

THE ROLES OF ENTREPRENEURIAL EDUCATION: A MEDIATION ANALYSIS BETWEEN ATTITUDE AND STUDENTS' ENTREPRENEURIAL INTENTION

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Abstract: *Nowadays, it is acknowledged that entrepreneurship plays a significant role in fostering innovation, productivity, job creation, and social and economic advancement. This study investigates the mediating role of Entrepreneurial Education in the relationship between Attitude and Entrepreneurial Intention among university students. While prior research has frequently highlighted the importance of both psychological factors and educational exposure in predicting entrepreneurial outcomes, findings remain mixed regarding the actual contribution of formal entrepreneurship education. Using Partial Least Squares Structural Equation Modelling (PLS-SEM), data from a structured questionnaire were analyzed to test the direct and indirect effects among the constructs. The results revealed that Attitude has a strong and significant direct effect on Entrepreneurial Intention ($\beta = 0.817$). However, Entrepreneurial Education did not mediate this relationship as expected. These findings suggest that students with a favourable attitude toward entrepreneurship are likely to develop strong entrepreneurial intentions regardless of their exposure to entrepreneurial education. The study provides theoretical contributions to the entrepreneurial intention literature by challenging the assumption that Entrepreneurial Education always enhances entrepreneurial motivation. Practically, the results highlight the need for universities to re-evaluate how entrepreneurship is taught and to design more experiential and attitude-aligned programs. Future research should explore other potential mediators and examine the long-term impact of education on actual entrepreneurial behavior.*

Keywords: *Personal Attitude (ATT), Entrepreneurial Intention (IE), Entrepreneurial Education (EE), Malaysia, Undergraduate Students*

Introduction

The initiative to promote the incorporation of entrepreneurial elements in the graduate study curriculum is one of the aims of Malaysia's Public Higher Education Ministry in shaping a business mindset culture. The higher education institution specifically University Teknologi MARA (UiTM) since its early establishment has progressively emphasize on the elements of entrepreneurship in developing the program curriculum. The UiTM 2025 Strategic Plan provides a significant direction to inspire all the university and the stakeholders in reaching its full potential. Literally, the University vision also clearly demonstrated the vision-to establish UiTM as a Globally Renowned University of Science, Technology, Humanities and Entrepreneurship. Particularly this objective also was highlighted in Strategic Theme 2: Entrepreneurial and Well-Balanced Graduates which aimed 10% of UiTM's graduates will be able to compete locally and globally as a young entrepreneur. For this reason, UiTM's is progressively focusing on developing the students' skills and interest in conducive entrepreneurship ecosystem and experience. In education ecosystem Shah (2024) states the entrepreneurship skills expose the graduates with appropriate and marketable skills as well as help them to sustain in a competitive market. The graduates need to recognize on how the factors may significantly bring a beneficial impact towards their after-graduate period. In their attempts to impact economic development, scholars and decision-makers have shown interest in entrepreneurial activity. The entrepreneurs themselves, who are involved in this process, have received special attention. It is assumed that by deepening our knowledge of how entrepreneurs make decisions, we would be able to increase the number of people who use resources to start, build, and establish entrepreneurial companies, which will boost economic development (Anderson, (2023).

Thus, the research objective to determine mediation effect of entrepreneurial education between personal attitude and student's entrepreneurship intention.

