07)	-0.204(.07)	-0.156*(.06)	-0.155**(.06)	-0.078(.05)
Gender	0.019(.07)	-0.009(.07)	0.061(.08)	0.037(.07)	0.029(.09)	0.007(.09)	0.095(.07)	0.058(.07)	0.051(.06)
Major	-0.095(.09)	-0.080(.09)	-0.027(.10)	-0.015(.10)	0.065(.12)	0.077(.12)	0.049(.10)	0.070(.09)	0.076(.08)
Independent variables									
Entrepreneurship Education		0.300**(.04)		0.255**(.04)		0.236**(.05)		0.399**(.04)	0.231**(.04)
Intermediate variables									
Individual Attitudes									0.236**(.04)
Entrepreneurial subjective norms									0.195**(.04)
Perceived Behavioral Control									0.200**(.03)
R2	0.026	0.134	0.024	0.089	0.032	0.072	0.031	0.200	0.399
F		19.248		12.143		9.643		31.207	47.077

**p<0.01, *p<0.05

Table 8. The Direct Effect, and Total Effect and Mediating Effect of Research Variables

	Effect	Standard error	BootLLCI	BootULCI	Effect proportion
Mediating effect of Individual Attitudes	0.0708	0.0195	0.0354	0.1108	17.76%
Mediating effect of Entrepreneurial subjective norms	0.0497	0.0131	0.0258	0.0768	12.47%
Mediating effect of Perceived Behavioral Control	0.0473	0.0139	0.0227	0.0772	11.86%
Direct effect	0.231	0.0381	0.1565	0.3058	57.94%
Total effect	0.3987	0.047	0.303	0.488	

4.4. Hypotheses Testing

The independent samples t-test was employed to assess the potential influence of demographic factors on the variables within the scale. Through a comparative examination of distinctions among various respondent categories, statistically significant differences were observed between genders concerning entrepreneurship education, individual attitudes, entrepreneurial subjective norms, perceived behavioral control, and entrepreneurial intentions. As indicated in Table 9, all p-values associated with these variables were found to be less than 0.01. These outcomes reveal a noteworthy discrepancy, with male respondents exhibiting significantly higher scores in entrepreneurial intentions compared to their female counterparts. This observation suggests a distinct and statistically significant gender-based divergence in the strength of entrepreneurial inclination, favoring males in this regard.

The data was stratified by gender, resulting in two groups: a female group comprising 441 samples and a male group consisting of 569 samples. Controlling for parental occupation and major, the data were separately inputted into the model, and path analysis was conducted using Amos 24.0. The results are presented in Table 10.

Table 10 reveals that in the path from entrepreneurship education to entrepreneurial intentions, the unstandardized coefficient for males is 0.475, while for females, it is 0.304. This indicates that, compared to females, entrepreneurship education has a more substantial impact on the entrepreneurial intentions of males. Across all influencing paths, the unstandardized coefficients for males are consistently higher than those for females, signifying gender disparities in the various pathways through which vocational entrepreneurship education influences students' entrepreneurial intentions. Moreover, the impact of vocational entrepreneurship education on males is more pronounced than on females. Thus, Hypothesis H8 is confirmed.

Table 9. Independent-samples T Test

	Male Mean(SD)	Female Mean(SD)	T	P
Entrepreneurship Education	3.99(0.79)	3.96(0.73)	1.46	0.002
Individual Attitudes	4.01(0.89)	3.96(0.82)	2.68	0.009
Entrepreneurial subjective norms	3.89(0.81)	3.76(0.76)	1.35	0.009
Perceived Behavioral Control	3.58(0.79)	3.23(0.74)	2.37	0.008
Entrepreneurial Intentions	3.95(0.84)	3.44(0.77)	1.94	0.000

Table 10. Unstandardized Coefficients and Standard Errors of Various Paths for Different Genders

