

Social Media Use and Entrepreneurial Intention among Vocational Students in China: The Role of Entrepreneurial Self-Efficacy and Gender

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ABSTRACT

This study explores the impact of social media use (SMU) on vocational students' entrepreneurial intention (EI) in China, examining entrepreneurial self-efficacy (ESE) as a mediating factor and gender as a moderating variable. Grounded in the Theory of Planned Behavior (TPB) and Social Cognitive Theory (SCT), structural equation modeling (SEM) was conducted using Amos 26 to analyze the hypothesized relationships. The study surveyed a sample of 1,250 vocational students from nine higher education institutions across China. SEM analysis tested the relationships between social media use, entrepreneurial self-efficacy, and entrepreneurial intention, while multi-group analysis examined gender differences. The results indicate that (1) both content-based and social-based social media use significantly enhance students' entrepreneurial self-efficacy, which positively influences entrepreneurial intention; (2) content-based social media use has a distinct positive impact on entrepreneurial self-efficacy; (3) gender moderates the relationship between social media use and entrepreneurial self-efficacy, with the effect being more pronounced among male students; and (4) social media use is a significant predictor of entrepreneurial intention among vocational students. These findings suggest that targeted social media strategies in entrepreneurship education could enhance students' entrepreneurial potential, with attention to gender-specific approaches.

Keywords: Content-based social media, Social-based social media, Entrepreneurial self-efficacy, Entrepreneurial intention, Gender

INTRODUCTION

Entrepreneurship plays a crucial role in driving economic growth, fostering innovation, reducing unemployment, and advancing societal progress (Chakraborty & Biswal, 2023). As entrepreneurial intention (EI) is widely regarded as a reliable predictor of entrepreneurial behavior, researchers have concentrated on identifying the factors that influence EI (Duong et al., 2024). The stronger an individual's EI, the more likely they are to engage in entrepreneurial activities (Ward et al., 2019).

Recently, as one of the most potential entrepreneurial populations, many researchers have shifted their attention to vocational students' EI (Ward et al., 2019). Many researchers found that vocational students possess practical skills and industry-specific knowledge, enabling them to play a significant role in entrepreneurial activities (Abdelfattah et al., 2022). Their entrepreneurial intention is influenced by social media use. Numerous studies have found that vocational students possess practical skills and industry-specific knowledge, enabling them to play a significant role in entrepreneurial activities (Chakraborty & Biswal, 2023). Their entrepreneurial intentions are influenced by social media use. For example, Nadlifatin et al. (2022) emphasized that digital technologies (including social media) enhance entrepreneurial intentions by facilitating the flow of information and reducing transaction costs, helping entrepreneurs identify opportunities. Additionally, the study by Troise et al. (2021) confirmed that social media strengthens entrepreneurs' social capital, which in turn improves their entrepreneurial performance. However, some studies have reached opposite conclusions regarding the impact of social media on vocational students' entrepreneurial awareness.

Ward et al. (2019) pointed out that although social media can enhance social capital, excessive use for entertainment purposes may detract from students' focus on entrepreneurship. According to Duong et al. (2024), the effect of social media on students' EI differs significantly between vocational students and undergraduate students. However, in developing countries, especially in China, the relationship between social media and EI among vocational students has been largely understudied (Wu & Tien, 2024). According to recent surveys, the proportion of self-employed graduates from leading vocational institutions in China reached 3.2% one year after graduation, surpassing that of graduates from general higher education institutions (Paftalika & Hananto, 2018). Entrepreneurship is particularly significant for vocational students, as it not only enhances their employability and innovation capacity but also helps them achieve self-fulfillment, promote industry development, and enhance their sense of social responsibility (Thi Loan et al., 2024). Therefore, despite the considerable entrepreneurial potential of vocational students, there is still a lack of research on how social media influences their entrepreneurial intentions, particularly in China, where the widespread use of social media provides vocational students with opportunities to access entrepreneurial resources, interact with potential partners, and enhance their personal reputation, thus stimulating their entrepreneurial interest (Troise et al., 2021).

Social media has become an integral part of daily life, playing a key role in influencing behavior, enhancing self-efficacy, and expanding access to information and social networks (Zhang & Chen, 2024). For example, content-based social media (e.g., Douyin, Bilibili) provides educational content and industry updates, helping vocational students build their entrepreneurial knowledge and improve their ability to identify and seize opportunities. In contrast, social-based social media (e.g., WeChat, Weibo) facilitates interactions with peers, mentors, and other members of the entrepreneurial community, helping students establish supportive social networks that offer both tangible resources and psychological encouragement for entrepreneurial success (Chakraborty & Biswal, 2023). However, the specific role of these different forms of social media in shaping vocational students' entrepreneurial intentions remains underexplored, particularly among vocational students in China universities (Shinnar et al., 2014). Therefore, one core objective of this study is to investigate how these forms of social media use affect the entrepreneurial intentions of vocational students.

Moreover, previous studies have examined the mediating role of individual-related factors in the relationship between external influences and entrepreneurial intentions, such as self-efficacy (Hoang et al., 2021), entrepreneurial passion (Uddin et al., 2022), and entrepreneurial mindset (Sun et al., 2023). Among these mediating factors, entrepreneurial self-efficacy (ESE) has gained significant attention due to its strong correlation with EI. ESE refers to an individual's confidence in their ability to perform tasks and solve problems in entrepreneurial settings (Nowiński et al., 2017). Individuals with high self-efficacy are more likely to take entrepreneurial action and overcome challenges in the entrepreneurial process (Nadlifatin et al., 2022).

At the same time, gender differences, as a moderating factor, have also gained widespread attention in the field of entrepreneurship (Emmanuel et al., 2022). Research shows that the entrepreneurial domain is traditionally male-dominated, with men typically exhibiting higher levels of confidence and access to broader social resources in entrepreneurial settings (Fan et al., 2024). Furthermore, Shinnar et al. (2014) research indicates that gender differences are reflected in social media usage patterns, with men more likely to engage in social-based interactions, while women tend to rely more on content-based media. These patterns may affect their entrepreneurial self-efficacy and entrepreneurial intentions.

Although numerous studies have examined the factors that influence entrepreneurial intentions, the role of social media—especially content-based and social-based social media—remains under-researched, particularly in the context of Chinese vocational students (Abdelfattah et al., 2022). This study seeks to fill this gap by exploring the impact of social media use on EI, the mediating role of ESE, and the moderating effect of gender (Sugeng & Chusjairi, 2022). The findings of this study aim to provide valuable insights for educators and policymakers, helping them leverage social media to enhance the entrepreneurial intentions of vocational students and design more effective, gender-sensitive support strategies.

We have defined the following research questions:

RQ1 What is the different types of social media (content-based and social-based) affect the entrepreneurial

intentions (EI) of vocational students in China?

RQ2 What is the mediating effect of entrepreneurial self-efficacy (ESE) on the relationship between social media use and vocational students' entrepreneurial intentions?

RQ3 What is the moderating effect of gender on the relationship between social media use (content-based and social-based) and entrepreneurial self-efficacy?

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Theoretical Foundation

In entrepreneurship research, two prominent theories are Social Cognitive Theory (SCT) by Bandura (1982), Theory of Planned Behavior (TPB) by Ajzen (1991) and Uses and Gratifications Theory (UGT) by Elihu Katz, Jay G. Blumler, and Michael Gurevitch in the 1970s, which offer key factors of theoretical framework of entrepreneurial intention (EI) (Larose et al., 2001) (Figure 1). Specifically, while SCT focuses on individual self-efficacy as a core determinant of behavior (Hagger & Hamilton, 2022), TPB provides a structured framework for understanding behavioral intention through three interrelated components: attitude toward behavior, subjective norms, and perceived behavioral control (Duong et al., 2024). UGT explores users' motivations, needs, and the gratification process to explain the driving forces behind media usage (Anwar et al., 2023). This theory emphasizes users' activeness and how different types of media influence users' behavior and decision-making by satisfying their cognitive, emotional, and social needs. Together, these theories offer a comprehensive lens for studying how entrepreneurial intentions develop, particularly in the context of education (Hagger & Hamilton, 2022).