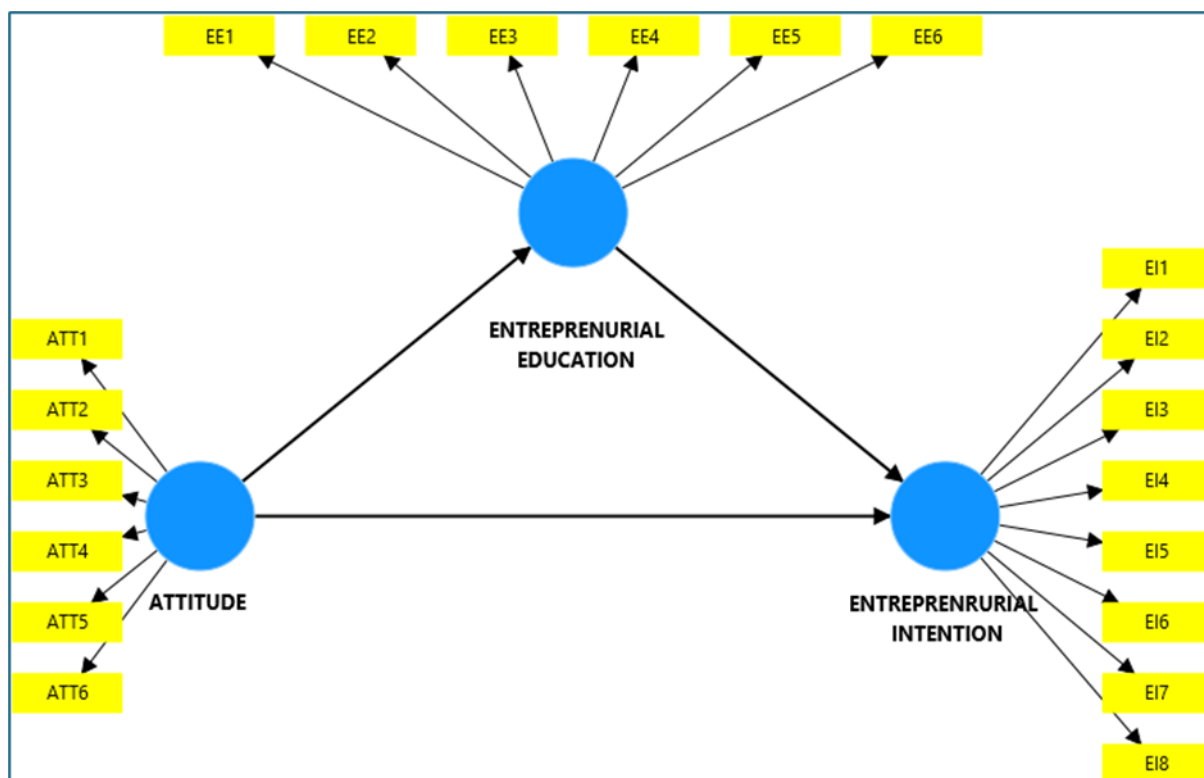


Figure 1: Research Framework in PLS SEM Diagram

Literature Review

This study was derived from the Theory of Planned Behavior (TPB) (Ajzen, (1991) and the Entrepreneurial Event Model (EEM) by Shapero and Sokol (1982). Therefore, the independent constructs were developed from the Planned Behavior Theory consists of personal attitude, risk taking and subjective norms to assess its contribution on entrepreneurial intention. The Theory of Planned Behaviour (TPB) is an extension of the Theory of Reasoned Action (TRA), which is considered one of the most fundamental conceptual frameworks explaining human behaviour (Chen & Slade (2024). Additionally, TPB is a psychological theory that describes how beliefs affect people's behavior and aids in predicting their intentions to engage in an activity at a specific time and place. Next a mediator- entrepreneurship education was tested to recognize how it mediates the process. The entrepreneurial intention highlights the person conscious state of mind which influence their attention, experience, and action toward starting a new business venture. Eventually, it becomes a vital role in fostering entrepreneurial activities among graduates.

