



The Influence of Entrepreneurship Education on University Students' Entrepreneurship Self-Efficacy and Entrepreneurial Intention

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Abstract: Entrepreneurship education in Higher Learning Institutions (HLIs) is vital to strengthening a country's entrepreneurship ecosystem, which fosters economic growth, innovation, and job creation. Through entrepreneurship education, more job creators are expected to be created and nurtured with entrepreneurial awareness, knowledge, abilities, and support. Therefore, this study investigated the relationship between entrepreneurship education, namely entrepreneurship curriculum, entrepreneurship lecturers' competency, and university entrepreneurship support in influencing entrepreneurship intention among Universiti Teknologi Malaysia's students, with entrepreneurship self-efficacy as the mediator. The methodological approach of this study is a quantitative method. The population of this study was Universiti Teknologi Malaysia (UTM) undergraduate students with a sample size of 212 respondents, obtained using simple random probability sampling. Data collected from respondents was analysed using the SPSS statistical analytical tool by applying descriptive, regression and mediation tests. The study's findings revealed that entrepreneurship curriculum and university entrepreneurship support have significantly influenced both entrepreneurship self-efficacy and intention. However, entrepreneurship lecturers' competency was found to have an insignificant relationship with entrepreneurship self-efficacy and intention. The influence of entrepreneurship self-efficacy towards entrepreneurship intention was also significant. Meanwhile, the mediating effect of entrepreneurship self-efficacy between entrepreneurship education components (curriculum, lecturers' competency, and university entrepreneurship support) and entrepreneurship intention were all significant. Thus, this study has provided insights for various stakeholders, predominantly academicians, HLIs, and policymakers, to understand the current scenario on the effectiveness of Malaysia's entrepreneurship education.

Keywords: Entrepreneurship education, self-efficacy, entrepreneurial intention, curriculum

1. Introduction

It is generally accepted that entrepreneurial activity is crucial in creating jobs, innovations, and overall economic growth. (Stoica et al., 2020). Rather than relying entirely on foreign investment, every country must foster local entrepreneurship for long-term socio-economic development and sustainability (Hassan et al., 2020). In Malaysia, entrepreneurship developments are generally closely linked to Malaysia's five-year programmes and national policies such as the New Economic Policy, New Development Policy, National Vision Policy, and New Economic Model. The recent National Entrepreneurship Policy, which was launched in July 2019, also intends to promote an entrepreneurial culture across

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Malaysian society and build an entrepreneurial ecosystem that is competitive in the global economy and Industry Revolution 4.0, with the ultimate ambition of establishing Malaysia as a prominent entrepreneurial nation by the year 2030 (New Straits Times, 11 July 2019).

In support of these policies, Malaysia’s entrepreneurship education (EE) has flourished in the twenty-first century, especially due to the expansion of knowledge-based economy developments (Abd Hamid, 2013). Governments worldwide are focused on promoting awareness of the role of entrepreneurs at all levels of education, particularly at Higher Learning Institutions (HLIs), and motivating students to explore business ownership as a profession (Lackeus, 2015). With EE especially, more individuals are anticipated to launch their business ventures, becoming job creators instead of job seekers, during studies and after graduation (Premand et al., 2016), regardless of their educational background or specialisation (Kamaruddin et al., 2017) because ultimately EE has the potential to equip aspiring entrepreneurs as well as current entrepreneurs with the information, abilities, and mindsets necessary to deal with the demands, setbacks, and unknowns that they will encounter will face in the real business world (Dumitrache and Raileanu, 2014).

Furthermore, aside from highlighting entrepreneurship in the national policies and Malaysia’s five-year national plans, the Malaysian government had implemented several specific entrepreneurship education policies for HLIs, starting with the Higher Education Entrepreneurship Development Policy on 13th April 2010, followed by The Strategic Plan on Entrepreneurship Development in Higher Education (2013-2015), Entrepreneurship Action Plan for Higher Education Institutions (2016-2020), Ministry of Higher Education’s Entrepreneurship Action Plan (2021 - 2025) and Entrepreneurship Integrated Education. Remarkably, the Ministry of Higher Education’s Entrepreneurship Action Plan 2021–2025 addresses four main key performance indexes (KPIs) in Entrepreneurship Education in Malaysia, which are i) entrepreneurship awareness among students, ii) graduate entrepreneurs, ii) student businesses and iv) educators with entrepreneurship expertise. The external and internal components of Malaysia’s HLI’s entrepreneurial education ecosystem is depicted in Table 1.