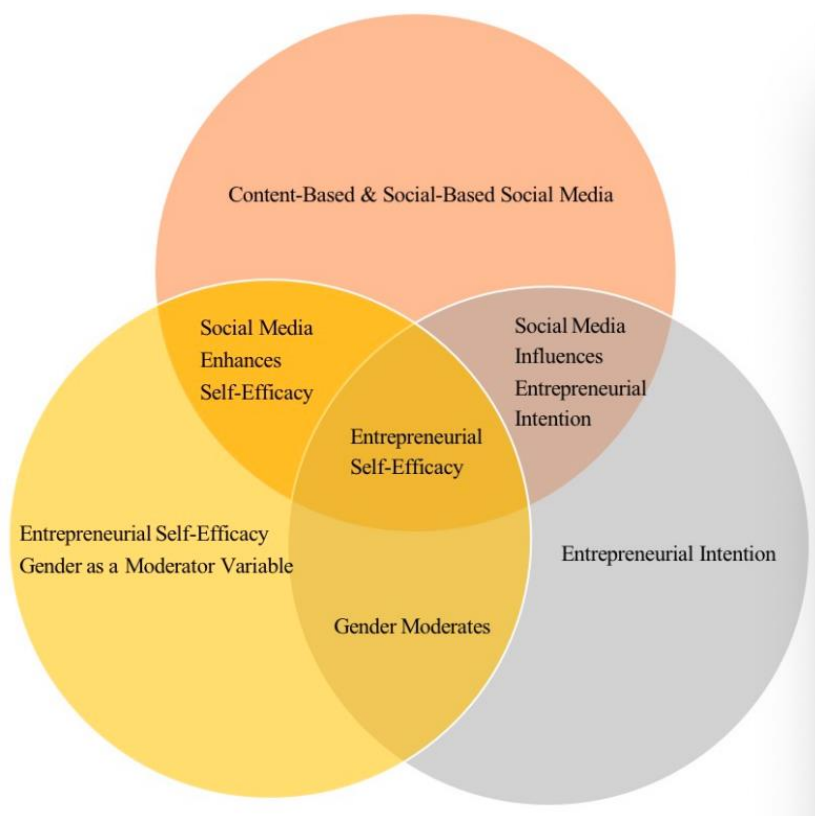


Figure 1 Theoretical framework of entrepreneurial intention (EI)

Moreover, SCT (Figure 2) emphasizes that self-efficacy—the belief in one's ability to successfully execute tasks—plays a pivotal role in shaping behavior. In entrepreneurship, Entrepreneurial Self-Efficacy (ESE) refers to students' confidence in their ability to engage in entrepreneurial activities, including opportunity identification, risk management, and resource acquisition (Ab Jalil & Zakaria, 2024). ESE not only fosters a positive attitude toward entrepreneurship but also strengthens perceived behavioral control by enhancing

confidence in overcoming challenges (Abdelfattah et al., 2022). Furthermore, research has demonstrated that higher ESE positively correlates with entrepreneurial intention, especially among students pursuing career development through entrepreneurship (de Moraes et al., 2024). For vocational students, who typically focus on acquiring practical skills, developing ESE aligns with their entrepreneurial readiness and influences their decision to pursue entrepreneurial activities.

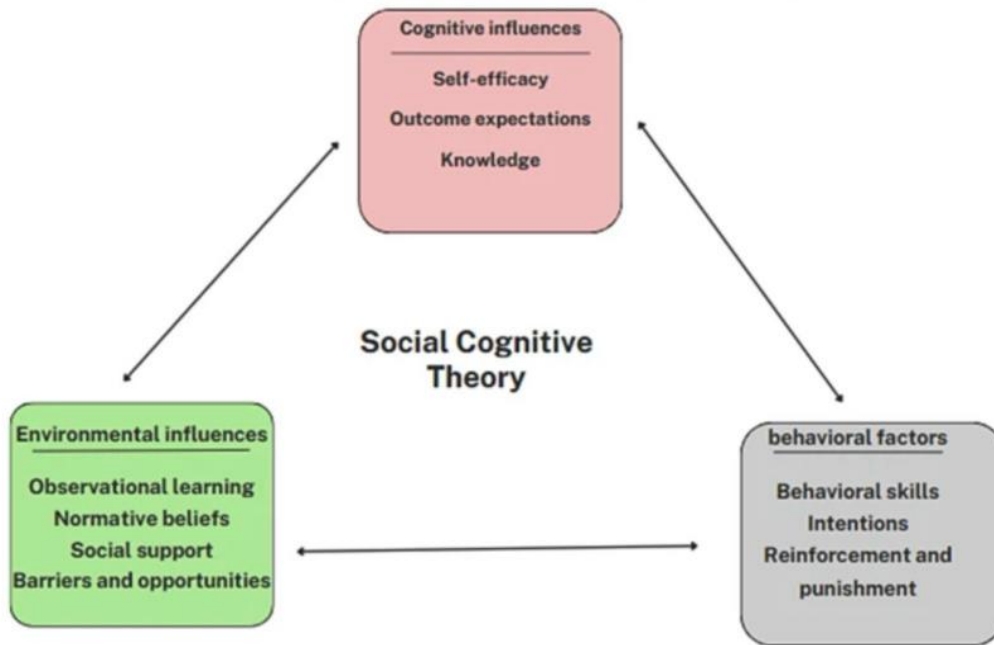


Figure 2 Constructs of social cognitive theory (SCT)

Similarly, the TPB model (Figure 3) suggests that entrepreneurial intention is shaped by three components: attitude toward behavior—the degree to which individuals view entrepreneurship as desirable; subjective norms—the perceived social pressure from significant others to engage in entrepreneurship; and perceived behavioral control—the individual’s belief in their ability to successfully execute entrepreneurial activities (Ajzen, 1991). TPB is widely recognized for its effectiveness in predicting entrepreneurial intention across diverse cultural and educational contexts. For example, Paftalika and Hananto (2018) found that, in Vietnam, subjective norms indirectly influenced entrepreneurial intention by enhancing ESE and perceived behavioral control. Likewise, Paul et al. (2023) confirmed TPB’s applicability to students’ entrepreneurial behavior. Thus, the social context in which vocational students develop their intentions is critical, as their peers, family, and personal skillsets shape their perceptions and decisions. TPB offers a structured framework to understand how these factors interact to foster entrepreneurial intention among vocational students.

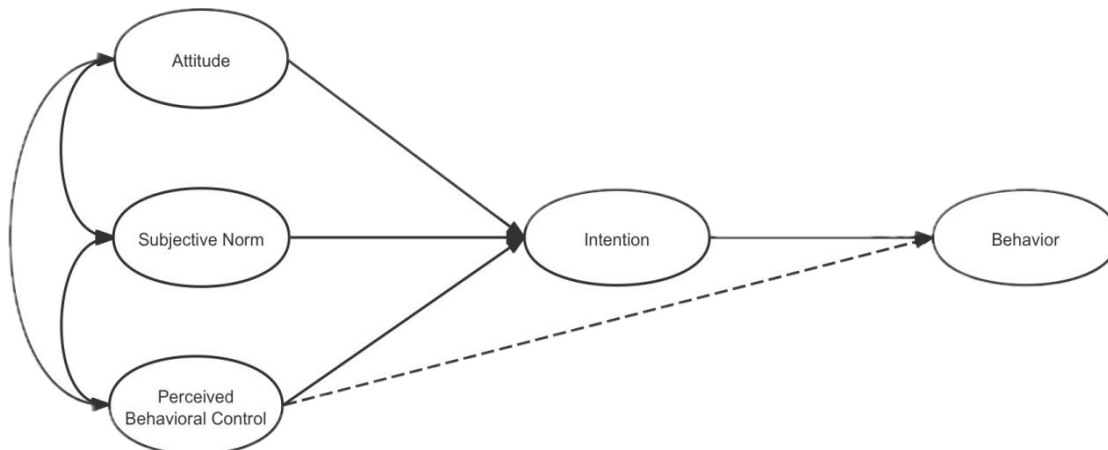


Figure 3 Theory of Planned Behavior (TPB) by Ajzen (1991)

In addition, the researcher advice that UGT factors (figure 4) (information seeking, self-discovery, maintaining interpersonal connectivity, entertainment value and social enhancement) may affect entrepreneurship participation intention in using social media. According to Bogatyreva et al. (2019), Social media platforms can be classified into content-based platforms and social-based platforms, each influencing distinct elements of the UGT framework.

