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## Impact of Entrepreneurship Education on Entrepreneurial Emotions among University Students

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**Abstract.** Entrepreneurship education can emotionally impact students by instilling excitement, curiosity, and self-efficacy, influencing their decision-making when considering entrepreneurship as a career path. Emotions are essential in shaping student involvement in entrepreneurship, especially during the early stages of beginning a business. Thus, this study was aimed at determining the impact of entrepreneurship education on entrepreneurial emotions among university students in higher education institutions. Purposive sampling was employed, targeting final-year undergraduate students from Malaysian public universities. A survey was administered to 453 students in their final year of study. Data were analysed using IBM SPSS 22 for descriptive analysis and SmartPLS 3.3.0 for testing hypotheses. The results revealed that entrepreneurship education and negative entrepreneurial emotions were modest, whereas positive emotions were high. This finding confirmed that fear is the greatest obstacle for students wanting to become entrepreneurs. Through exposure to entrepreneurship education, students' entrepreneurial abilities and emotions to venture into business were significantly heightened. This suggests that entrepreneurship education was advantageous as it inspired students toward entrepreneurship. The findings of this study implied that curriculum planning committees prudently design syllabi at the university to incorporate theoretical and practical aspects within the entrepreneurship education programme. The curriculum structure

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should also emphasize relevant and applicable practicality in the real world.

**Keywords:** entrepreneurship education; positive emotion; negative emotion; university students

## 1. Introduction

Entrepreneurship is recognized as a possible catalyst for driving economic growth and sustaining competitiveness in the globalization era (Gonzalez et al., 2020). This suggests that if the number of entrepreneurs is low the country's economic growth will be affected due to the narrower market for job opportunities. In this regard, the emphasis on developing entrepreneurial skills through entrepreneurship education ought to be given attention by governments. Higher education institutions (HEIs) have a critical role in enhancing the structure of entrepreneurship education to improve not only the attributes, critical thinking, knowledge, and entrepreneurial skills, but also influence their behaviour when engaging in entrepreneurial activities.

In Malaysia, many government policies and entrepreneurship action plans have been enacted. However, the number of university graduates who venture into entrepreneurship still needs to be increased, as a mere two per cent of those who graduate each year become entrepreneurs (Ministry of Higher Education, 2015). The impact of this situation raises more concern in light of the report of Graduate Tracking Survey that reported that 60% of graduates were unemployed a year after completing their studies (Ministry of Education Malaysia, 2019). This indicates that the government's introduction of entrepreneurship education through various policies and plans has not yet attained the intended result. This concern has raised questions, including 'Why is this happening?'

According to Bernoster et al. (2020) and Kollman et al. (2017), their studies have shown how fear could be produced by unfavourable emotions, which also might have a detrimental impact on how opportunities for entrepreneurship are perceived. As a result, these emotions prevent individuals from engaging in entrepreneurial activities. Furthermore, emotions are formed due to external stimuli that shape individual experiences (Celik & Calik, 2022; Gogan & Belinsky, 2022; Murad et al., 2022). In other words, positive emotions can be elicited if the experience acquired through entrepreneurship education is meaningful, as students then may acquire a higher emotional capacity to face the obstacles and pressures of entrepreneurship. It can favourably impact their emotional state and decision-making while deciding whether or not to start a business.

This is in tandem with the strategy the Malaysian Ministry of Education put forth via the National Education Development Plan 2013-2025, which prioritizes interactive learning activities to stimulate students' affective or emotional learning. Indeed, recognising and addressing the important role of emotions in education may contribute to the holistic development of students and entrepreneurs. Students who experience negative emotions are more likely to give up if they do not develop an innovative business idea (Othman et al., 2020; Patzelt

& Shepherd, 2011), or are afraid of starting a business (Kollman et al., 2017). This study shows how emotion can affect logical reasoning when considering to engage in business, either positively or negatively. Therefore, entrepreneurship education is crucial to make students 'fall in love' with a career as an entrepreneur, which can increase their involvement in business endeavours.