Theory of Planned Behaviour (TPB)

Literally, human behavior and action are directed by certain situation. According to the theory of planned behavior, one's positive attitude toward a certain conduct, belief that important others will support the behavior, and sense of control over those actions will all influence actual behavior. These elements are all subjective statements rather than absolute truths. As a result, perceived control may not always be equal to objective or actual control, and subjective norms may not necessarily represent what other people believe about a given conduct (Jose & Sia (2022). Empirically, behavior is often only weakly predicted by attitudes alone or by exogenous factors that are either situational or the individual. Ajzen (1991) introduces three attitude

antecedents of intention are identified by the theory of planned behavior. Perceived social norms and one's own attitude toward the behavior's results are two factors that indicate how desirable it is to carry out the behavior. Perceptions that the behavior is under one's personal control are reflected in the third, perceived behavioral control. Perceptions of situational competence (self-efficacy) of these attitudes are linked to perceived behavioral control, which reflects the perceived feasibility of carrying out the behavior. The TPB states that when a person feels good about a behavior and believes that significant others agree with them, they are more likely to carry it out. This situation explains how people carry their behavior from the expected result.

Entrepreneurial Event Model (EEM)

EEM was developed by Shapero and Sokol (1982) as a reliable framework that is especially used to assess an individual's emotional intelligence. Constructs that operate on emotional intelligence (EI) make up EEM. In one situation, before launching a new enterprise or firm, EEM completes two criteria. It begins with, a person must have or have the notion of starting a business because they find it appealing and realistic. The second reason for launching a firm is a displacement event, which might have been neutral, negative, or favorable. Receiving an inheritance or investment funds from a shareholder are examples of positive events. This is how the individual emotional intelligence level strongly contributes to the decision process.

Personal Attitude

In general, people make judgments based on logical evaluations of the facts at their disposal, according to TPB, which traces the causal relationships between beliefs and real human behavior. According to Ajzen (1991) these three categories of theory beliefs—which are thought to be easily recalled—predict behavioral intention by influencing attitude toward the behavior, subjective norm, and perception of behavioral control, respectively.

Entrepreneurial Intention

Ambad & Rafiki (2025) believed the intention to become an entrepreneur is a general reason why people decide to get engage with a business. It is crucial to remember, nevertheless, that if we did not examine entrepreneurial goals at every stage of people's careers, our knowledge of them would be severely constrained. It is true that researching university students' aspirations to start their own businesses has a big impact on policies pertaining to higher education and the development of entrepreneurship pipelines (Anderson (2023).

Entrepreneurial education

Without a question, the relevance of entrepreneurship has persuaded academics and policymakers alike after decades of teaching it at educational institutions across the globe (.SMEs) need more and more on human resources to thrive as economies become more globalized and organizational environments become more complicated. Employees, including owners and entrepreneurs, have the greatest influence on a company's commercial results, development, and survival because of their expertise, aptitude, drive, devotion, and resourcefulness in the use and administration of material, monetary, and informational resources (Messikh, 2022). Better educated entrepreneurs are more likely to exhibit greater capacity for information acquisition, assimilation, and transformation, which helps them generate entrepreneurial ideas and comprehend the strategic operations of businesses. Next, Lyu (2023) demonstrates the entrepreneurship knowledge is one of the of key components of university entrepreneurial ecosystems and the ways in which different entrepreneurship

activities within these ecosystems may influence students' venture development is enhanced by the factors around.

Methodology

A set of questionnaires was distributed to the 371-target sample. Then the SmartPLS 4 was used to generate the models- measurement and structural model. For the measurement model the convergent validity was assessed. Average Variance Extracted 9 (AVE) is a method used to estimate the convergent validity. The AVE must exceed the value of 0.5 to achieve the acceptable level. Next Composite Reliability (CR) must be 0.7 or above is deemed to be acceptable. Table 2 shows the results of measurement model. By implementing the SmartPLS the response gathered were analysed for assessing the reliability of measurement. The recorded Cronbach Alpha for all variables employing multi-items estimated range exceed than 0.9 which suggests that the questionnaires were reliable for further analysis as cited in Kline (2011). Next is the assessment of structural model which it provides the relationship between latent variables in the research model. The following criteria facilitate this assessment: Coefficient of determination (R^2), cross-validated redundancy (Q^2), and path coefficients (Hair et al., 2014). Table 4 shown the path coefficient of items.