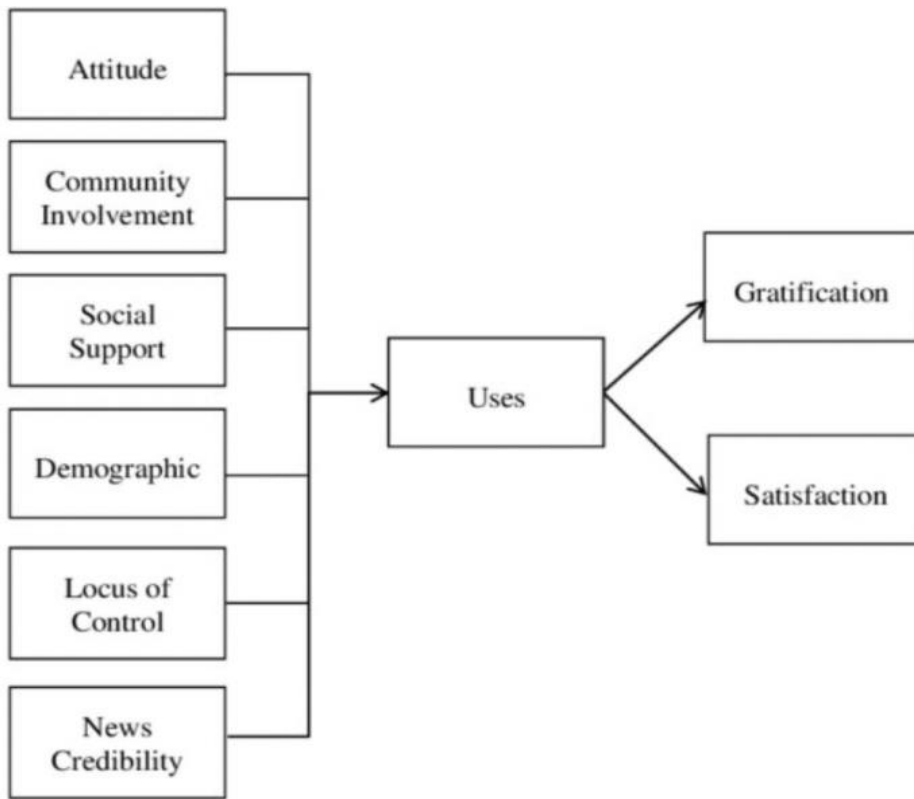


Figure 4 Uses and Gratifications Theory (UGT)

On the one hand, content-based platforms (e.g., YouTube, Zhihu, TikTok) focus on disseminating entrepreneurial knowledge, success stories, and skill-building content. It is a value that participants get from getting and sharing information in a virtual community and from knowing what other people think Laguía et al. (2019) suggested these platforms positively influence students' attitudes toward entrepreneurship by providing practical skills and role models, thereby enhancing their entrepreneurial self-efficacy (ESE) (Martins et al., 2022). Meanwhile, Wu et al. (2021) said that the knowledge and confidence gained from these platforms reinforce students' perceived behavioral control, motivating them to pursue entrepreneurial activities.

On the other hand, social-based platforms (e.g., WeChat, Weibo, Facebook) foster interaction and social support networks by satisfying users' social needs, thereby enhancing subjective norms. According to the Uses and Gratifications Theory (UGT), students use these platforms to connect with entrepreneurial communities, fulfilling their needs for emotional support and social interaction, while also accessing resources that promote entrepreneurial behavior (Altamira et al., 2023). These social-based platforms strengthen students' sense of belonging and participation, further enhancing their entrepreneurial expectations and intentions.

Meanwhile, gender differences further shape how students use social media and develop entrepreneurial intentions. Research indicates that male students are more likely to engage with content-based platforms to acquire entrepreneurial knowledge, which enhances their ESE and entrepreneurial confidence (Gefen & Straub, 1997). In contrast, female students benefit more from social-based platforms, where interaction and emotional support improve subjective norms and perceived behavioral control (Venkatesh et al., 2012). These gendered preferences are especially salient in the Chinese cultural context, where societal expectations influence students' social behavior and career decisions. Therefore, understanding how gender moderates the relationship between social media use, ESE, and entrepreneurial intention offers valuable insights for designing targeted entrepreneurial education programs for different groups.

In summary, this theoretical foundation provides a clear and comprehensive understanding of how SCT and TPB explain the formation of entrepreneurial intention among vocational students. It underscores the importance of ESE as a central concept, highlights the impact of content-based and social-based social media platforms, and emphasizes the moderating role of gender within the TPB framework.

Hypotheses Establishment

Content-based & Social-based social Media Use (SMU) and Entrepreneurial Self-Efficacy (ESE)

Altamira et al. (2023) define Social Media Use (SMU) as internet-based platforms built on Web 2.0 that allow users to create and share content, including social networks, blogs, wikis, and content communities. Meanwhile, Entrepreneurial Self-Efficacy (ESE) is defined as an individual's self-assessment of their entrepreneurial capabilities, influenced by both personal and environmental factors (Sarhan et al., 2022). Social media enhances relationships and expands networks, thus increasing social capital, particularly online, by providing more resources and support. This not only improves students' social skills and adaptability but also enhances their self-assessment, leading to higher entrepreneurial self-efficacy.

In addition, social media serves as a repository of knowledge and information, providing university students with valuable entrepreneurial resources such as financial support, market opportunities, and innovative ideas, further boosting their entrepreneurial confidence (Becker, 2009). Despite extensive research on social media use, there is still no unified standard for defining user behavior or selecting measurement indicators. Researchers such as Sohaib, Safeer, and Majeed (2022) have categorized social media behaviors into active and passive types. Dwivedi et al. (2021) assessed the intensity of social media use based on time and frequency on WeChat, while Olanrewaju et al. (2020) also categorized Facebook user behaviors into active and passive types.

Using the Uses and Gratifications Theory, Jagongo and Kinyua (2013) divided social media usage into social, entertainment, and cognitive dimensions. Troise et al. (2021) further distinguished social media usage in enterprises into work-based and social-based categories. However, few studies have considered the distinct effects of social media activities related to both social and content-based aspects on entrepreneurial self-efficacy. Therefore, this study categorizes social media use into content-based and social-based dimensions to investigate their impact on university students' entrepreneurial self-efficacy and intentions.

First, content-based social media platforms (such as YouTube) provide educational resources and entrepreneurial trends that help students improve their entrepreneurial knowledge and enhance their entrepreneurial self-efficacy. The more frequently students engage with these platforms, the more confident they become in their entrepreneurial abilities. On the other hand, social-based social media platforms (such as Facebook) facilitate social interaction and entrepreneurial network building, providing students with more emotional support and entrepreneurial collaboration opportunities. Through interaction with others, students can receive feedback from entrepreneurial partners and mentors, thus enhancing their entrepreneurial self-efficacy.

H1a: Content-based social media use will have a significant positive influence on Entrepreneurial Self-Efficacy (ESE)

H1b: Social-based social media use will have a significant positive influence on Entrepreneurial Self-Efficacy (ESE)

Content-based & Social-based social Media Use (SMU) and Entrepreneurial Intention (EI)

As stated by Kaplan and Haenlein (2010), Social Media Use (SMU) is social media use is defined as internet-based platforms built on Web 2.0 that allow users to create and share content, including social networks, blogs, wikis, and content communities. while Entrepreneurial Intention (EI) is defined as an individual's self-perception and plan to start a new business or engage in entrepreneurial activities, serving as a direct precursor to entrepreneurial behavior (Becker, 2009). Social Media Use (SMU) plays a pivotal role in developing EI

among vocational students. For example, Huang & Zhang (2020) conducted a study with 524 undergraduate students from three Chinese universities, showing that SMU was positively associated with EI, mediated by self-efficacy. Specifically, the more frequently students engaged with social media, the higher their entrepreneurial self-efficacy, which in turn increased their entrepreneurial intentions. Numerous studies have shown strong correlations between students' participation in social media use and the formation of their EI (Sutrisno et al., 2023). According to Chakraborty and Biswal (2023), SMU helps students acquire entrepreneurial skills, interact with potential customers, and access entrepreneurial networks, all of which are critical to developing entrepreneurial mindsets. Use a quasi-experimental design, Wibowo et al. (2023) found that a cross-sectional study on 248 students found that those who used social media frequently had a higher likelihood of developing entrepreneurial intentions.

As for the vocational students' entrepreneurial intentions (EI), the positive effects of social media use—both content-based and social-based—on their EIs are particularly significant. Having SMU affords students more possibilities to succeed in entrepreneurship (Sutrisno et al., 2023). Because social media platforms not only provide a wealth of information and resources but also create opportunities for networking and collaboration, which are essential for developing entrepreneurial skills. Content-based platforms like YouTube offer educational materials and trends, while social-based platforms like Facebook foster social interactions and community building (Zhang & Chen, 2024).