In addition, research on the impact of entrepreneurship education on students' emotions, whether positive or negative, is in a relative infancy stage and yet has to be studied extensively. Some studies only examined positive emotions toward entrepreneurship (Inanova et al., 2018; Othman et al., 2020; Zampetakis et al., 2016), while others solely focused on negative emotions (Kollman et al., 2017). Patzelt and Shepherd (2011) suggested that future studies should investigate negative emotions, as the current literature has a narrow focus on this aspect. Furthermore, there is a lack of research concurrently exploring both positive and negative emotions towards entrepreneurship among students, highlighting the need for further investigation in this field. This study can contribute to understanding entrepreneurship education by examining its impact on positive and negative emotions among students in higher education institutions. Therefore, this study was aimed at determining the impact of entrepreneurship education on entrepreneurial emotions among university students.

## **2. Literature Review**

Entrepreneurship education was first introduced in higher education institutions (HEIs) in 1968, with Babson College offering an entrepreneurship course to its undergraduate students. Over the following decades, entrepreneurship education gained popularity in HEIs, with the University of Southern California setting a precedent by offering such a course in 1971. Today, the number of universities and colleges that provide entrepreneurship courses has surpassed 3,000 globally (Kuratko & Morris, 2017). Multiple studies highlighted the positive impact of entrepreneurship education, including the increased likelihood of engaging in entrepreneurial activities (Gieurea et al., 2020; Sanchez & Sahuquillo, 2018), development of entrepreneurial qualities, and increased likelihood of starting a business (Botha & Koranteng, 2022; Cai et al., 2021).

At the beginning of 2013, entrepreneurship education has been implemented in Malaysia as one of the core courses for all students in HEIs, regardless of their subject of study. Previously, formal entrepreneurship education had not been emphasised and it depended on the university whether the course was offered as a compulsory, core, or elective course. However, entrepreneurship education in Malaysia recently has been revamped to become a significant national agenda point. This became evident as government called attention to the development and implementation of entrepreneurship in its Ninth Malaysia Plan (9MP 2006-2010) through the Twelve Malaysia Plan (12MP 2021-2025). Various national policies and strategic plans for HEIs were implemented, including the Entrepreneurship Development Policy, Entrepreneurship Strategic Plan 2013-2015, and the Entrepreneurship Action Plan 2016-2020. Therefore, universities today are not only a storehouse of knowledge but also a place to develop the potential of students to become entrepreneurs.

Students or potential entrepreneurs who pursue entrepreneurship education gain the drive, skills, and knowledge required to start a successful business (Shah et al., 2020). Based on social cognitive theory, individual characteristics and the learning environment have a considerable impact on how well-educated entrepreneurs develop. Some entrepreneurs see links between things that at first glance seem unconnected. They can thereby "connect the dots" between changes in government policy, technology, markets, and other factors. The pattern they notice will inspire them to create new products and services. Additionally, the term 'newness' does not necessarily refer to 'new' knowledge, meaning that it may also refer to the advancement or modification of knowledge that is already known.

Next, to strengthen this study, the appraisal theory was applied to interpret students' emotions or stimuli when predisposed to a situation or event. In this context, a situation or event refers to exposing the students to entrepreneurship education. Entrepreneurial emotion refers to the emotions, affections, or feelings toward entrepreneurship (Cardon et al., 2012). Meanwhile, Khan (2017) asserts that a person's emotions can be influenced by or subjected to decision making and actions due external and internal factors. He expounded that these factors include information obtained from and appraisal given on an action or decision. According to Imada and Ellsworth (2011), even if persons are exposed to the same or similar situations, each person will react in a slightly different manner according to his/her perception of the situation. Any information obtained will be evaluated according to persons' respective emotions.

