

The Mediating Role of Entrepreneurial Education on Entrepreneurial Mindset among Public University Students in Malaysia

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Abstract

Entrepreneurship has emerged as a crucial sector in today's world, especially in response to global crises that lead to economic downturns. To mitigate these challenges, governments have implemented economic aid strategies, increasingly focusing on entrepreneurship to drive both immediate and long-term economic growth. This strategic pivot highlights the significant role of entrepreneurial activities in promoting national prosperity. Governments are adopting various laws and regulations to support and empower entrepreneurs, recognizing the advantages of a robust entrepreneurial ecosystem. A lack of entrepreneurial mindset, particularly among youth, risks brain drains and hinders national economic advancement, emphasizing the need to cultivate such a mindset for sustained economic vitality. This study examines the relationship between four independent variables which are attitude, subjective norms, perceived behavioral control, and self-efficacy on entrepreneurial mindset, mediated by entrepreneurial education.

Keywords: Entrepreneurship, Entrepreneurial Mindset, Attitude, Subjective Norms, Perceived Behavioral Control, Self-Efficacy

Introduction and Background

Entrepreneurship and its related economic activities have ancient origins, but the term "entrepreneur" gained prominence in the 17th century, largely thanks to the influential Irish-French economist Richard Cantillon (Thornton, 2007). Although Cantillon did not provide a clear definition of entrepreneurship in his book, *Essai Sur la Nature du Commerce en Général*, his ideas helped shape our understanding of entrepreneurship as a driving force for economic innovation, risk-taking, and resource allocation (Saucier, 2010). Despite its varying definitions over time, entrepreneurship is consistently recognized as a process of discovering

new opportunities and fostering innovation (Nájera-Sánchez et al., 2023). But before we dive into the rabbit hole of entrepreneurship and spurring the nation economy, it is important to understand that graduates play a crucial role in a country's success. Prof. Datuk Dr. Kasim Haji Mansor emphasizes that graduates who excel in various fields are valuable assets for national development and global competitiveness. These individuals possess strong problem-solving skills, can address current needs, and can anticipate future trends, empowering society to become more innovative (UMS, 2023).

In addition, the rising unemployment rate among graduates in Malaysia poses a significant challenge to the country's economic performance. As a result, researchers and policymakers agree that entrepreneurship is crucial for economic development and sustainability (Cui & Bell, 2022). In response, many governments are focusing on entrepreneurship to create job opportunities, foster innovation, and stimulate economic growth (Elnadi & Gheith, 2021). Malaysia's is no different as it introduced the Future Malaysia Programme (FMP) which aims to support local entrepreneurs and start-ups to drive innovation (Nair, 2023). According to MalayMail (2023a), the number of Malaysian graduates increased by 5.1% to 5.92 million in 2022, while the graduate unemployment rate remained at 3.7%, indicating persistent joblessness among graduates. A previous study reported that 60% of graduates remained unemployed after graduation, according to an official report by the Ministry of Education Malaysia (Tan et al., 2021). Therefore, this research aims to highlight the importance of entrepreneurial education and mindset, emphasizing their urgency for educational institutions and policymakers. By identifying specific gaps that need attention, this study seeks to empower the next generation of entrepreneurs. Addressing these critical areas is vital for promoting youth entrepreneurship and stimulating overall economic growth in the country. Additionally, this study will explore the relationship between entrepreneurial education and mindset as variables.

Research Questions

This section introduces the research objectives to steer the research path. Below are the objectives.

1. To analyse the relationship between attitude, subjective norms, perceived behavioral control, self-efficacy, and entrepreneurial mindset among public universities students in Malaysia.
2. To measure the mediating effect of entrepreneurial education towards self-efficacy and entrepreneurial mindset among public universities students in Malaysia.

Research Questions

1. What is the relationship between attitude, subjective norms, perceived behavioral control, entrepreneurial education and entrepreneurial mindset among public universities students in Malaysia?
2. How does entrepreneurial education mediate the relationship between self-efficacy and entrepreneurial mindset among public universities students in Malaysia?