Demographic Profile -Population and sampling

From overall sample, there are 260 number of female respondents with a percentage of 76.9% as compared to only 78 male respondents with 23.1%. From overall population based on age the highest frequency of respondents are 21-23 years old with a total 179 (53%) followed by 18-20 years old with 148 (43.8%), lastly 24-26 years old with 11 (3.3%). The highest respondent's education level members were from diploma's group with 237 respondents (70.1%) followed by degree level with 101 respondents represent by 29.9%. Next majority of respondents were from UiTM Cawangan Terengganu (158 students-46.7%), next UiTM Cawangan Pahang (120 students-35.5%) and UiTM Cawangan Kelantan (60 students-17.8%). Then for respondent's family background, 238 students (70.4%) of them are from family with entrepreneurship background while 100 students (29.6%) do not have any business background previously. Meanwhile previously 263 students (77.8%) have taken the entrepreneurship course during their previous semester and 75 students (22.2%) never sit for this course. Lastly for category of entrepreneurship course 247 student (73.7%) were from ENT300, 59 students (17.5%) were from ENT530 course (Business Course) and 30 students (8.9%) were ENT600 (Non-Business Course) students.

Result and Discussion

Measurement Model

The measurement model was constructed before assessing the structural model. For the first phase of the measurement model of latent concentrated on evaluating the convergent validity which main loading should be 0.7 and above, Average Variance Extracted (AVE) must exceed than 0.5 to gain acceptable convergent validity and Composite Reliability (CR) must be 0.7 or above is deemed to be acceptable (Hair et al. (2014).

Construct reliability and Validity

Table 1 represent the result of reliability analysis for all constructs. The assessment of reliability and validity showed all 20 items achieved an excellence strength of association.

Table 1: Construct reliability and Validity (n=317)

Constructs	No. of Items	Cronbach's Alpha	Strength of Association	Composite Reliability (CR)	Average Variance Extracted (AVE)
ATT	6	0.915	Excellent	0.924	0.707
EE	6	0.951	Excellent	0.955	0.804
IE	8	0.974	Excellent	0.974	0.847

*Note: Personal Attitude (ATT), Entrepreneur Education (EE), Entrepreneurial Intention (IE)

Discriminant Validity

Discriminant validity is tested by means of assessment for Fornell Larcker and the Heterotrait - Monotrait ratio (HTMT). Represent in Table 2 the square root of AVEs is greater in all cases than the off-diagonal elements in their corresponding row and column, so that the required discriminant validity by Fornell-locker has been achieved. This is because the square root of the AVE when compared against the correlations of the other constructs, the AVE extracted is greater than its correlations with all the other constructs then discriminant validity has been established.

Table 2: Discriminant Validity (Fornell and Larcker, 1991)

Variables	ATT	IE	EE
ATTITUDE			
ENTREPRENRURIAL_INTENTION	0.784		
ENTREPRERUIA EDUCATION	0.797	0.522	

Heterotrait-monotrait ratio (HTMT) - Matrix

Next the HTMT assessment was conducted to assess the discriminant validity. If the HTMT value is greater than 1.0, then there is a problem with discriminant validity. The value must be lower than required threshold value of HTMT (Garson, 2016). Therefore, for this HTMT assessment for all constructs do not exceed the threshold. So, there is no discriminant validity issue for this dataset (Table 3).

Table 3: Heterotrait -Monotrait Ratio (HTMT)

Path	HTMT
ATT <-> EE	0.797
ATT <-> EI	0.784
EE <-> EI	0.522

Assessment of structural model

The structural model provides the relationship between latent variables in the research model. The following criteria facilitate this assessment: Coefficient of determination (R^2), cross-validated redundancy (Q^2), and path coefficients (Hair et al., 2014).