According to Mortan et al. (2014), entrepreneurship education not only fosters the valuable aptitudes to thrive, manage, and succeed but also the ability to use one's emotions in challenging situations. This insinuates that entrepreneurship education affects students' psychology, especially during their initial involvement in starting an enterprise. This implies that an unfavourable and uninspiring environment may result in individuals' disinterest in entrepreneurship. This phenomenon is described by Li and Wu (2019), who say that students are more excited and enthusiastic to venture into entrepreneurship after having taken an entrepreneurship course. Thus, students' psychology and eagerness, whether they are inspired or hindered to venture into entrepreneurship, are fundamentally noteworthy. Thus, these hypotheses guided the study:

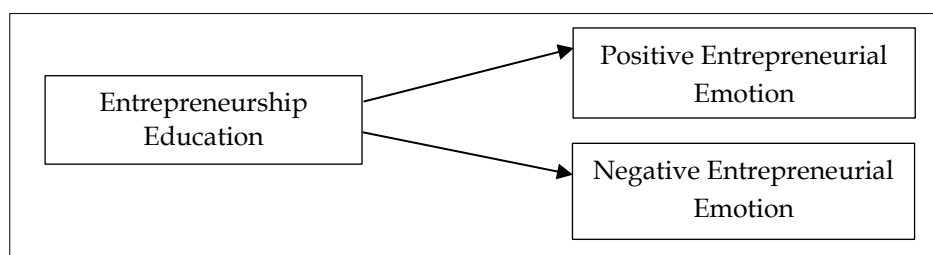
H1: Entrepreneurship education has a significant effect on positive entrepreneurial emotion.

H2: Entrepreneurship education has a significant effect on negative entrepreneurial emotion.

Inanova et al. (2018) assert that positive emotional evaluation is influenced by the entrepreneurial tendencies or abilities of individuals. In order to develop effective strategies for supporting and fostering entrepreneurial activity among potential entrepreneurs, it is essential to understand the range of anticipated emotions, both positive and negative. Furthermore, entrepreneurship education can significantly impact the emotional experiences of aspiring entrepreneurs, with positive effects

including increased self-efficacy and motivation, and negative effects including heightened stress and anxiety. Relevant and interactive pedagogy in entrepreneurship learning has increased students' positive emotions toward entrepreneurship, making them more inclined to start a business and thrive in the field (Othman et al., 2020). This is in agreement with the ideas of Zampetakis et al. (2016), who discovered that a person with positive emotions is motivated and driven towards entrepreneurial activities. Therefore, what students feel or experience is important in determining their potentiality to become entrepreneurs, especially if they are impelled by positive emotions.

Patzelt and Shepherd (2011) maintain that the entrepreneurship literature focuses more on positive emotions towards entrepreneurship compared to the effects of negative emotions. Accordingly, they recommended exploring the importance of negative emotions in future research. They explained that teachers or educators often neglect negative emotions because they overemphasise the positive aspects of entrepreneurship. Still, business failures typically occur during the initiation of an enterprise, due to not discussing the negative emotions, such as fears and concerns, which might prevent them from thriving. This is because negative emotions disturb perceptions when assessing a stimulus, thus jeopardising necessary actions (Kollman et al., 2017). Therefore, entrepreneurial emotions consist of both positive and negative emotions. Figure 1 illustrates the research model that was developed.



**Figure 1: Research model**

### 3. Methodology

This section elucidates the methodology employed for sample selection and data collection, and outlines the data analysis techniques utilized in the study.

#### 3.1 Sample

This study employed purposive sampling, targeting 453 final-year undergraduate students from Malaysian public universities. Final-year students were chosen based on their plans and anticipated employment after graduation. The population comprised 93,352 final-year students enrolled in the bachelor's programme in public universities across Malaysia (Ministry of Higher Education, 2021). To calculate the appropriate sample size, we referred to various determination tables. For instance, Krejcie and Morgan's (1970) table recommends a sample size of 384 for populations with over 100,000 people. However, Cohen et al. (2007) and Israel (1992) considered the significance level and sampling error in determining the sample size for populations exceeding 100,000. Cohen et al.