This research aims to illustrate and establish the significance of the entrepreneurial education and entrepreneurial mindset, highlighting its urgency and importance for both educational institutions and policymakers. This research is poised to assist policymakers by identifying specific gaps that demand analysis, ultimately empowering the next generation of

entrepreneurs. Addressing these critical areas is essential not only for fostering youth entrepreneurship but also for stimulating the overall economic growth of the country. In addition, the relationship between entrepreneurial education and entrepreneurial mindset will be displayed through this study. Moreover, this research could potentially benefit countries who are struggling with unemployment issues and spiking poverty rate. This is because countries in the African region face significant challenges with high unemployment rates, with some exceeding 20% (Walters, 2022). This situation is compounded by alarmingly high poverty rates, which can exceed 70% (Joe Hasell, 2022). These statistics highlight the pressing need for effective strategies to address unemployment and poverty in the region. By understanding how people's intentions influence their actions, policymakers and organizations in these countries could develop more effective strategies to address poverty and improve overall well-being. The worst part of this scenario is the newly adjusted International Poverty Line according to the new 2022 Purchasing Power 13 Parity which is \$2.15 per person compared to 2017 which is \$1.90 per person (TheWorldBank, 2022). For better contextual comprehension, the increasing of global poverty rate is dangerous because it means that a significant portion of the world's population is experiencing a decline in living standards. The United Nations has set an ambitious target of eliminating poverty in all its forms by 2030 as part of its Sustainable Development Goals (UnitedNations, 2015).

This emphasizes the widely recognized importance of reducing poverty to achieve sustainable development and global well-being. Therefore, an increase in the global poverty rate is generally seen as a worrying trend that demands immediate attention and collaborative efforts from governments, international organizations, and civil society to tackle it. In addition regarding the overall context in Malaysia, a recent study pointed out that 444,800 Malaysian youth are unemployed with 40% of that number are university graduates employed with minimum wage (MalayMail, 2023b). Based on the effect on said countries of spiking unemployment rate above, this finding is rather harrowing as it will negatively affect Malaysia's economy. Thus, this research will contribute to the production of entrepreneurs with its findings. This is because innovation and entrepreneurship have been proven vital in modern economic development (Sekerbayeva et al., 2023). Sekerbayeva et al (2023), also added that the connection between entrepreneurship and economic growth has been widely acknowledged, both locally and globally. Furthermore, fostering entrepreneurship and Small to Medium Enterprises (SME) sector played a substantial role in spurring the economy, creating more job opportunities and help reduce the poverty rate (Al-Qadasi et al., 2023).

Bibliometric Method

Bibliometrics is a scientific method that uses quantitative analysis to study articles published in a particular field. It helps measure the impact or influence of scientific publications using specific indicators (Alfaro - García et al., 2022). Therefore, in order to address this research question, a total of 1,804 articles from Scopus databases, were analyzed. This review employed a bibliometric approach to summarize the increasing focus on entrepreneurial education and its role in shaping the entrepreneurial mindset.