Paths	Male			Female		
	Unstandardized Coefficients (SE)	R2	F	Unstandardized Coefficients (SE)	R2	F
Entrepreneurship Education→ Individual Attitudes(H1)	0.357***(.05)	0.160	17.713	0.223***(.06)	0.120	9.784
Entrepreneurship Education→ Perceived Behavioral Control(H2)	0.281***(.07)	0.085	8.693	0.175***(.08)	0.085	6.648
Entrepreneurship Education→ Entrepreneurial subjective norms(H3)	0.303***(.06)	0.112	11.807	0.186***(.07)	0.085	6.699
Entrepreneurship Education→ Entrepreneurial Intentions(H4)	0.475***(.05)	0.242	29.734	0.304***(.06)	0.193	17.190
Individual Attitudes→ Entrepreneurial Intentions	0.474***(.06)	0.210	24.806	0.422***(.07)	0.237	22.330
Perceived Behavioral Control→ Entrepreneurial Intentions	0.337***(.05)	0.162	18.080	0.328***(.05)	0.258	25.060
Entrepreneurial subjective norms→ Entrepreneurial Intentions	0.439***(.05)	0.200	23.267	0.311***(.06)	0.195	17.483

***p<0. 001, **p<0.01, *p<0.05

This study adopts a dual approach, integrating theoretical models and empirical data, to delve into the intricate mechanisms governing the impact of vocational entrepreneurship education on the entrepreneurial intentions of tertiary vocational students. The investigation reveals a discernible and statistically significant influence of entrepreneurship education on multiple dimensions, encompassing entrepreneurial intentions, individual attitudes, perceived behavioral control, and entrepreneurial subjective norms within the context of tertiary vocational education. Moreover, the study unravels the mediating roles played by individual attitudes, perceived behavioral control, and entrepreneurial subjective norms in the pathways through which entrepreneurship education shapes students' entrepreneurial intentions. The intricate interplay of these factors is encapsulated in a comprehensive model pathway diagram, offering a visual representation of the intricate dynamics inherent in the relationship between vocational entrepreneurship education and the entrepreneurial aspirations of students in tertiary vocational education. This synthesized model serves not only as a theoretical framework but also as an empirical manifestation of the nuanced

associations identified in the study. By elucidating the multifaceted impact of vocational entrepreneurship education, the study contributes to a deeper understanding of the complex interrelations shaping entrepreneurial intentions among students in tertiary vocational settings.