(2007) suggest a sample size of 383, while Israel (1992) recommends 398, at a significance level of 0.05, with a sampling error of five percent and a reliability level of 95 percent. Considering these perspectives, the minimum sample size required for this research was 398 respondents.

### **3.2 Instrument**

The questionnaire was structured into three main sections. Part A included questions related to the respondent's profile and utilized eleven items from Othman et al.'s (2020) study to measure the construct of entrepreneurship education. All items were rated on a ten-point scale, ranging from 1 (not at all) to 10 (very high). Part B and Part C consisted of ten items developed based on Othman et al.'s (2019) research, with five items measuring positive and negative entrepreneurial emotions. Responses were recorded on a seven-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

Next, a pilot study involving 40 final-year students was carried out. The Cronbach Alpha coefficient was employed as a measure of reliability to determine the internal consistency of the questionnaire. For entrepreneurship education, the Cronbach Alpha value was 0.89, whereas it was 0.91 for positive emotion and 0.93 for negative emotion. All variables were over the cut-off of 0.6, proving this instrument was reliable (Sekaran & Bougie, 2016).

### **3.3 Data Collection**

A total of 518 questionnaires were distributed over six months, from March 2022 to August 2022, to account for potential incomplete items and unreturned questionnaires. All questionnaires provided to the respondents were successfully retrieved. However, during data screening, seven incomplete questionnaires and 58 data sets with outliers were identified, resulting in a final sample size of 453 respondents for this study. This indicated that the rate of return of the complete and usable questionnaire form in this study was good (87.45%) and met the target as it exceeded 80%, as Cohen et al. (2007) suggested.

### **3.4 Common Method Variance (CMV)**

To examine the problem of CMV due to the utilisation of one method of data collection, the Harman factor singularity test was performed. The findings revealed that the first factor accounted for 40.56% of the variance, below the 50% threshold, indicating no concerns regarding Common Method Variance (CMV).

### **3.5 Data Analysis**

To address the research questions formulated, descriptive and inferential statistics were employed using IBM SPSS 22 and SmartPLS 3.3.0 software. Using mean scores, descriptive analysis was used to examine the levels of entrepreneurship education, and positive and negative entrepreneurial emotions. The mean score ranges for entrepreneurship education were categorized as follows: 1.00 to 2.80 (very low), 2.81 to 4.60 (low), 4.61 to 6.40 (moderate), 6.41 to 8.20 (high), and 8.21 to 10.00 (very high). Similarly, the mean score ranges for positive and negative entrepreneurial emotions were classified as: 1.00-2.20 (very low), 2.21-3.40 (low), 3.41-4.60 (moderate), 4.61-5.80 (high), and 5.81-7.00 (very high).

In this study, inferential statistics provide a quantitative method for examining the relationship between variables and determining whether the hypothesis should be rejected or cannot be rejected. Thus, direct effect testing was performed to identify significant effects between exogenous variables and endogenous variables via SmartPLS 3.0 software. This study examined the predicted relationship between the variables in the conceptualized model, which aligns with the findings of Hair et al. (2014) that suggested the use of Partial Least Squares Structural Equation Modelling (PLS-SEM) due to its predictive nature compared to Covariance-Based Structural Equation Modelling (CB-SEM).

The standard regression weight ( $\beta$ ) value postulated the contribution strength of a relationship. This is depicted through the  $\beta$  value and is interpreted by three levels of contribution, namely the value of  $\beta$  lesser than 0.10 (small), the value of  $\beta$  to be between 0.10 and 0.50 (moderate), and the value of  $\beta$  greater than 0.50 (Cohen et al., 2007). It was emphasized that a value of  $\beta$  smaller than 0.10 or negative would lead to the rejection of the hypothesis, even if the p-value was significant. This study evaluated the convergent validity based on the criteria proposed by Hair et al. (2014), which recommend that the loading factor, CR, and AVE values exceed 0.70, 0.7, and 0.5, respectively.