These diverse uses of social media align with the Uses and Gratifications Theory, where users engage for purposes like social interaction, pleasure, and cognition (Adam et al., 2022). Vocational students, by using these platforms, can enhance their understanding of the entrepreneurial landscape and expand their social networks, which are critical for entrepreneurial success (Chakraborty & Biswal, 2023). As Ab Jalil and Zakaria (2024) emphasized, social media use (SMU) increases students' ability to recognize and exploit entrepreneurial opportunities, ultimately affording them more chances to succeed in entrepreneurship.

H2a: Content-based social media use will have a significant positive influence on entrepreneurial intention (EI)

H2b: Social-based social media use will have a significant positive influence on entrepreneurial intention (EI)

The mediating role of entrepreneurial self-efficacy

Self-efficacy is an individual's belief in their ability to successfully perform specific tasks (Hagger & Hamilton, 2022). Emmanuel et al. (2022) suggested that social media use helps students to develop self-efficacy because it supplies them with knowledge and solutions to problems. Moreover, social media gives students access to unprecedented levels of information in a way that allows them to interactively select, organize, and integrate it with what they already know. This, in turn, leads to effective learning and enhances students' efficacy beliefs (Thi Loan et al., 2024). When they start a new business individuals must hold a strong belief about their abilities to overcome various difficulties and challenges (Paul et al., 2023). Researchers have found a positive relationship between students' self-efficacy and their entrepreneurial

intention (Nadlifatin et al., 2022), and we anticipated that social media use would have a positive influence on students' self-efficacy, which would, in turn, increase students' entrepreneurial intention.

When evaluating the intensity of vocational students' entrepreneurial intentions (EIs), entrepreneurial self-efficacy (ESE) serves as a crucial explanatory variable and has consistently been found to be a strong predictor (de Moraes et al., 2024). According to Chakraborty and Biswal (2023), ESE refers to an individual's capability to mobilize motivation, cognitive resources, and actions necessary to achieve success in performing specific tasks. Therefore, ESE is seen as a vital prerequisite for aspiring entrepreneurs to initiate entrepreneurial behaviors.

Drawing from social cognitive theory, empirical studies have shown that ESE significantly influences entrepreneurial intentions. For example, Fan et al. (2024) found that, using data from 310 business students in Pakistan, ESE, along with perceived feasibility and desirability, had a significant impact on entrepreneurial

intentions. Similarly, Hagger and Hamilton (2022) reported that, in a sample of 202 American business students, ESE significantly influenced perceived feasibility, which, in turn, predicted students' intentions to establish social enterprises.

In recent years, the relationship between social media use (SMU) and entrepreneurial intention (EI) has garnered increasing attention (Martins et al., 2022). Positive experiences derived from SMU can substantially enhance an individual's ESE, fostering the confidence needed to pursue entrepreneurial endeavors. According to Paftalika and Hananto (2018), resources and support obtained from social media play a critical role in building entrepreneurial confidence, motivating individuals to take entrepreneurial action. Specifically, content-based social media platforms, such as WeChat articles, blogs, and YouTube, provide valuable resources, market opportunities, and knowledge that strengthen entrepreneurial self-efficacy. Meanwhile, social-based platforms, such as WeChat Moments and WhatsApp, expand users' social networks and social capital, which further improves adaptability and increases the likelihood of entrepreneurial success (Sarhan et al., 2022).

By integrating both content-based and social-based social media use, individuals can enhance their entrepreneurial self-efficacy, which in turn boosts their overall readiness to engage in entrepreneurial ventures (Zhang & Chen, 2024). Therefore, ESE plays a mediating role in the relationship between social media use and entrepreneurial intentions among vocational students.

H3: Social media use (content-based and social-based) will have an indirect positive relationship with students' entrepreneurial intention via the mediator of self-efficacy.

The moderating role of gender

In the group of vocational students in China, gender, as a moderating variable, significantly influences their entrepreneurial path choices (Emmanuel et al., 2022). The vocational education system in China creates unique employment pressures and career development opportunities for students, where gender plays a key moderating role (Fan et al., 2024). Female vocational students often choose entrepreneurship due to uncertainties in future employment, focusing more on balancing work and study through entrepreneurship rather than purely seeking financial gain (Laguía et al., 2019). In contrast, male vocational students are more inclined to pursue entrepreneurship to accumulate wealth and advance their careers, seeing it as an integral part of their professional development (Nadlifatin et al., 2022). This gender difference reflects the different priorities in entrepreneurial motivation and career planning between males and females (Paftalika & Hananto, 2018).

Beyond differences in entrepreneurial motivation, gender also affects the ways in which vocational students use social media (Paul et al., 2023). Content-based social media, typically referring to platforms that provide information and business opportunities like LinkedIn and business forums, contrasts with social-based social media, which focuses more on maintaining interpersonal relationships and providing emotional support, such as WeChat and Weibo (Sarhan et al., 2022). Research shows that female vocational students are more likely to use social media to maintain personal relationships and enhance emotional connections, thereby increasing their entrepreneurial self-efficacy (ESE) (Sutrisno et al., 2023). For instance, data from this study shows that 72% of female vocational students received emotional support through social media, while only 45% of males reported similar feedback (Troise et al., 2021). In contrast, male vocational students predominantly use social media to obtain market information and business opportunities, thereby boosting their entrepreneurial confidence (Wang et al., 2019). This finding aligns with Ward et al. (2019), who observed that men tend to use content-based social media to access business resources, while women enhance their entrepreneurial self-efficacy through emotional support from social interactions.

Within the framework of the Theory of Planned Behavior (TPB), gender moderates vocational students' personal attitudes, subjective norms, and perceived behavioral control (Wu et al., 2021). For men, content-based social media enhances their market insights and entrepreneurial opportunities, further strengthening their perceived behavioral control (Troise et al., 2021). In contrast, women benefit from stronger emotional connections and interpersonal support through social-based social media, which increases their confidence in

entrepreneurship. This phenomenon was further confirmed by the study’s data: 65% of male vocational students reported that social media improved their market insights into entrepreneurial opportunities, while 69% of female vocational students indicated that social interactions helped boost their entrepreneurial self-efficacy (Nadlifatin et al., 2022).

Gender not only influences vocational students’ social media behaviors but also moderates the relationship between entrepreneurial self-efficacy and entrepreneurial intention. Men tend to exhibit greater confidence, believing they possess the necessary skills and knowledge for entrepreneurship, while women rely more on the emotional support provided by social networks to enhance their entrepreneurial self-efficacy (Sarhan et al., 2022). The findings from Troise et al. (2021) further verify this: female vocational students prioritize emotional support in balancing their careers and studies through entrepreneurship, while males focus more on financial goals. This gender-moderating effect has been validated in the entrepreneurial practices of Chinese vocational students, highlighting the crucial role that gender plays in the entrepreneurial process.

H4a: Gender moderates the relationship between content-based social media use and entrepreneurial self-efficacy (ESE)

H4b: Gender moderates the relationship between social-based social media use and entrepreneurial self-efficacy (ESE)

H4c: Gender moderates the relationship between entrepreneurial self-efficacy (ESE) and entrepreneurial intention (EI).

Figure 5 presents the conceptual model of moderated mediation, illustrating how content-based and social-based social media use influence entrepreneurial intention (EI) through entrepreneurial self-efficacy (ESE). The Theory of Planned Behavior (TPB) suggests that intentional behaviors, such as starting and running a business, are best predicted by individuals’ intentions towards that behavior. Additionally, the Uses and Gratifications Theory (UGT) emphasizes that users engage with media to fulfill specific needs—such as social interaction, knowledge acquisition, or entertainment—which in turn impacts their entrepreneurial motivations and confidence. By integrating both theories, the model explains how different types of social media use shape vocational students’ entrepreneurial intentions, mediated by ESE and moderated by gender.