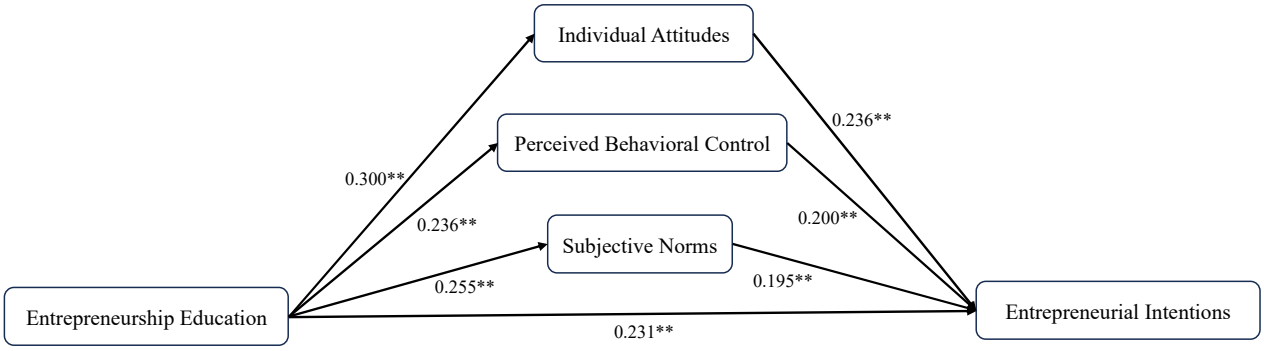

Figure 2. Model path diagram

5. Discussion

This study, anchored in the Theory of Planned Behavior, scrutinizes the factors influencing entrepreneurial intentions among Chinese higher vocational college students who have undergone entrepreneurship education. Through empirical analysis, the research delves into the relationships between entrepreneurship education and individual attitudes, entrepreneurial subjective norms, perceived behavioral control, and entrepreneurial intentions. The findings underscore that entrepreneurship education effectively stimulates the generation of individual entrepreneurial intentions. Concurrently, entrepreneurship education shapes the individual attitudes, subjective norms, and perceived behavioral control of higher vocational students, subsequently influencing individual entrepreneurial intentions and fostering proactive engagement in future entrepreneurial endeavors. These outcomes align harmoniously with the fundamental tenets of the Theory of Planned Behavior. The plausible pathways through which entrepreneurship education influences pertinent factors in higher vocational colleges in China may intricately relate to the curriculum's design. Entrepreneurship courses in higher vocational education impart training, activities, practical insights, and policy interpretations. Employing diverse formats such as lectures and competitions, students gain proficiency in evaluating the challenges of entrepreneurial activities, enrich their management knowledge in business operations, enhance entrepreneurial practical skills, and perceive robust social support[52]. Furthermore, in contrast to previous research, this study specifically interrogates the impact of entrepreneurship education on the entrepreneurial intentions of students of different genders within the context of Chinese higher vocational colleges. The results reveal that among students who have undergone entrepreneurship education, males exhibit higher overall entrepreneurial intentions than females. The coefficients of various pathways, including the impact of entrepreneurship education on individual attitudes, perceived behavioral control, and entrepreneurial subjective norms, are higher for males than females. These findings authenticate the existence of gender differences in students' entrepreneurial intentions within the higher education landscape in China, a phenomenon notably pronounced in higher vocational colleges. The rationale behind such disparities may be intertwined with psychological traits, societal culture, and available entrepreneurial environment resources. Primarily, in the process of gender role socialization, males and females gradually assume gender roles aligned with their own traits. Males demonstrate stronger career aspirations, higher risk propensity, and superior risk control characteristics compared to females [53]. The entrepreneurship education in Chinese higher vocational colleges may not explicitly address this situation, resulting in lower entrepreneurial intentions among females. Secondly, from a societal culture perspective, women are perceived to shoulder more family responsibilities, posing challenges to entrepreneurial pursuits for female students in higher vocational colleges. This disadvantaged position may hinder female students from expanding their social networks, leading to misguided assessments of their own entrepreneurial capabilities [54]. The current entrepreneurship education curriculum at the higher vocational level in China remains relatively deficient in aiding female students in forming accurate entrepreneurial identities and dismantling stereotypical impressions [55]. Lastly, from the perspective of analyzing entrepreneurial environmental network resources, female students in higher vocational colleges encounter challenges in establishing crucial relationship networks for entrepreneurship. On one hand, the overall social network of females is lower than that of males, as they are often excluded from male-dominated advanced relationship networks[56]. On the other hand, female social networks are more family-centric, comprising fragmented information with significant disparities from entrepreneurial actions[57]. The current entrepreneurship education curriculum at the higher vocational level in China is inadequate in providing quality social network support for female students.

6. Research Implications and Limitations

6.1. Implication

From a theoretical standpoint, this study employs the theory of planned behavior to scrutinize the influence of innovative entrepreneurship education in Chinese higher vocational institutions on students' entrepreneurial intentions. The research contributes to the extant literature by enriching antecedent investigations into entrepreneurial behavior among higher vocational students. The study investigates the correlations between students' entrepreneurial intentions and

variables such as major background, entrepreneurial attitudes, entrepreneurial subjective norms, and perceived behavioral control. Furthermore, it conducts a nuanced analysis of the impact of entrepreneurship education on the entrepreneurial intentions of students of different genders within higher vocational education. Methodologically, the study adopts a questionnaire survey approach, enhancing our comprehension of the intricate relationships among factors affecting students' entrepreneurial intentions in the context of higher vocational entrepreneurship education and validating the applicability of the theory of planned behavior in the Chinese higher vocational context.