#### 4. Result

This section explains the study findings to answer the five research questions. The mean score was used to answer the first three research questions, while path analysis was utilised to address the fourth and fifth research questions. Using SEM-PLS involves two steps in the analysis procedure: evaluating the measurement and the structural model. The evaluation of the structural model included measures such as the explanatory strength of the model ( $R^2$ ), impact measure ( $f^2$ ), and strip coefficient (Hair et al., 2014). A bootstrapping procedure with 5,000 subsamples was also conducted to test the relationship hypothesis.

**Table 1: Measurement model**

| Construct                               | Item | Loadings | AVE   | CR    |
|---|------|----------|-------|-------|
| Entrepreneurship Education (EE)         | A1   | 0.908    | 0.803 | 0.970 |
|   | A2   | 0.883    |       |       |
|   | A3   | 0.890    |       |       |
|   | A4   | 0.905    |       |       |
|   | A5   | 0.906    |       |       |
|   | A6   | 0.892    |       |       |
|   | A7   | 0.897    |       |       |
|   | A8   | 0.902    |       |       |
|   | A9   | 0.882    |       |       |
|   | A10  | 0.899    |       |       |
|   | A11  | 0.888    |       |       |
| Positive Entrepreneurial Emotions (PEE) | B1   | 0.919    | 0.82  | 0.958 |
|   | B2   | 0.917    |       |       |
|   | B3   | 0.910    |       |       |
|   | B4   | 0.879    |       |       |

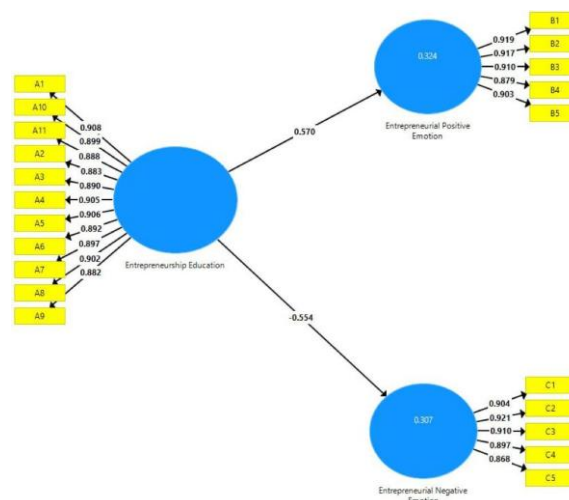
|   |    |       |      |       |
|---|----|-------|------|-------|
|   | B5 | 0.903 |      |       |
| Negative<br>Entrepreneurial<br>Emotions (NEE) | C1 | 0.904 | 0.81 | 0.955 |
|   | C2 | 0.921 |      |       |
|   | C3 | 0.910 |      |       |
|   | C4 | 0.897 |      |       |
|   | C5 | 0.868 |      |       |

Table 1 indicates that the AVE value is higher than 0.5, and CR is above 0.7, while all loading values exceed the threshold of 0.7. Therefore, all the constructs demonstrate sufficient internal consistency reliability as recommended by Hair et al. (2014).

**Table 2: Discriminant validity**

| Construct | EE           | PEE          | NEE          |
|-----------|--------------|--------------|--------------|
| EE        | <b>0.896</b> |              |              |
| PEE       | 0.57         | <b>0.906</b> |              |
| NEE       | -0.554       | -0.66        | <b>0.900</b> |

Then, the researchers determined the validity of discrimination by comparing the AVE's square root with the correlation proposed by Fornell and Larcker (Table 2). The square correlation of each construct was found to be less than its respective AVE, which suggests adequate discriminatory validity of the measurement. Overall, the measurement model exhibits satisfactory convergent and discriminant validity levels. The graphical output of this study is shown in Figure 2.