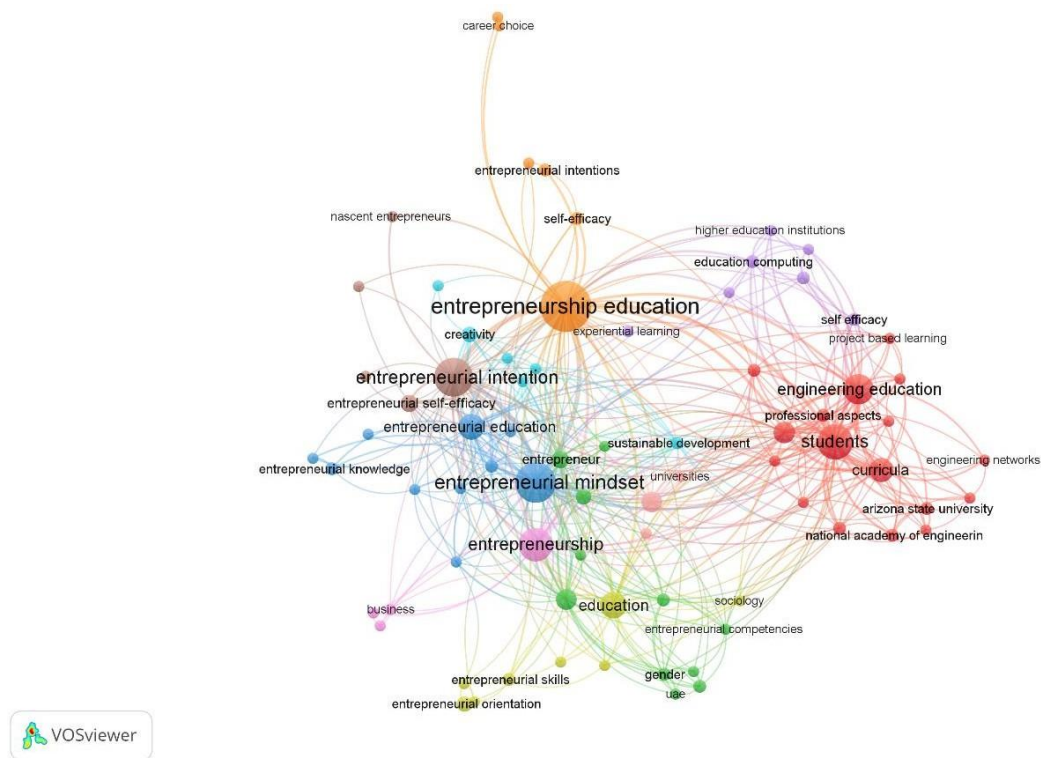


Figure 1

Science mapping (Figure 1) is an integral part of bibliometric analysis that identifies current knowledge and visually illustrates its connections to other areas of knowledge. In this context, bibliometric analysis techniques are applied to map the scientific landscape of entrepreneurial education and the entrepreneurial mindset. The analysis of keyword co-occurrence networks uncovers the intellectual structure underlying these fields (Anubhav, 2024). This node is highlighted in the literature as a critical focal point, connecting to key concepts like "entrepreneurial mindset" and "entrepreneurial intentions." Its prominence underscores its significance in understanding how these concepts interplay and influence one another in entrepreneurial studies which is based on the explanation on each variables above (Cui et al., 2021; Benouadni & El Cati, 2020). The mapping above indicates a notable connection between self-efficacy, the entrepreneurial mindset, and education. This suggests that students' belief in their capabilities may mediate the effects of education on their mindset (Costa et al., 2022). Enhancing self-efficacy through educational programs can empower students to take risks and embrace innovation, ultimately driving their entrepreneurial intentions (Mulyono et al., 2023). This cluster, which includes terms such as higher education institutions, experiential learning, and curricula, indicates a strong focus on how educational environments and methodologies can facilitate entrepreneurial development. The emphasis on experiential learning suggests that practical experiences within educational settings are crucial for fostering an entrepreneurial mindset (Costa et al., 2022). Aside from that, this cluster encompasses concepts like self-efficacy and entrepreneurial orientation, highlighting the importance of individual characteristics that influence entrepreneurial behavior. Understanding how personal attributes interact with educational influences can provide insights into developing effective strategies to nurture entrepreneurial intentions among students (Zanabazar & Jambal, 2023).