In terms of practical implications, the empirical outcomes of this study furnish evidentiary support for the continual enhancement of entrepreneurship education in Chinese higher vocational colleges. First and foremost, the implementation of innovative entrepreneurship education in higher vocational institutions necessitates a focused consideration of students' gender characteristics. Targeted initiatives should be undertaken to augment the entrepreneurial enthusiasm of female students. This involves the development of entrepreneurship education courses tailored specifically for female higher vocational students, thereby elevating their entrepreneurial intentions. Additionally, efforts should be made to provide more opportunities for independent entrepreneurial practices for female students, facilitate face-to-face interactions with successful female entrepreneurs serving as role models, and broaden support channels for female graduates in entrepreneurship. Secondly, with consideration for the market development trends associated with each major, the effectiveness of entrepreneurship education curricula should be enhanced accordingly. Subsequent to the evaluation of entrepreneurship education implementation outcomes, more comprehensive guidance should be offered to students demonstrating high entrepreneurial intentions. This includes the selection of outstanding entrepreneurial projects for entry into the institution's entrepreneurship park, along with the provision of rent incentives, teacher support, and other supportive measures to enhance the specificity and depth of entrepreneurship education. Thirdly, the establishment of a conducive cultural environment and support system for student entrepreneurship is paramount. Entrepreneurship education in higher vocational institutions should be conceived as a comprehensive system, integrating government policy resources, academic theory and technical resources, as well as practical resources from surrounding enterprises. This entails inviting accomplished entrepreneurs, successful alumni entrepreneurs, researchers with insights into cutting-edge technologies, and government officials well-versed in entrepreneurship support policies to deliver lectures and serve as part-time entrepreneurship educators. These endeavors collectively contribute to the cultivation of a favorable entrepreneurship education ecosystem within the institution.

6.2. Research Limitations and Recommendations for Future Research

This study is subject to several inherent limitations. Firstly, due to temporal constraints, the research exclusively gathered cross-sectional data from third-year vocational college students who had undergone innovative education. The absence of pre-test data pertaining to innovative education precludes the comprehensive depiction of enhancements in the five facets of entrepreneurship education for vocational college students. To address this limitation in future research, the inclusion of pre-tests is recommended to record and analyze the entrepreneurial elements of students before their engagement in entrepreneurship education, thereby facilitating an assessment of the role played by entrepreneurship education in fostering the development of psychological factors influencing entrepreneurial intentions.

Secondly, the research adopted a questionnaire survey as the primary data collection method. However, entrepreneurial action, being a multifaceted behavioral decision, is also influenced by cultural contexts, pivotal developmental events, and significant interpersonal influences. Future researchers are encouraged to employ additional research methods, such as interviews, to conduct a more nuanced analysis of the changes in entrepreneurial psychology and decision-making mechanisms among vocational college students.

Thirdly, the study focused on students from three distinct categories of majors at the vocational college level, revealing variances in entrepreneurial intentions among students of different majors post entrepreneurship education. Nevertheless, the study falls short of illustrating the specific influence characteristics of learning experiences within particular majors on entrepreneurial intentions. Each factor's impact on entrepreneurial intentions may be intricately linked to these learning experiences, thereby giving rise to divergent entrepreneurial intentions among students from various majors. Subsequent research should aim to intensify the examination of diverse major-specific learning experiences and elucidate the mechanisms through which these experiences influence students' entrepreneurial intentions.

Acknowledgments

This study was supported by the study on the mechanism of industrial-education co-cultivation for interdisciplinary technical and skilled personnel in the Chinese intelligent manufacturing industry [Planning Project for the 14th Five-Year Plan of National Education Sciences (BJA210093)].

References

[1] M. Y. Cheng, W. S. Chan and A. Mahmood, “The effectiveness of entrepreneurship education in Malaysia,” Education+ training, vol. 51, pp. 555-566, Sep. 2009.

[2] H. Zhang and Q. Zha, “What Functions Does Entrepreneurship Education Organization Play in Higher Vocational Colleges? - An Empirical Study Based on 15 Case Colleges,” Higher Education Exploration, vol.3, pp: 115-123, 2021.

[3] S. Zairong and H. Haiyan, “Philosophical Reflections on the Innovation and Entrepreneurship Education of Higher Vocational Colleges in New Era,” Vocational and Technical Education, vol. 39, pp: 50-54, Mar. 2018.