**Figure 2: Graphical output**

#### 4.1 What is the entrepreneurship education level among students?

Table 3 displays the mean scores of the entrepreneurship education level among students. The findings indicate that entrepreneurship education is moderately provided, with an average score of 5.73. Following this, a robust analysis of each item in entrepreneurship education revealed that "identifying business ideas"



established the highest mean score, followed by "identifying changes in the environment" and "linking business ideas with societal needs."

**Table 3: Mean and standard deviation in entrepreneurship education (EE)**

| Construct                  | Mean | Standard Deviation | Interpretation Score |
|----------------------------|------|--------------------|----------------------|
| Entrepreneurship Education | 5.73 | 1.201              | Moderate             |

#### 4.2 What is the positive entrepreneurial emotions level among students?

**Table 4: Mean and standard deviation of positive entrepreneurial emotions (PEE)**

| Construct                         | Mean | Standard deviation | Interpretation Level |
|-----------------------------------|------|--------------------|----------------------|
| Positive Entrepreneurial Emotions | 4.63 | 1.204              | High                 |

Table 4 indicates the interpretation of mean scores of positive entrepreneurial emotions. Results show that students' positive emotions towards entrepreneurship were high. Based on a thorough analysis of the positive entrepreneurial emotions statements, the highest mean score was "I feel satisfied when the product sold is well received by the public," followed by "I feel proud when the product can solve a customer's problem," and "I feel happy when the products produced can meet the tastes of the customers".

#### 4.3 What is the negative entrepreneurial emotions level among students?

**Table 5: Mean and standard deviation of negative entrepreneurial emotions (NEE)**

| Construct                         | Mean | Standard deviation | Interpretation Level |
|-----------------------------------|------|--------------------|----------------------|
| Negative Entrepreneurial Emotions | 4.43 | 1.406              | Moderate             |

Table 5 depicts the interpretation of mean scores for negative entrepreneurial emotions. Findings show that the negative emotions towards entrepreneurship among students are moderate. Based on the detailed analysis, the mean value for the highest statement was "I am afraid that the business opened will fail," followed by "I am ashamed to face customers," "I feel sad if my product is not sold," "I worry when customers give feedback on my product," and, the lowest mean was "I feel angry if customers compare my product with a competitor's product".

#### 4.4 Does entrepreneurship education have an effect on positive entrepreneurial emotions among students?

**Table 6: Hypothesis testing on direct effect**

| Relationship | Std. Beta | Std. Error | t-value | Decision  | R <sup>2</sup> | f <sup>2</sup> |
|--------------|-----------|------------|---------|-----------|----------------|----------------|
| EE → PEE     | 0.570     | 0.032      | 17.659  | Supported | 0.324          | 0.480          |

Table 6 exhibits the significance test between entrepreneurship education and positive entrepreneurial emotions. According to the findings, entrepreneurship education ( $\beta = 0.570$ ,  $t = 17.659$ ,  $p < 0.05$ ) was found to have a positive effect on positive entrepreneurial emotions, accounting for 32.4% of the variance. The effect size analysis revealed that entrepreneurship education ( $f^2=0.480$ ) had a moderate effect on positive entrepreneurial emotions. Thus, this hypothesis was supported.

#### 4.5 Does entrepreneurship education have an effect on negative entrepreneurial emotions among students?

**Table 7: Hypothesis testing on direct effect**

| Relationship | Std. Beta | Std. Error | t-value | Decision  | R <sup>2</sup> | f <sup>2</sup> |
|--------------|-----------|------------|---------|-----------|----------------|----------------|
| EE → NEE     | -0.554    | 0.036      | 15.234  | Supported | 0.305          | 0.443          |

Table 7 presents the significance test between entrepreneurship education and negative entrepreneurial emotions. The results of the analysis indicated that entrepreneurship education ( $\beta = 0.554$ ,  $t = 15.324$ ,  $p < 0.05$ ) had a negative effect on negative entrepreneurial emotions, accounting for 30.5% of the explained variation. Additionally, the effect size analysis revealed that entrepreneurship education ( $f^2=0.443$ ) had a moderate effect on negative entrepreneurial emotions. Therefore, the study hypothesis was supported.