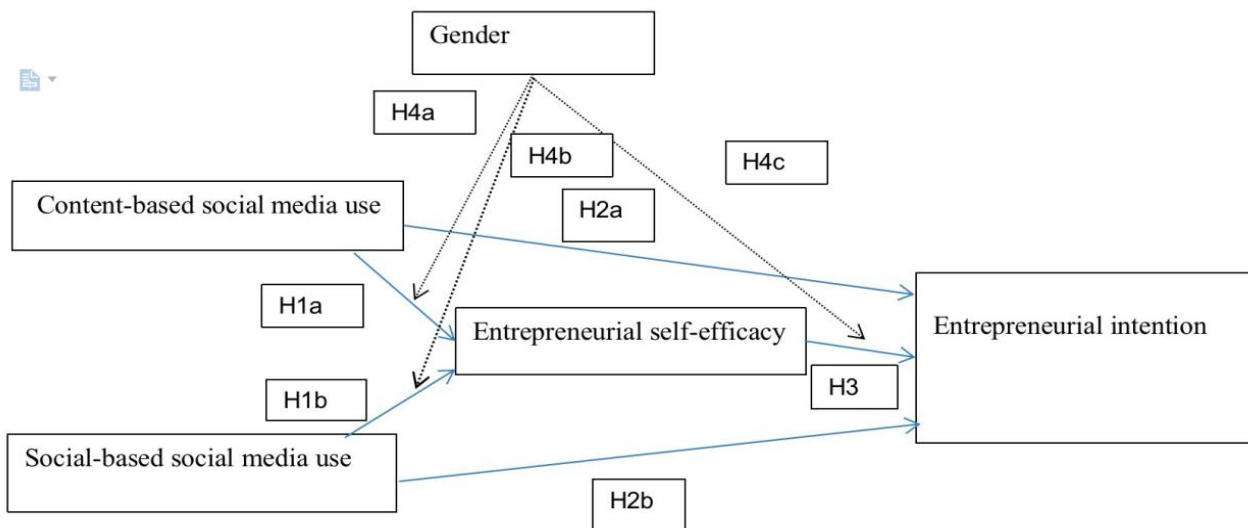


Figure 5 The hypothetical model. Content-based social media use ; Social-based social media use; SMU: social media use; ESE, entrepreneurial self-efficacy; EI, entrepreneurial intention.

METHOD

This study used a quantitative research approach (survey study). It is considered and accepted methods in the

business management studies (Hallikainen et al., 2020). To obtain the perception of the large people, it is the best method (Vomberg and Klarmann, 2021). Survey was developed based on previous validated scales and distributed among vocational students of four Chinese vocation colleges located in Hebei, Province China. Numerous statistical analyses were performed including normality test, reliability, confirmatory factor analysis, construct validity test and structural equation modelling to investigate the hypothesized relationship in the conceptual model.

Participants

The Ethics Committee of the Hebei Institute of Mechanical and Electrical Technology University approved the present study. A convenient sampling questionnaire survey was conducted at five universities from China, one in Hebei Province, and the others in Jiangsu Province between April 6 and May 20, 2024. Both provinces have rich social media entrepreneurship resources, natural and human landscape, such as Xingtai in Hebei Province and Changzhou in Jiangsu Province. Five class counselors were recruited for the survey, and the necessary training and guidance was made to them. Before the formal survey, the scientific purpose of the study, the voluntariness of their participation, and the anonymity of their responses were guaranteed to the respondents. All respondents signed the written informed consent. During the class breaks, the online questionnaire was distributed through Wechat. Finally, a total of 1300 questionnaires were sent and we obtained 1250 valid responses, resulting in a response rate of 96.1%. For the gender, the majority of respondents were 43.7% female and 56.3% male respondents, reflecting a balanced gender distribution. The demographic breakdown of the respondents was 16.7% first-year students, 39.6% second-year students, and 43.7% third-year students, indicating a representative spread across different academic years. Entrepreneurship experience was not reported by 30.2% of the participants, while 69.8% had none. The most prevalent social media platforms used by the participants were QQ, used by 100% of the respondents, followed by WeChat (96.8%), Weibo (14.9%), Tieba (25.6%), and other platforms (4.9%).

Measures

To assess the effects of content-based social media use (CBSMU) and social-based social media use (SBSMU) entrepreneurial self-efficacy (ESE), entrepreneurial intention (EI) and gender of vocational students, the present study designed a quantitative cross-sectional questionnaire survey. The questionnaire consisted of two parts: the first part was sociodemographic characteristics of participants, and the second part included five scales to measure students' CBSMU, SBSMU, ESE, EI and gender. All items in five scales were scored on a 5-point Likert, ranging from 1 (strongly disagree) to 5 (strongly agree).

Content Based Social Media Use

Content based social media use (CBSMU) was assessed with Wu et al. (2021) three-item instrument, which is based on Wang et al. (2019) social media use scale. The original items were modified to fit the study context. Sample items are "I often use social media to obtain business-related information and knowledge" (1 = strongly disagree to 5 = strongly agree) and "What is your frequency of usage of social media in entrepreneurship?" (1 = never to 5 = a great deal). Cronbach's alpha for this scale was .92.

Social Based Social Media Use

More specifically, to measure students' Social based social media use (SBSMU), Adapted from Fan et al. (2024), this measure is bifurcated into two distinct dimensions: content-based and social-based social media use. The content-based dimension comprises six items, such as "I discover information about products and services," whereas the social-based dimension includes six items, including "I keep in touch with my friends and classmates."

Entrepreneurial Self-Efficacy

Entrepreneurial self-efficacy was assessed with a four-item entrepreneurial self-efficacy scale taken from Chakraborty and Biswal (2023). A sample item is "I am confident in my ability to identify new business

opportunities.” Responses were rated on a 5-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Cronbach’s alpha for this scale was .90.

Entrepreneurial Intention

Students’ entrepreneurial intention was assessed with Emmanuel et al. (2022) three-item scale, which was adapted from Nadlifatin et al. (2022) entrepreneurial intention instrument. Sample items are “How interested are you in setting up your own business?” (1 = strongly uninterested to 5 = strongly interested) and “How likely is it that you will set up a (or another) business during the next 5 years?” (1 = very unlikely to 5 = very likely). Cronbach’s alpha for this scale was .85. Based on previous studies, the participants’ gender was taken as moderating variable (Wilson et al., 2007)

Data Analysis

A series with sequence of statistical analysis were applied including Common Method Variance Test, reliability test, correlation, confirmatory factor analysis (CFA), and Structural Equation Modeling (SEM) to investigate the relationships among the constructs. SPSS 21.0 and AMOS 26.0 software were used to analyze data.

RESULTS

Common Method Variance Test

Harman’s single factor test was performed to check for the potential common method variance. A total of five factors with an eigenvalue over one were obtained by unrotated principal component factor analysis for all variables. The analysis results showed that the variance explained by the first factor was 32.628%, well below the commonly cited threshold for significant common method bias, indicating minimal bias presence. The data could be further analyzed.

Measurement Model

The reliability and validity of the primary variables were evaluated through a measurement model using four standard criteria: individual item reliability, construct reliability, convergent validity, and discriminant validity (Hair et al., 2017).

To confirm individual item reliability, factor loadings (FL) were examined. Most items had FLs above the 0.7 threshold and each items slightly from 0.751 to 0.896. Ramayah et al. (2018) suggest that items with FLs are acceptable if they contribute to AVE scores above 0.5, which was achieved across constructs. Cronbach’s α values for content-based social media use (CBSMU), social-based social media use (SBSMU), entrepreneurial self-efficacy (ESE), and entrepreneurial intention (EI) were 0.872, 0.820, 0.890, and 0.910 demonstrating solid internal consistency.

Construct reliability was confirmed using composite reliability (CR), with CR values across constructs ranging from 0.918 to 0.937, exceeding the minimum 0.7 threshold. Convergent validity was assessed through AVE scores, all surpassing the 0.5 standard (Fornell and Larcker ,1981).

Table 1 presents factor loadings, composite reliabilities, AVEs, and Cronbach’s α values for all latent variables, verifying that the measurement model fulfills reliability and validity requirements.

Table 1 Confirmatory Factor Analysis of Measurement Model

Scales	Items	Factor Loading	CR	AVE	Cronbach’s α
	CBSMU1	0.838	0.921		

Content-based social media use	CBSMU2	0.894	0.702	0.920
	CBSMU3	0.834		
	CBSMU4	0.865		
	CBSMU5	0.751		
Social-based social media use	SBSMU1	0.878	0.937	0.788
	SBSMU2	0.896		
	SBSMU3	0.892		
	SBSMU4	0.885		
Entrepreneurial Self-Efficacy	ESE1	0.794	0.929	0.685
	ESE2	0.848		
	ESE3	0.819		
	ESE4	0.795		
	ESE5	0.886		
	ESE6	0.820		
Entrepreneurial Intention	EI1	0.812	0.918	0.691
	EI2	0.873		
	EI3	0.872		
	EI4	0.851		

Note: Scales: content-based social media use (CBSMU) , social-based social media use (SBSMU) , entrepreneurial self-efficacy (ESE), and entrepreneurial intention (EI)

Confirmatory Factor Analysis (CFA)

According to Magistris and Gracia (2008), before doing hypothesis testing, confirmatory factor analysis (CFA) was performed to examine the validity of the variables (see Figure 6). This included establishment of measurement model using AMOS 26.0. It is commonly used to assess the primary conceptual model with a group of constructs for several hypotheses (Hair, 2009). It is a widely accepted technique used in business research to examine the measured constructs accurately denotes the underlying latent variable. CFA has been known as efficient and robust for testing validity (Wong 2013). To assess the reliability of the CFA model, numerous model fit indexes were checked, including the chi-square to degrees of freedom ratio (χ^2/df), comparative fit index (CFI), incremental fit index (IFI), normal fit index (NFI), goodness fit index (GFI), and root-mean-square error of approximation (RMSEA) (Kline et al., 2016). Wong (2013) indicated also that for marketing research, a significance level of 5%, a statistical power of 80%, and R2 values of at least .25 are considered typical.