[4] U.Hytti, and C. O’Gorman, “What is “enterprise education”? An analysis of the objectives and methods of enterprise education programmes in four European countries,” Education+ training, vol. 46, pp. 11-23, Jan. 2004.

[5] Q. X. Wang, “Research on the Development Strategies of Higher Vocational & Technical Colleges,” Ph.D. dissertation, Dept. Elect. Eng., Huazhong University of Science and Technology, China, 2004.

[6] L. Le and S. P. Lei. “Alienation and Return:Reshaping the Value Orientation of Innovation and Entrepreneurship Education in Vocational Colleges,” Journal of Vocational Education, vol. 9, pp: 31-36, Oct. 2020.

[7] C. Xi and L. Shi-yong, “Construction of Measurement Index System and Weight Analysis of University Innovation and Entrepreneurship Education Ecosystem,” University Education Science, vol. 1, pp: 99-106, Jan. 2020.

[8] E. Xue and J. Li, China's Vocational Education Reform. Singapore: Springer, 2022, pp. 107-124.

[9] W. Hu, and W. P. Wei, “From High Adaptation to High Quality: Challenges. Orientation and Path of Vocational Education Reform in the New Era Hu Wei & Shi Weiping,” Research in Educational Development, vol. 42, pp: 30-7, May. 2022.

[10] Y. Wang, X. Duan, and K. Wu, “The Dilemma and Outlet of the Industry Transformation and Upgrading of the City's‘Vacating Cage to Change Birds’: Based on the Investigation and Study in Beijing,” Scientia Geographica Sinica, vol. 40, pp. 786-792, May. 2020.

[11] Wei H, Weiping S, “From Adaptation to High Quality: Positioning, Challenges, and Paths of New Era Vocational Education Reform. Education Development Research. 9th ed. vol. 42, Jiapeng S,” World Science Education Press, pp. 30-37, May. 2022.

[12] Guofeng Z, Juyin L, Rongjia Z, “Research on the Quality Evaluation System of Entrepreneurship Education in Higher Vocational Colleges,” China Vocational and Technical Education, vol. 4, pp. 87-90, Jan. 1993.

[13] J. R. Yin, W. D. Wu, C. J. Ren, and X. C. Wu, “The Difficulties, Measures, and Prospect of the Intension-type Devel-opmentof Innovation and Entrepreneurship Education in Universities——Based on the Exploration and Practice of In-novation and Entrepreneurship Education in Zhejiang University for 20 Years,” Research in Higher Education of Engineering, vol. 3, pp. 150-154, May. 2023.

[14] E. Santarelli and M. Vivarelli, “Entrepreneurship and the process of firms’ entry, survival and growth,” Industrial and corporate change, vol. 16, pp. 455-488, Jun. 2007.

[15] I. Ajzen, “The theory of planned behavior,” Organizational behavior and human decision processes, 2nd ed. vol. 50, pp. 179-211, Dec. 1991.

[16] I. Ajzen, “From intentions to actions: A theory of planned behavior,” Action control: From cognition to behavior: Springer, vol. 2, pp. 11-39, 1985.

[17] A.D. Farashah, “The effects of demographic, cognitive and institutional factors on development of entrepreneurial intention: Toward a socio-cognitive model of entrepreneurial career,” Journal of International Entrepreneurship, vol. 13, pp. 452-476, Mar. 2015.

[18] A. Fayolle, B. Gailly, N. Lassas-Clerc, “Assessing the impact of entrepreneurship education programmes: a new methodology,” Journal of European Industrial Training, vol. 30, pp. 701-720, Dec. 2006.

[19] Y.H. Zhong and J. H. Wang, “The Influencing Factors and Mechanism of DynamicChanges of College Students’ Entrepreneurial Intention--Quantitative Investigation Based on the Theory of Planned Behavior,” Journal of Educational Science of Hunan Normal University, vol. 22, pp. 89-99, Jan. 2023.

[20] L. Kolvereid, “Prediction of employment status choice intentions,” Entrepreneurship Theory and Practice, vol. 21, pp. 47-58, Oct. 2023.