Literature Review

Attitude : Attitude is a crucial component of the theory of planned behavior as it is defined as an individual's evaluation or judgment of a specific behavior that encompasses their positive or negative feelings, beliefs, and thoughts about that behavior (Ajzen, 1991). Ajzen (1991) emphasized that an individual's attitude significantly predicts their intentions to engage in certain behaviors, ultimately influencing the actual performance of those behaviors. This perspective aligns with recent research, which suggests that a positive attitude toward entrepreneurship correlates with stronger intentions to start a business. For instance, studies conducted in Latin America indicate that the population generally holds a positive attitude toward entrepreneurship, leading to frequent business startups (Phong et al., 2020). The development of an entrepreneurial attitude can arise from the joy of launching a business and the improved quality of life it can bring (Mensah et al., 2023). However, in collectivist cultures, attitudes may not consistently predict entrepreneurial intentions due to cultural differences (Al-Jubari et al., 2019). This highlights the complexities in explaining human behavior, particularly regarding the entrepreneurial mindset, which ultimately leads to entrepreneurial action. Recent studies also indicate that attitude significantly impacts students' entrepreneurial mindsets and intentions. For example, Mensah et al (2023), found that fostering a positive attitude toward entrepreneurship empowers students to think and act like businesspeople, enabling them to seize opportunities effectively. To encourage a more entrepreneurial mindset among students, Anjum et al (2023), argue that universities should offer a variety of required and elective entrepreneurship courses across different majors, as a supportive environment for entrepreneurship positively influences students' motivation to engage in business activities. Despite its importance, Ajzen (1991), noted that attitudes often serve as weak predictors of behavior in specific contexts, particularly when influenced by institutional factors. To enhance the predictive validity of attitudes, aggregating specific behaviors across various situations can provide a more accurate assessment of underlying behavioral tendencies.

Subjective Norm : The second fundamental variable in the Theory of Planned Behavior is subjective norm, which refers to an individual's perception of societal pressure influencing their behavior. This involves the beliefs about whether important people in their lives approve or disapprove of a specific action and their motivation to adhere to those beliefs (Ajzen, 1991). Subjective norms and attitudes are closely linked, as both significantly impact behavioral intention—the key predictor of actual behavior—according to (Ulker-Demirel and Ciftci, 2020). Additionally, influences on subjective norms can extend beyond family and friends to include business consultants and successful entrepreneurs, affecting an individual's intention to engage in entrepreneurship (Tsordia & Papadimitriou, 2015). However, recent research by Saraih et al (2020), presents mixed findings regarding the predictive role of subjective norms in entrepreneurial intention. While some scholars argue that subjective norms are insignificant, others highlight inconsistencies in previous studies. For instance, Kobylinska (2022), noted that personal factors are more critical in shaping entrepreneurial intentions than the less direct influence of external factors. Conversely, some studies emphasize the significant role of family as a key social unit in fostering entrepreneurial inclination, with recent findings indicating that students' family backgrounds substantially influence their entrepreneurial choices (Swanzen & Botha, 2023; Tan et al., 2021). In addition, Swanzen and Botha (2023), found that while family has a strong influence, friends and colleagues also play a role, although to a lesser extent for some students. Overall, these findings suggest that

decisions regarding entrepreneurship among students are shaped by the influence of family, friends, and colleagues. Given that this study focuses on the entrepreneurial mindset, which is positively correlated with entrepreneurial intention Wardana et al. (2020), a positive relationship with subjective norms is anticipated.

Perceived Behavioral Control : Perceived behavioral control refers to an individual's perception of how easy or difficult it is to engage in a specific behavior, including beliefs about factors that can either facilitate or hinder that behavior (Ajzen, 1991). According to Phong et al. (2020), perceived behavioral control plays a significant role in determining behavior. Their research, which involved over 3,000 students across Finland, Sweden, and the United States, identified perceived behavioral control as the most crucial determinant of entrepreneurial intention. Tan et al (2021), further noted that students with stronger entrepreneurial intentions tend to score higher on perceived behavioral control, as individuals who believe in their ability to manage entrepreneurial activities are more likely to develop entrepreneurial intentions.

Huang et al (2023), added that, unlike subjective norms, which influence entrepreneurial intention through environmental perceptions, perceived behavioral control impacts intention from an internal perspective. This makes the Theory of Planned Behavior relevant in entrepreneurial education, as it allows researchers to explore students' attitudes and behaviors toward entrepreneurship. Additionally, recent findings indicate that perceived behavioral control has a more substantial positive influence on entrepreneurial intention than social norms, as it heavily relies on an individual's perception of how easy or challenging entrepreneurship is (Sutiadiningsih & Mahfud, 2023). This study also emphasizes that a positive attitude toward entrepreneurship can boost students' confidence in their ability to start a business, which can be cultivated through entrepreneurial education. However, Che Nawi et al. (2022), argued that greater support from parents, relatives, and friends increases students' likelihood of engaging in entrepreneurial activities. Recent research also shows a significant correlation between perceived behavioral control and entrepreneurial intention, although earlier studies across 12 countries presented inconsistent findings due to external factors (Aga, 2023). This inconsistency is addressed in a study by Ikhwan et al. (2022), which demonstrated that higher perceived behavioral control corresponds to greater entrepreneurial activity among students, aligning well with the concept's definition.