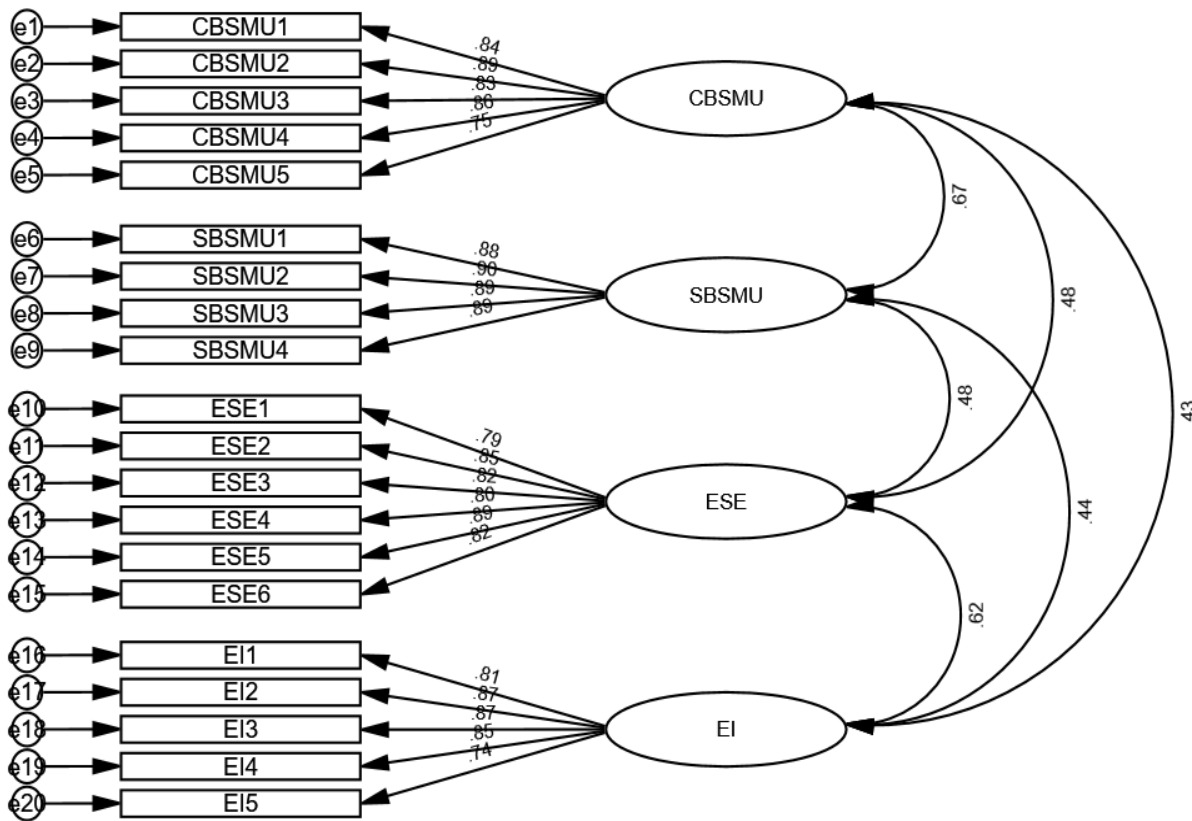


Figure 6 Confirmatory Factor Analysis (CFA)

In addition, according to the suggestion of Gilal et al. (2018), the present study conducted a CFA to test the discriminant validity. The results were presented in Table 2 the model fit indices of the four-construct model were as follows: $\chi^2/df = 2.375$, RMSEA = 0.043, CFI = 0.981, IFI = 0.981 and NFI = 0.974, All the fit indices were within acceptable limit (Schumacker & Lomax, 2016), confirming the discriminant validity of the constructs.

Table 2 Model Fit of CFA Model

index	RMSEA	GFI	IFI	TLI	CFI
Judgment criteria	<0.08	>0.9	>0.9	>0.9	>0.9
Measurement result	0.043	0.956	0.981	0.981	0.981

Descriptive Statistics and Correlation Analysis

The results of descriptive statistics and correlation analysis were shown in Table 3. The results of correlation analysis suggested that there was a significant positive correlation between CBSMU and SBSMU ($r = 0.668$, $p < 0.001$), between CBSMU and ESE ($r = 0.478$, $p < 0.001$), and between CBSMU and EI ($r = 0.432$, $p < 0.001$). Similarly, there is a significant positive correlation between SBSMU and ESE ($r = 0.483$, $p < 0.001$) and between SBSMU and EI ($r = 0.439$, $p < 0.001$). Additionally, there is a significant positive correlation between ESE and EI ($r = 0.619$, $p < 0.001$).

Table 3 Descriptive Statistics and Correlation Analysis.

Latent Constructs	Content-based social media use	Social-based social media use	Entrepreneurial Self-Efficacy	Entrepreneurial Intention
Content-based social media use	0.838			

Social-based social media use	0.668***	0.888		
Entrepreneurial Self-Efficacy	0.478***	0.483***	0.828	
Entrepreneurial Intention	0.431***	0.439***	0.619***	0.831

***, $p < 0.00$

Structural Equation Modeling

Structural Equation Modelling (SEM) is a multivariate statistical technique to examine the associations between exogenous and endogenous constructs in a conceptual model. It is extensively used in marketing and business to evaluate theoretical constructs. SEM involves two models including the measurement model and the structural model. It has received prevalent recognition in management sciences studies for its power to test complicated relationships among observed and latent variables in different orders (Awang et al., 2022). In current paper, SEM was conducted to investigate the relationships among latent constructs (i.e., content-based social media use (CBSMU), social-based social media use (SBSMU), entrepreneurial self-efficacy (ESE), entrepreneurial intention (EI) and gender.

The research model posits that CBSMU, SBSMU, ESE, EI and gender.

positively influences EI. Figure 3 Shows the SEM analysis of the CBSMU, SBSMU, ESE, EI and gender constructs, illustrating the standardized path coefficients and their significance levels. This pictorial illustration supports in understanding the interactions within the model. Similar to CFA, the SEM model was also assessed through numerous fit (indices such as X^2/df , RMSEA, CFI, IFI, and TLI. The values NFI, GFI, CFI, IFI and TFI close to 0.9 shows a good-fitted model. The SEM model meeting at least four fit indices threshold values were accepted in this paper. In this study, one structural model was developed based on the hypothesized research model (see Figure 7).