[21] B. Bird, “Implementing Entrepreneurial Ideas: The Case for Intention,” The Academy of Management Review, vol. 3, Jul. 1988.

[22] W. Ju, and X. H. Zhou, “Academic Entrepreneurship and Institutional Environment: An Empirical Study on the Entrepreneurial Intention of Academics under Institutional Incentives,” Nanjing Journal of Social Sciences, vol. 21, pp. 41-50, Apr. 2021.

[23] N. F. Krueger Jr, M. D. Reilly, and A. L. Carsrud, “Competing models of entrepreneurial intentions,” Journal of business venturing, vol. 15, pp. 411-32, Aug. 2000.

[24] H. Zhu and Y. L Zhang, “Effects of Entrepreneurship Education in Beijing Colleges on Students' Entrepreneurial Intentions: From the Perspective of Student Engagement,” TSINGHUA JOURNAL OF EDUCATION, vol. 35, pp: 100-7, Dec. 2014.

[25] G. W. Dyer Jr, “Toward a theory of entrepreneurial careers,” Entrepreneurship theory and practice, vol. 19, pp: 7-21, Jan. 1995.

[26] L. W. Wardana, B. S. Narmaditya, and A. Wibowo, “The impact of entrepreneurship education and students' entrepreneurial mindset: the mediating role of attitude and self-efficacy,” Heliyon, vol. 6, May. 2020.

[27] S. Pfeifer, N. Šarlija and M. Zekić Sušac, “Shaping the entrepreneurial mindset: Entrepreneurial intentions of business students in Croatia,” Journal of Small Business Management, 1st ed. vol. 54, pp. 102-17, Nov. 2019.

[28] S. Farny, S. H. Frederiksen, and M. Hannibal. A CUL Ture of entrepreneurship education. Institutionalization of Entrepreneurship Research, CA: London, 2019, pp. 38-59.

[29] L. Kolvereid, “Organizational employment versus self-employment: Reasons for career choice intentions,” Entrepreneurship theory and practice, vol. 20, pp. 23-31, Apr. 1996.

[30] J. A. Katz. “Advances in Entrepreneurship, Firm Emergence, and Growth: Rationale and Realizations,” Reflections and Extensions on Key Papers of the First Twenty-Five Years of Advances, vol. 20, pp. 219-30, Dec. 2018.

[31] X. ZHENG and X. ZHOU, “Influence of Social Norms on Entrepreneurial Activities,” China Economic Quarterly, vol. 17, pp. 189-220, Apr. 2018.

[32] F. Liñán and Y. W. Chen, “Development and cross–cultural application of a specific instrument to measure entrepreneurial intentions,” Entrepreneurship theory and practice, vol. 33, pp. 593-617, May. 2019.

[33] D. V. Holland and D. A. Shepherd, “Deciding to persist: Adversity, values, and entrepreneurs’ decision policies,” Entrepreneurship theory and practice, vol. 37, pp. 331-358, Mar. 2013.

[34] J. Lee and J. Wang, “Developing entrepreneurial resilience: Implications for human resource development,” European Journal of Training and Development, vol. 41, pp. 519-539, Jul. 2017.

[35] Y. Ni, Y. Wenyi and R. Li, “The Impact of College Students’ Cognition of New Formsof Business on Their Employment Intention--Empirical Analysis Based on Theory of Planned Behavior,” Social Security Studies, vol. 3, pp. 80-91, Mar. 2023.

[36] W. Jianwen, “Parent's Social Status and Social Capital: How Family mpact the Employment Intent of College Students,” YOUTH STUDIES, vol. 2, pp. 11-17, Apr. 2009.

[37] Y. Miaomiao and Z. Xiaoyan, “A study of college students entrepreneurial capability promotion path in China,” Science Research Management, vol. 40, pp. 142-150, Oct. 2019.

[38] N. Bosma, J. Hessels, V. Schutjens, “Entrepreneurship and role models,” Journal of economic psychology, vol. 33, pp. 410-424, Apr. 2012.

[39] H. Li, X. Zhang, J. Zhang, and Y. Zhang, “Is Persistence Victory? A Review and Prospects of Entrepreneurial

Persistence Research," Human Resources Development in China, vol. 38, pp. 6-24, Apr. 2021.