Self-Efficacy : The concept of self-efficacy refers to an individual's confidence in their ability to successfully execute a behavior (Bandura, 1978). Although self-efficacy is not explicitly mentioned in the Theory of Planned Behavior, it is closely related to perceived behavioral control, which involves beliefs about how easy or difficult it is to perform a behavior and can be influenced by an individual's self-efficacy beliefs (Ajzen, 1991). According to Bandura's Social Cognitive Theory, self-efficacy is defined as an individual's belief in their capacity to achieve specific performance levels and exert influence over events that affect their lives. It encompasses confidence in one's skills and abilities to successfully navigate tasks, even when facing challenges. Understanding self-efficacy is crucial as it shapes individuals' perseverance, resilience, and commitment in the face of difficulties, and it affects the level of effort a student or individual is willing to invest in completing tasks (Elnadi & Gheith, 2021). Costa et al. (2022), highlighted the similarities between self-efficacy and perceived behavioral control, where the researcher noted that both concepts rely heavily on individual beliefs to assess the

effectiveness of behaviors. Specifically, both concepts relate to perceptions of the difficulty of becoming an entrepreneur and the potential for success in that role. Despite these similarities, self-efficacy has been shown to positively correlate with entrepreneurial intention. Recent research indicates that self-efficacy mediates the relationship between education, experience, and entrepreneurial intention, demonstrating its positive implications (Huang et al., 2023). In the context of students, self-efficacy can be cultivated through entrepreneurial education, which equips students with the necessary skills to navigate entrepreneurial challenges. This empowerment helps students endure difficulties, persist through challenges, and develop effective plans to achieve their entrepreneurial goals, thus shaping their mindset (Costa et al., 2022). Furthermore, prior research indicates that self-efficacy significantly mediates the impact of entrepreneurship education on entrepreneurial intention. This aligns with Bandura's Theory of Self-Efficacy, which posits that an individual's confidence in their ability to succeed in specific tasks influences their motivation and willingness to engage in those activities. In the realm of entrepreneurship education, self-efficacy reflects an individual's belief in their capability to succeed as an entrepreneur (Mulyono et al., 2023). Consequently, the role of self-efficacy is essential for this study, which aims to explore its relationship with the entrepreneurial mindset.

Entrepreneurial Mindset : Two definitions of entrepreneurial mindset have emerged from previous research. Kor et al. (2001), describe it as the ability to navigate, take initiative, and organize in uncertain circumstances, while Hitt and Sirmon define it as a growth-oriented outlook that encourages adaptability, creativity, continual innovation, and renewal. Despite the variations in definitions, a study comparing eight definitions of entrepreneurial mindset highlights a significant commonality, in which they all emphasize on cognitive perspective related to thinking and acting (Cui et al., 2021). Additionally, Benouadni and El Cati (2020) suggest that fostering entrepreneurship requires establishing intention before transitioning to actual entrepreneurial endeavors. To achieve this, it is essential to equip inexperienced individuals with the attitudes, behaviors, and mindsets necessary for developing entrepreneurship. The entrepreneurial mindset is crucial because it encompasses flexible thinking rooted in adapting core beliefs in uncertain, complex, and dynamic environments (Cui & Bell, 2022). Research has shown a positive and constructive correlation between entrepreneurial mindset and participation in entrepreneurial activities. A study involving 242 business school students revealed that individuals with an entrepreneurial mindset are more likely to engage in entrepreneurial activities (Benouadni & El Cati, 2020). However, Cui and Bell (2022) note a gap in research regarding the contextual factors that contribute

to these outcomes, particularly how the characteristics of a university influence students' entrepreneurial mindset. Nonetheless, the entrepreneurial mindset is significantly related to education, as it helps individuals develop a deeper understanding of entrepreneurship and become familiar with entrepreneurial culture (Zanabazar & Jambal, 2023). This mindset also raises awareness of the importance of gaining practical experience for successfully starting a new business. Furthermore, a previous study analyzed the relationship between entrepreneurial education and entrepreneurial mindset indicated that the primary goal of entrepreneurial education is to cultivate an entrepreneurial mindset, which is a vital factor in determining individuals' success (Mendoza et al., 2023). The connection between education and mindset has been reinforced by multiple studies showing a significant positive correlation,

leading researchers to conclude the critical role entrepreneurial education plays in shaping students' mindsets (Li et al., 2023).