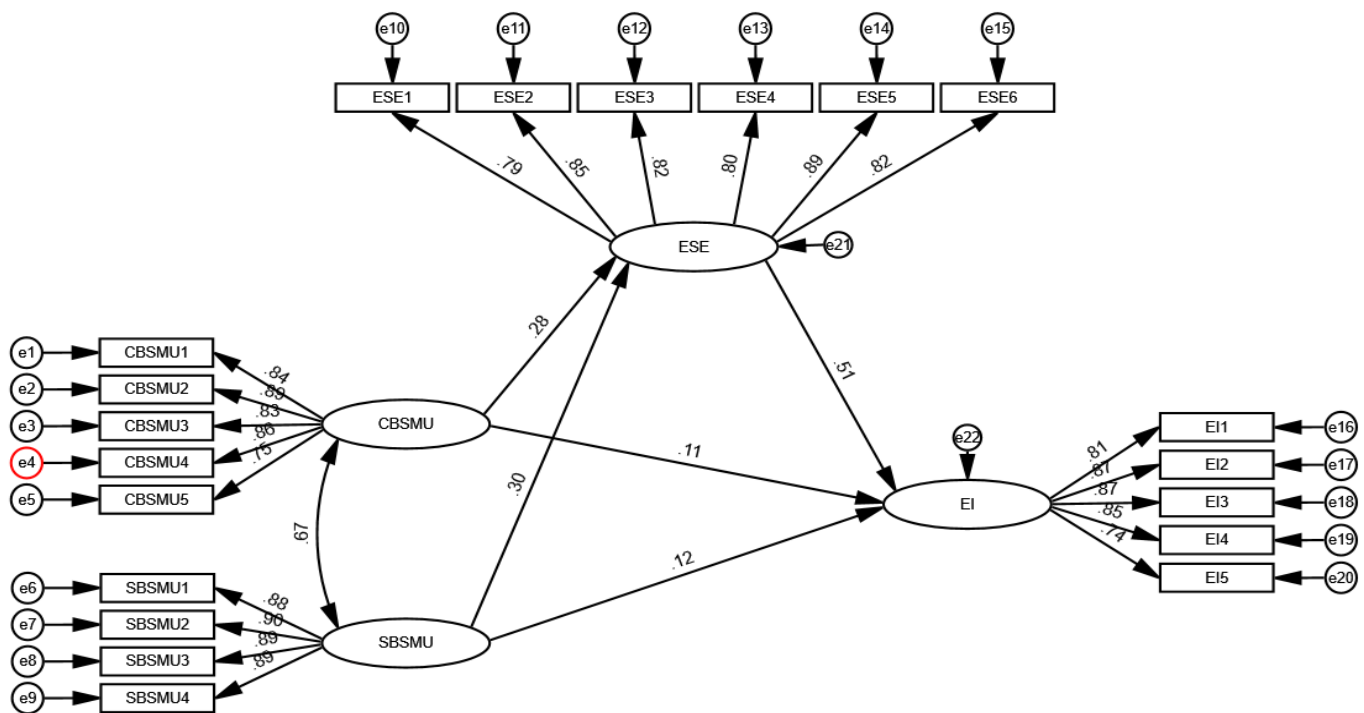


Figure 7 SEM Structural Model

The SEM results showed that model meet the required criteria at X^2/DF is 3.315, GFI, NFI is greater than 0.8 acceptable, IFI, CFI is 0.981, RMSEA is 0.043, most of the fitting indicators meet the standard, indicating that the model fit is good (see Table 4).

Table 4 Model Fit of SEM Structural Model

index	RMSEA	GFI	IFI	TLI	CFI
Judgment criteria	<0.08	>0.9	>0.9	>0.9	>0.9
Measurement result	0.043	0.956	0.981	0.981	0.981

The maximum likelihood estimates of the final SEM model are presented in Table 5. The final SEM model revealed that: content-based social media use → entrepreneurial self-efficacy has a standardized coefficient of 0.281, with significance at the $p < 0.001$ level, indicating a significant positive effect; social-based social media use → entrepreneurial self-efficacy has a standardized coefficient of 0.296, with significance at the $p < 0.001$ level, indicating a significant positive effect; entrepreneurial self-efficacy → entrepreneurial intention has a standardized coefficient of 0.509, with significance at the $p < 0.001$ level, indicating a significant positive effect; content-based social media use → entrepreneurial intention has a standardized coefficient of 0.106, with significance at the $p < 0.01$ level, indicating a significant positive effect; and social-based social media use → entrepreneurial intention has a standardized coefficient of 0.122, with significance at the $p < 0.001$ level, indicating a significant positive effect.

Table 5 Standard Estimated Likelihood of SEM Model

Path	Estimate	STD.Estimate	S.E.	C.R.	P
CBSMU→ESE	0.313	0.281	0.042	7.366	<0.001
SBSMU→ESE	0.314	0.296	0.04	7.802	<0.001
ESE→EI	0.476	0.509	0.031	15.543	<0.001
CBSMU→EI	0.11	0.106	0.037	2.975	0.003
SBSMU→EI	0.121	0.122	0.035	3.442	<0.001

Test of Mediation

From the table above, it can be seen that, using a bootstrap sampling method with a sample size of 5000, the mediation effects in the model were tested. The mediation effect of content-based social media use → entrepreneurial self-efficacy → entrepreneurial intention is 0.149, with the confidence interval not crossing zero, indicating that entrepreneurial self-efficacy has a significant mediating effect between content-based social media use and entrepreneurial intention. Similarly, the mediation effect of social-based social media use → entrepreneurial self-efficacy → entrepreneurial intention is 0.149, with the confidence interval not crossing zero, indicating that entrepreneurial self-efficacy has a significant mediating effect between social-based social media use and entrepreneurial intention.

Table 6. The Mediation of ESE.

Mediating Path	Effect Type	Effect Value	95%CI Lower	95%CI Upper
CBSMU→ESE→EI	Direct Effect	0.110	0.011	0.207
	Mediating Effect	0.149	0.097	0.207
SBSMU→ESE→EI	Direct Effect	0.121	0.027	0.223
	Mediating Effect	0.149	0.098	0.204

Testing for Moderated Mediation

In a moderated mediation analysis with content-based social media use (CBSMU) and social-based social media use (SBSMU) as independent variables, entrepreneurial self-efficacy as the mediator, gender as the moderator, and entrepreneurial intention as the dependent variable, the following findings were observed:

In the mediation path CBSMU → ESE → EI, the effect value for the male group was 0.187, with a confidence interval that does not cross zero, indicating a significant mediation effect. For the female group, the effect value was 0.074, with a confidence interval that also does not cross zero, indicating a significant mediation effect as well. The difference in effect values between the two groups was 0.113, with a confidence interval that does not cross zero, demonstrating a significant difference in the mediation path between genders, with a relatively higher mediation effect for the male group.

Similarly, in the mediation path SBSMU → entrepreneurial self-efficacy → entrepreneurial intention, the effect value for the male group was 0.207, with a confidence interval that does not cross zero, indicating a significant mediation effect. For the female group, the effect value was 0.073, with a confidence interval that does not cross zero, also indicating a significant mediation effect. The difference in effect values between the two groups was 0.114, with a confidence interval that does not cross zero, indicating a significant difference in the mediation path between genders, with a relatively higher mediation effect for the male group.

Table 7 Results for Moderated Mediating Effects.

Mediating Path	Moderator Group	Effect Value	95%CI Lower	95%CI Upper
CBSMU → ESE → EI	Male	0.187	0.113	0.272
	Female	0.074	0.002	0.157
Difference	Male - Female	0.113	0.005	0.222
SBSMU → ESE → EI	Male	0.207	0.138	0.294
	Female	0.073	0.007	0.145
Difference	Male - Female	0.134	0.033	0.240

DISCUSSION

Main Findings

Based on previous literature, this study aimed to examine the effects of content-based social media use (CBSMU) and social based social media use (SBSMU), Entrepreneurial Self-Efficacy (ESE) and gender on entrepreneurial intention (EI) among vocational students. According to the results, the proposed hypotheses were verified as followed.

First, the results confirmed a significantly positive link between content-based social Media Use(CBSMU), social-based social Media Use (SBSMU) and Entrepreneurial Self-Efficacy (ESE) among vocational students, supporting hypotheses H1a and H1b. This finding was similar to the studies of Fan et al. (2024), Laguía et al. (2019) and Paul et al. (2023) in different cultures among vocational students. Although the significant effect of CBSMU and SBSMU on EI has reported by many previous studies, some even stated no significant effect (Troise et al., 2021). However, different types of social media use could all be potential factors influencing the effects on EI(Wibowo et al., 2023). In this sense, as for the vocational students, at least, the effect of content-based social Media Use (CBSMU) and social-based social Media Use (SBSMU) on their Entrepreneurial Self-Efficacy (ESE) was not insignificant. According to the theory Thi Loan et al. (2024), for vocational students, the effect of content-based social media use (CBSMU) and social-based social media use (SBSMU) on their

Entrepreneurial Self-Efficacy (ESE) is notably significant. According to Social Cognitive Theory (SCT) by Bandura (1982), self-efficacy is shaped through observational learning and social influences, which can be effectively reinforced by specific social media interactions. CBSMU provides pathways to access information and resources that aid in skill acquisition, while SBSMU enhances social support and observational learning through peer interaction. Together, these platforms enable students to observe, participate, and build confidence in entrepreneurial activities, thus enhancing vocational students' ESE, making CBSMU and SBSMU key factors in strengthening their entrepreneurial intentions.