[40] I. Ajzen, "Residual Effects of Past on Later Behavior: Habituation and Reasoned Action Perspectives, " Personality and Social Psychology Review, vol. 6, pp. 107-122, May. 2002.

[41] F. Wilson, D. Marlino, and J. Kickul, "Our entrepreneurial future: Examining the diverse attitudes and motivations of teens across gender and ethnic identity, " Journal of developmental entrepreneurship, vol. 9, pp. 177, Dec. 2004.

[42] P. D. Reynolds, W. B. Gartner and P. G. Greene. The entrepreneur next door: Characteristics of individuals starting companies in America: An executive summary of the Panel Study of Entrepreneurial Dynamics. SSRN 1262320. 2002.

[43] Z. Zhuo, Z. Long, X. Xu, "Effective Approaches and Challenges of Innovation and Entrepreneurship Education for College Students: A Systematic Study," China Educational Technology, vol. 6, pp. 80–88, Jun. 2022.

[44] W. Zhu, Y. Fang, Y. Liu and J. Si, "College Students' Entrepreneurial Intention and its Relationship with Entrepreneurial Values, Entrepreneurial Self-Efficacy: Gender Moderation Effect," Psychological Research, vol. 14, pp. 341–349, Aug. 2021.

[45] H. Bergmann, M. Geissler, and C. Hundt, "The climate for entrepreneurship at higher education institutions," Research Policy, vol. 47, pp.700–716, May. 2018.

[46] J. McGregor and D. Tweed, "Profiling a new generation of female small business owners in New Zealand: Networking, mentoring and growth," Gender, Work & Organization. vol. 9, pp. 420–438, Dec. 2002.

[47] N. S. Langowitz, M. Minniti, and P. Arenius, Global entrepreneurship monitor: 2004 report on women and entrepreneurship. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship. 2004.

[48] Y. Benschop, "The micro-politics of gendering in networking," Gender, Work & Organization, vol. 16, pp. 217–237, Feb. 2009.

[49] J. F. Liu, "Analysis of the Impact of Entrepreneurship Education on College Students' Entrepreneurial Intention Based on the Theory of Planned Behavior," Higher Education Exploration, vol. 5, pp. 117–122, May. 2017.

[50] M. Molino, V. Dolce, C. G. Cortese, and C. Ghislieri, "Personality and social support as determinants of entrepreneurial intention," Gender differences in Italy, PLoS One, vol. 13, Jun. 2018.

[51] L. Francisco and Y. W. Chen, "Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions," Entrepreneurship theory and practice, vol. 33, pp. 593–617, May. 2009.

[52] Q. Zhou, "Compilation and Application of the Learning Experience Scale of Entrepreneurship Education Courses in Higher Vocational Education," Vocational and Technical Education, vol. 41, pp. 36–43, Mar. 2020.

[53] B. R. Schiller and P. E. Crewson, "Entrepreneurial origins: A longitudinal inquiry," Economic inquiry, vol. 35, pp.523–531, Oct. 1997.

[54] Wu J, Li Y and Zhang D. "Identifying women's entrepreneurial barriers and empowering female entrepreneurship worldwide: a fuzzy-set QCA approach." International Entrepreneurship and Management Journal, vol. 15, pp.905–928, Feb. 2019.

[55] X. He, "Exploration of the Talent Cultivation Model of Innovation and Entrepreneurship for Female College Students in Higher Vocational Colleges," Hunan Social Sciences, vol. 2, pp. 166–172, Mar. 2019.

[56] J. M. Scott, R. T. Harrison, and J. Hussain, "The role of guanxi networks in the performance of women-led firms in China," International Journal of Gender and Entrepreneurship, vol. 6, pp. 68–82, Mar. 2014.

[57] X. Li, W. Ye, and H. Zhu, "Social Capital and Women's Entrepreneurship (1) - Cross-National (Regional) Comparative Study Based on GEM Data." Journal of Management Science, vol. 8, pp.112–126, Aug. 2017.