Entrepreneurial Education : Entrepreneurial education is defined as a learning activity designed to enhance individuals' knowledge, skills, abilities, and personal qualities within the entrepreneurship context (Jiatong et al., 2021)). Research has shown that universities that effectively provide essential knowledge about entrepreneurship contribute positively to the development of entrepreneurial traits among students. Those who aspire to pursue entrepreneurship as a career are significantly influenced by entrepreneurial education (Vanlalhriati et al., 2022). Fauzi (2022), argues that entrepreneurial education is a crucial factor in promoting entrepreneurial activities and generating job opportunities. According to previous research, entrepreneurial education significantly impacts an individual's intention and behavior towards entrepreneurship (Fitriana & Kassymova, 2021). It plays a vital role in nurturing students' enthusiasm for starting their own businesses by fostering an entrepreneurial mindset and equipping them with the skills necessary to recognize opportunities and develop innovative ideas, ultimately igniting their interest in launching their ventures (Amani et al., 2024). However, some studies argue that entrepreneurship education does not significantly contribute to developing entrepreneurial intentions, highlighting that such education varies across countries (Fitriana & Kassymova, 2021), and some suggest that students' entrepreneurial intentions are influenced by their university's approach to entrepreneurship (Cui et al., 2021). Additionally, research that emphasize the implications of entrepreneurial education on entrepreneurial intention suggests that well-structured programs encourage creative thinking and motivate students to pursue entrepreneurial endeavors (Costa et al., 2022). To enhance students' entrepreneurial intentions, educational programs should prioritize hands-on practical experiences over traditional theoretical instruction to inspire exploration of business opportunities (Costa et al., 2022). Mulyono et al. (2023) support this view, indicating that entrepreneurial education, combined with proper training and skill development, can boost students' self-efficacy in tackling business challenges. Higher self-efficacy correlates with increased motivation to take risks and fosters innovation and proactive initiatives among students (Mulyono et al., 2023). Consequently, this study will consider entrepreneurial education as a mediating variable in examining the relationships between attitudes, subjective norms, perceived behavioral control, and self-efficacy regarding the entrepreneurial mindset.

Conclusion

In conclusion, the analysis of entrepreneurial education, mindset, and related constructs highlights the pivotal role educational interventions play in fostering entrepreneurial intentions among students. Research suggests that entrepreneurial education not only enhances knowledge but also cultivates essential personal traits like self- efficacy, which mediates the link between education and entrepreneurial mindset (Costa et al., 2022; Mulyono et al., 2023). The relationship between entrepreneurial mindset and intentions emphasizes the crucial role of education in transforming attitudes into tangible actions, equipping students to navigate uncertainty and capitalize on entrepreneurial opportunities (Cui & Bell, 2022; Zanabazar & Jambal, 2023). By focusing on experiential learning and personal development, entrepreneurial education has the potential to foster a growth- oriented mindset, ultimately empowering students to pursue entrepreneurship and succeed in their ventures. Not only that, Amani et al. (2024) also highlights applying the theory of planned

behavior here is well-suited, providing insights into students' behaviors and entrepreneurial mindset. The study also incorporates entrepreneurial mindset as an additional variable, with entrepreneurial education acting as a mediator between attitudes, subjective norms, perceived behavioral control, self-efficacy, and entrepreneurial mindset. This design enables a thorough examination of the proposed hypotheses. Hypothesis testing, as Kahl (2023) notes, is fundamental for assessing theoretical accuracy, allowing researchers to confirm or challenge existing theories.

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