## 5. Discussion

These findings show that entrepreneurship education positively impacts students' personal development toward entrepreneurship. The students could identify business ideas by looking at the needs and want of the community by identifying and exploring potential opportunities. Numerous studies have found that entrepreneurship education positively equips entrepreneurs and those interested in entrepreneurship with the necessary knowledge and skills (Gieurea et al., 2020; Kuratko & Morris, 2017; Murad et al., 2022). Therefore, incorporating entrepreneurship education into tertiary-level education can improve knowledge and increase students' ability to recognize opportunities and gather pertinent information, enabling them to capitalize on potential opportunities and pursue entrepreneurship.

The second finding showed that students exhibited highly positive entrepreneurial emotions. It implies that students' emotions towards embarking on entrepreneurial endeavours were positive, and therefore, they would be more eager to carry out entrepreneurial activities. These activities often involve

discovering opportunities, developing a business plan and strategy, obtaining money, allocating resources efficiently, organising and testing the product or service, and putting up a physical store or an online store. Based on a thorough analysis, the emotion of satisfaction and pride got the highest mean value to start a business. This finding is in agreement with those of Khan (2017) and Othman et al. (2019), which revealed that a person with positive emotions would be more inclined toward entrepreneurial activities to start a business. It means that a positive emotional response toward entrepreneurship among students acts as a catalyst to venture into the field. Therefore, what students feel or experience is vital in determining their potential engagement in entrepreneurial activities.

Overall, the results from this survey elucidated that positive emotions such as satisfaction, pride and happiness motivated students to commence a start-up. The emotion of "satisfaction" indicates the students' evaluation of a product that attracts the public's attention, and the response has motivated them to start a business. This finding is supported by Kerr et al. (2019) and Zampetakis et al. (2016) that emotional satisfaction increases an individual's effectiveness in performing a task. Such instances serve as a compelling testament to how individuals endowed with positive entrepreneurial emotions are adeptly equipped and prepared to tackle any circumstances or challenges in the entrepreneurial field and exhibit unwavering determination, optimism, and resilience as they pursue their entrepreneurial endeavours.

The findings show that students' negative emotions about entrepreneurship are modest. Specifically, negative emotions can influence a person's judgment to avoid or refrain from engaging in entrepreneurial activities. This agrees with findings of studies conducted by Bernoster et al. (2020) and Kollman et al. (2017), which indicated that negative emotions prevented individuals from engaging in start-ups. Thus, negative emotions can reduce self-efficacy to act, which becomes an obstacle in entrepreneurial activity. In general, negative emotions such as fear, shame, sadness, worry, and anger significantly impact students' decisions regarding entrepreneurship and their willingness to start a business. Results from the study of Inanova et al. (2018) reveal that when a person has high levels of fear, they quickly lose control of a situation. Specifically, this finding determined that the emotional fear of uncertainty or anxiety that might impact students when starting a business might be a stumbling block, especially when starting a business.

This study found that the direct effect of entrepreneurship education on positive and negative entrepreneurial emotions yielded fresh insights in the literature. This is because there still is a dearth of information on entrepreneurial emotions among students. Findings from this study indicated that emotions are crucial factors that can affect decision-making towards entrepreneurship. As such, universities play an essential role in empowering entrepreneurship among students. Thus, entrepreneurship education can contribute toward the government agenda of producing more entrepreneurial graduates with higher propensities for risk-taking and participating in entrepreneurial activities.