Table 4: Q^2

	Q^2 predict	RMSE	MAE
EI	0.540	0.682	0.509
EE	0.575	0.656	0.484

Assess the predictive relevance - Q^2

Based on the blindfolding procedure as presented by Hair et al. (2014), Q^2 evaluates the predictive validity of a model via PLS (Table 4). Q^2 values larger than zero indicate that the exogenous constructs have predictive relevance for the endogenous construct. Cited from Hair et al., (2014) the Q^2 value larger than 0 indicates that exogenous constructs have predictive relevance over endogenous construct

Hypotheses Testing

After the evaluation of the measurement model, the next step was to analyse the structural model. Understanding the relationship between the constructs and the predictive abilities of outer models assists in evaluating the inner model (Hair et al., 2013). Therefore, the statistical significance of the path coefficients was assessed using the bootstrapping method, the results of which revealed that, in terms of the direct relationship, two (H1–H2) out of the three hypotheses were accepted. This indicates that the relationship between the proposed relationships were statistically significant (shown in Table 5), i.e. “H1a (beta = 0.817; t values = 13.983 and p value = 0.000. H1b (beta = 0.762; t values = 26.231 and p value = 0.000). H1c (beta= -0.103, t values =1.441 and p value = 0.150).

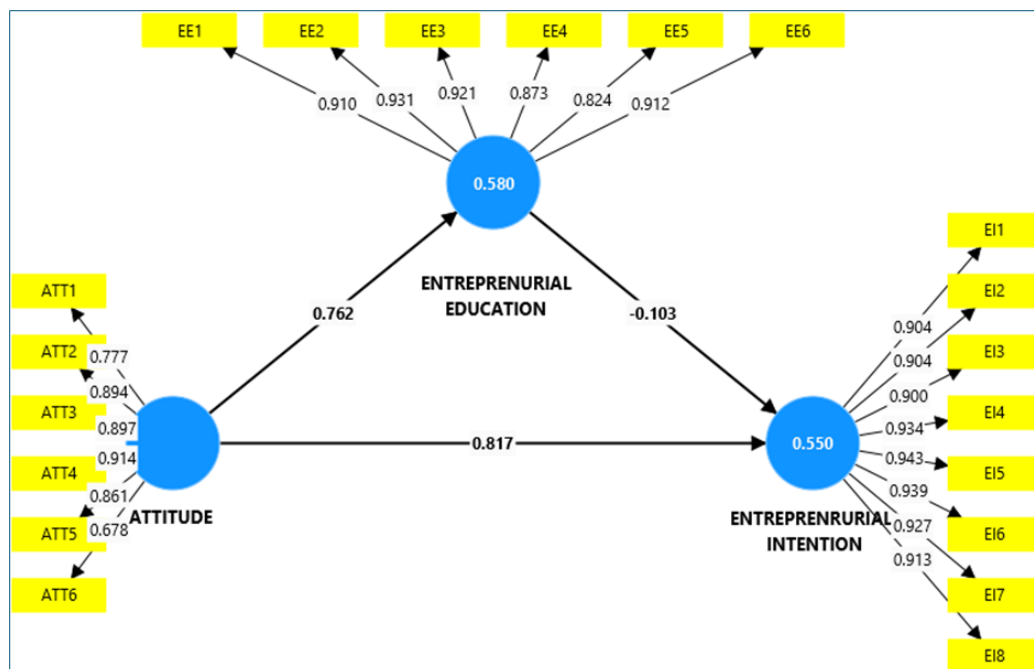


Figure 2: PLS SEM result

As demonstrated in Figure 2, R^2 value for endogenous latent is 0.550 suggesting that 55.5% of the variance for Entrepreneurial Intention (IE) can be explained by the Personal Attitude (ATT), and Entrepreneurial Education.

Table 6 shown the path coefficient of item. The result shown the positive relationship of H1a and H1b, however, H1c and H2 are not significant at p value <0.05.