Recently, the predominant literature on entrepreneurship has mainly focused on developed countries with individualistic cultures, reflecting a neoliberal economic paradigm (Martins et al., 2022). In this context, for vocational students, the impact of content-based social media use (CBSMU) and social-based social media use (SBSMU) on their Entrepreneurial Self-Efficacy (ESE) is significant. Unlike in developed countries, where entrepreneurial activities have been widely studied, culturally diverse developing countries like China present unique contexts in which social media use can have a profound impact. Through CBSMU and SBSMU, vocational students gain access to extensive resources and peer support, which not only enhances their ability to recognize opportunities in a dynamic business environment and strengthens their entrepreneurial mindset but also enriches the knowledge and skills necessary for developing and managing an enterprise (Elshaer & Sobaih, 2023). Consequently, CBSMU and SBSMU further consolidate students' Entrepreneurial Self-Efficacy, offering stronger connections and reinforcement through social media platforms.

Second, ESE played a partial mediating role in the prediction of content-based social Media Use (CBSMU), social-based social Media Use (SBSMU) on Entrepreneurial intention (EI), supporting hypotheses H2a and H2b. That is, Secondly, Entrepreneurial Self-Efficacy (ESE) played a partial mediating role in the relationship between content-based social media use (CBSMU), social-based social media use (SBSMU), and Entrepreneurial Intention (EI), supporting hypotheses H2a and H2b. This indicates that, through higher levels of CBSMU and SBSMU, vocational students can not only directly impact their entrepreneurial intentions but also enhance them indirectly by improving their ESE. The mediating effect of ESE accounted for 78.22% of the total effect, meaning that social media use influences entrepreneurial intention primarily through ESE. This result confirms ESE as a critical pathway for vocational students to achieve entrepreneurial intentions, further reinforcing the central role of ESE in the formation of entrepreneurial intention.

Although the mediating role of ESE in the field of EI was reported by previous studies, the nature of mediating role was still controversial among present researchers. For instance, some previous researchers found that ESE was a complete mediator between SMU and EI (Al Halbusi et al., 2023). However, the present study reported a partial mediating in the SMU-EI link. The finding corroborates those of previous studies which drew similar conclusions (Paftalika & Hananto, 2018). The different mediating effects of ESE on the link between SMU and EI maybe lie in the different measure of ESE and EI, or attribute to the disparate sampling populations, which needs further examined in the future studies among more populations.

Third, the present study further suggested that gender is a moderating variable. More specifically, gender could moderate the first half of the mediating effect of ESE, that is, grit could moderate the indirect effect of EE on EI via their ESE, supporting hypothesis H3. That is, the linkage between EE and ESE would be stronger for individuals with gritty character. Moreover, by investigating the moderation of grit, the present study revealed that it improves the strength between EE and tourism and hotel management students' ESE towards generating EI. This aligns the studies of Bogatyreva et al. (2019) who identified grit a meaningful personality variable in examining the determinants of EIs. The moderating role of grit suggests that EE, that teaches grit, may strengthen students' ESE. The more grittier students have, the stronger the predictive effect of EE on their ESE is.

This moderated mediation effect of gender on the CBSMU&SBSMU-EI,ESE-EI link could be explained by the components of gender. The findings indicate that gender plays a significant moderating role in the relationships between content-based and social-based social media use (CBSMU and SBSMU), entrepreneurial self-efficacy (ESE), and entrepreneurial intention (EI), supporting hypotheses H4a, H4b, and H4c. Specifically, males show a more pronounced effect in enhancing entrepreneurial self-confidence through social media use, while females experience a relatively weaker enhancement, suggesting that males are more likely to

gain entrepreneurial confidence from social media use. Furthermore, in the relationship between ESE and EI, males' entrepreneurial self-efficacy is more readily translated into actual entrepreneurial intention, whereas this conversion process is less evident for females. These findings highlight the important role of gender differences in entrepreneurial education and support, suggesting that considering gender can more effectively amplify the impact of entrepreneurial self-efficacy on fostering entrepreneurial intentions.

Theoretical Contributions

Based on prior studies and literature review, the present study explored the effects of CBSMU, SBSMU, ESE, and Gender on EI in a single model, and the finding could make some theoretical contributions to EI literature. First, regarding the role of social media in entrepreneurial intention, prior research has primarily focused on business students in Western, developed countries. This study extends the literature by examining the influence of CBSMU and SBSMU on EI specifically among vocational students in China. The results underscore the importance of social media as a unique resource in fostering entrepreneurial intention, especially within a vocational education context. Second, in terms of the mechanisms linking social media use to entrepreneurial intention, this study identified ESE as a partial mediator in the CBSMU-EI and SBSMU-EI relationships. This highlights ESE as a critical factor in how social media use translates into increased entrepreneurial intention, indicating that ESE can both independently and jointly enhance the impact of social media on EI. This finding enriches existing theoretical models by emphasizing the mediating role of ESE in the pathway from social media use to entrepreneurial intentions. Third, building on previous studies that examined moderators like entrepreneurial attitude Adam et al. (2022), competition experience Emmanuel et al. (2022), and prior entrepreneurial exposure Nadlifatin et al. (2022) within the EI context, this study investigates the moderating role of gender. The results show that gender significantly influences the strength of the CBSMU-ESE and SBSMU-ESE relationships, with differences in how male and female students leverage social media to build entrepreneurial self-efficacy and intentions. This insight contributes to the growing understanding of gender's role in shaping the impact of social media use on entrepreneurship among vocational students, underscoring the need to consider demographic factors when evaluating the effectiveness of social media as a tool for developing entrepreneurial intentions. In summary, this study contributes to the literature by confirming CBSMU, SBSMU, ESE, and gender as meaningful factors in predicting entrepreneurial intention among vocational students in China, thus providing a broader and more nuanced theoretical framework for understanding how social media and individual differences interact to influence entrepreneurial intentions in diverse educational settings.

Practical Contributions

The findings of this study offer several practical insights for enhancing entrepreneurial intention (EI) among vocational students in China, especially considering the roles of social media use (SMU), entrepreneurial self-efficacy (ESE), and gender. First, given the impact of social media use on EI, policymakers in the education sector should consider integrating content-based and social-based social media use into the entrepreneurial education (EE) curriculum. Practical policies that promote social media as a resourceful tool across various majors, including vocational education, which can help students cultivate entrepreneurial intentions (EI) more effectively. Second, educators play a critical role in fostering a supportive environment that bolsters students' ESE. Vocational education institutions can implement specific strategies, such as creating accessible entrepreneurial practice platforms, incorporating business plan projects, and offering on-the-job training programs. These targeted measures are essential for helping students build their entrepreneurial confidence and develop the skills necessary for success in an evolving business landscape. Third, to address the moderating effect of gender in the CBSMU and SBSMU influence on ESE, educators and mentors should consider tailored approaches that account for gender-specific needs in building entrepreneurial self-efficacy.

Limitations

This study was not without limitations. First, the study used cross-sectional questionnaire study to analyze EI targeting only the vocational students from five universities of two provinces in China, so a general conclusion cannot be arrived. Second, this study used ESE and gender to explore the moderated mediation model of CBSMU and SBSMU on EI, however, as prior have reported there are still some other mediating variables,

such as entrepreneurial competency (Sarhan et al., 2022), entrepreneurial passion (Fan et al., 2024), and entrepreneurial mindset (Thi Loan et al., 2024). Third, the present study has taken the students only from the business vocational students background; hence whether the moderated mediation model within which gender as a moderating role and ESE as mediating role in the CBSMU and SBSMU-EI link would be applicable to students from other majors is still unanswered, thereby opening the possibility for performing another study targeting students from other majors viz. humanities, science, engineering, etc.

CONCLUSION

Overall, in a sample of 1250 vocational students in China, the present study proposed a moderated mediation model to examine the relationship between CBSMU and SBSMU and EI. The findings verified that there was a significant positive relation between EE and EI, and ESE played a mediating role in the link between EE and EI. This study could make a unique contribution, since we proposed grit as a moderating variables through which EE could enhance its effects on individual's ESE. High levels of grit could result in high levels of ESE, which in turn leads to high levels of EI. In this vein, grit should become an essential component of EE. Thus, entrepreneurial policy makers and EE educators could potentially use the finding of study as a practical guide to develop EIs among vocational students. Since the cross-sectional nature of this study, to get a more sound conclusion, further studies should increase representative samples from other countries. Considering the gender-related role was still little discussed in the field of EI, future research could incorporate other potential mediating variables into the EI model to examine the potential moderated effect of gender.

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Data availability statement

The datasets used during the current study are available from the corresponding author on reasonable request.

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