In addition, being exposed to entrepreneurship education is crucial for cultivating students' entrepreneurial potential and ability to effectively utilize their emotions in difficult situations, particularly in the early stages of starting a business. This aligns with Li and Wu's (2019) report, which stated that students' enrolment in entrepreneurship education created more excitement and confidence toward entrepreneurship. It fashioned them to become more sanguine in uncertain situations which is notorious in start-ups. This is reinforced by Cai et al. (2021) and Othman et al. (2020), who agreed that students who experienced fun during learning allocated more time to their studies outside the classroom. In other words, an unfavourable and uninspiring environment can deter and impede a person's interest in entrepreneurship. Consequently, encouraging students to think of themselves as job creators rather than job seekers is crucial, and tertiary exposure to entrepreneurship education makes this possible.

According to the results of the study, students who undergo entrepreneurship education but have lower entrepreneurial abilities tend to experience stronger negative emotions when considering starting a business. This situation may cause students to avoid taking risks and exploiting entrepreneurial opportunities. Entrepreneurship courses have been shown to affect students' negative emotions about starting a business (Gogan & Belinsky, 2022; Kollman et al., 2017). They stated that the entrepreneurship classes they attended did not help transform them into entrepreneurs; instead, they were despaired and gave up on innovatively kick-starting a business. This illustrates that to establish a business goes hand in hand with risk-taking and uncertainty. Incidentally, uncontrolled negative emotions, such as fear of failure, might be fuelled by the lack of entrepreneurial knowledge and abilities, and interfere with an individual's involvement in entrepreneurial activities. This concept aligns with the appraisal theory, which elucidates that a decision is made according to an assessment of emotions based on a particular event or situation.

This study implies that curriculum planning committees prudently design syllabi at the university to incorporate theoretical and practical aspects within the entrepreneurship education programme. Students should be taught entrepreneurship in a way that includes academic and practical components with an emphasis on real-world business. Accordingly, to increase students' potential to choose entrepreneurship as a career, the negative emotional aspect needs to be given due attention, especially when developing the curriculum. This is because the cognitive element needs to be emphasized to improve the quality of human capital, and the emotional aspect is equally important. Therefore, with entrepreneurship education emphasizing aspects of the entrepreneurial experience, negative emotions such as fear or shame in business can be reduced. Students who control their emotions can use them to advance their entrepreneurial endeavours. At the same time, their motivation can be increased to venture into entrepreneurship.

According to these findings, universities or lecturers who teach entrepreneurship courses should pay attention to the technical and emotional aspects of starting a business. Indirectly, aspiring entrepreneurs can control their emotions better and

develop resilience in the face of difficulties in the entrepreneurship journey. Moreover, the present economic climate is marked by uncertainty and growing challenges, necessitating students and aspiring entrepreneurs to be more creative, competitive, and adept at thriving in a competitive market. This is particularly crucial during periods of uncertainty, where individuals often are plagued by anxiety or fear, ensuing in them avoiding entrepreneurial endeavours. It is evident from such circumstances that an individual's emotions play a crucial role in shaping his or her actions and decisions, irrespective of whether the outcomes are favourable or unfavourable, indirectly influencing their willingness to engage in entrepreneurial activities and start a new business venture.

## 6. Conclusion

Entrepreneurship education is vital in developing students' potential as entrepreneurs at the tertiary level, motivating them to engage in entrepreneurial activities and establish their businesses, particularly when they positively perceive their abilities. This study has shown the importance of developing human capital through entrepreneurship education and the emotional evaluation of students to start a business. Exposure to various forms of knowledge and experience oriented toward entrepreneurship can enhance students' abilities in entrepreneurship. It is essential to produce more competitive and resilient entrepreneurs to take advantage of the current opportunities in a world without borders, especially after the COVID-19 pandemic. Thus, entrepreneurship education in HEIs can enhance students' entrepreneurial abilities as well as open students' minds to entrepreneurship as a career of choice.

This study has several limitations, such as that it only included participants who were students at public universities. Therefore, future researchers should also investigate students at private universities for a more comprehensive understanding of the situation within the Malaysian context. In addition, this study utilized a quantitative method; thus, a mixed approach of both qualitative and quantitative approaches is necessary for more robust results.

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