Table 6: Total Direct Effect

Hypotheses	Path	Beta Value	Sample Mean	Std Error	t-value	P-value	Decision
H1a	ATT -> EI	0.817	0.821	0.058	13.983	0.000	Accepted
H1b	ATT → EE	0.762	0.763	0.029	26.231	0.000	Accepted
H1c	EE -> EI	-0.103	0.105	0.071	1.441	0.150	Not Accepted

Table 7: Total Indirect Effect

Hypotheses	Path	Beta Value	Sample Mean	Std Error	t-value	P-value	Decision
H2	ATT → EE → EI	-0.078	-0.081	0.056	1.397	0.162	Not Accepted

Types of Mediation

The indirect effect : Att → EE → EI = 0.762 x (-0.103) = -0.0785

- Negative and Not significant

The direct effect : Att → EI = 0.817 (positive and substantial)

Total Effect : -0.0785 + 0.817 = 0.7385

$$\text{Variance Accounted For (VAF)} = \frac{-0.0785}{0.7385} = -10.6\%$$

Entrepreneurial Education does **not mediate** the relationship between Attitude and Entrepreneurial Intention. The indirect effect ($\beta = -0.0785$) was small and negative, while the direct effect ($\beta = 0.817$) remained strong and significant. The VAF was -10.6% , indicating no mediation and potential suppression.

Table 8: Summary of Hypotheses Analysis (n=317)

Hypotheses	Path	Hypotheses Findings
H1a: Personal Attitude significantly has positively influenced the entrepreneurial intention	ATT -> EI	Supported
H1b: Personal Attitude significantly has positively influenced the entrepreneurial education	ATT ->EE	Supported
H1c: Entrepreneurial Education significantly has positively influenced the Entrepreneurial Intention	EE -> EI	Not Supported
H2: Entrepreneurial education significantly mediates the relationship between Personal Attitude and entrepreneurial intention	ATT -> EE -> EI	Not Supported – No mediation effect

Discussion

The findings of this study reveal that Attitude towards entrepreneurship exerts a strong and direct influence on Entrepreneurial Intention. However, contrary to expectations, Entrepreneurial Education (EE) does not serve as a significant mediator in this relationship. The indirect effect of Attitude through EE on Intention was negative and weak, indicating a possible suppression effect rather than facilitation. This result is somewhat unexpected, as prior literature often supports the notion that education enhances the cognitive and motivational factors driving entrepreneurial action (Fayolle & Gailly, 2015). However, similar to findings by Nabi et al. (2018), the effectiveness of Entrepreneurial Education is not universal and can depend on the design, delivery, and contextual relevance of the program. If Entrepreneurial Education is too theoretical or lacks practical engagement, it may fail to convert positive entrepreneurial attitudes into intention.

This suggests that while positive entrepreneurial attitudes are crucial in fostering intention, exposure to or participation in entrepreneurial education does **not necessarily enhance** this relationship. In fact, the findings imply that EE, in its current form, may not be resonating with students' attitudes or may not effectively translate into heightened entrepreneurial drive. Students with favourable perceptions and mindsets toward entrepreneurship are more likely to express strong intentions to pursue entrepreneurial paths, regardless of their educational background in the subject.

Conclusion

This study explored the mediating role of Entrepreneurial Education in the relationship between Attitude and Entrepreneurial Intention. The results indicated that Attitude exerts a strong and direct influence on intention, while Entrepreneurial Education did not significantly mediate this relationship. In fact, the indirect effect was negative, suggesting a potential suppression effect.

Since Attitude shows a stronger influence than educational mediation, initiatives such as entrepreneurial role model talks, startup simulations, and personal reflection exercises may be more effective in nurturing entrepreneurial intention. In addition, Universities should implement ongoing evaluations of their entrepreneurship programs to measure impact, collect student feedback, and iterate based on what is most effective in fostering intention. Future studies should investigate other mediating variables such as self-efficacy, perceived behaviour control may better explain the relationship between attitude and entrepreneurial intention.

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