Table 1 - Malaysian HLIs’ entrepreneurship education ecosystem

External Factor	Internal Factor
<ul style="list-style-type: none"> • Overall Business Environment – Economic, Competition Landscape • Ministry of Higher Education • Public Sector and Government agencies • Corporate Sector • Non-Governmental Organizations • Funding Support • Support from society in general 	<ul style="list-style-type: none"> • Support from HLI’s Top Management • Support from academic and non-academic staffs • The effectiveness of entrepreneurship centers • Competency of educators • Education Programs • Development of entrepreneurs • Readiness of students

Source: Hamidon (2015)

However, Malaysia is a developing nation with a high rate of unemployed university graduates (Hanapi and Nordin, 2014; Lee et al., 2021). This is one of the most serious social development concerns in Malaysia, as graduates' preference for working for a corporation rather than working for themselves is the prominent factor contributing to the present situation (Karim, 2016; Shakur et al., 2020). The Department of Statistics Malaysia (2020) shares worrisome data showing that the number of jobless graduates in Malaysia increased by 22.5 per cent, reaching 202,400 in 2020 from 165,200 in 2019, whereas in 2018, it was 161,300 people. According to Sani and Jamil (2022), although Malaysian HLIs have made notable progress in implementing entrepreneurship programs, the percentage of unemployed graduates is concerning. Public HLIs especially play a crucial role in Malaysia’s innovation system, where in 2012 alone, they supplied 80% of the country's research staff and spent 29% of the country's overall research and development budget (Narayanan and Yew-Wah, 2018). But over time, according to MOHE Higher Education Statistics (2021), as depicted in Table 2, although producing a much greater number of employed student output, public universities have the second lowest percentage (13.1 %) of self-employed graduates when compared with private HLIs (14.9%), polytechnics (12.8%), community colleges (18.5%) and vocational colleges (14.2%).

Therefore, with so much highlighted focus on EE components and ecosystem development, as well as KPI assessments through policies, in creating more entrepreneurs, this study attempts to analyse the impact of EE components, namely curriculum, lecturers’ competency, and university entrepreneurship support, has on entrepreneurship intention (EI) among Universiti Teknologi Malaysia’s (UTM’s) students, with entrepreneurship self-efficacy (ESE) acting as the mediator. Most existing research on EE is done from a broad perspective, and very few have analysed the impacts of the components of EE itself. In addition, there is currently less empirical research examining the present situation of EE in Malaysian HLIs, mainly focusing on the components of EE, namely curriculum, lecturers’ competency, and university support (Rengiah, 2013; Akinboye and Pihie, 2014; Rahim and Mukhtar, 2021). Moreover, there is a limited available study investigating ESE’s mediating effect with EE components. Ultimately, even though many academics believe entrepreneurship can be taught and learned, the effectiveness of the EE components or dimensions has not received

sufficient scholarly attention, especially in Malaysia. Therefore, this research was conducted with the following objectives:

- i. To investigate the effect of entrepreneurship education (EE) components, namely curriculum, lecturers' competency, and university entrepreneurship support, towards students' entrepreneurship intention (EI).
- ii. To investigate the effect of entrepreneurship education (EE) components, namely curriculum, lecturers' competency, and university entrepreneurship support, towards students' entrepreneurship self-efficacy (ESE).
- iii. To investigate the effect of students' entrepreneurship self-efficacy (ESE) towards students' entrepreneurship intention (EI).
- iv. To investigate the mediating effect of students' entrepreneurship self-efficacy (ESE) in the relationship between entrepreneurship education (EE) (curriculum, lecturers' competency, and university entrepreneurship support) and students' entrepreneurship intention (EI).

Table 2 - Malaysian graduates by types of HLIs according to employment status, year 2021 (cut-off date: 28 february 2021)

Types of HLI's	Employment Status										Total	
	Permanent		Contract		Temporary		Self-employed		Working with family			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Public Universities	27,538	44.2	14,884	23.9	8,136	13.1	8,141	13.1	3,538	5.7	62,237	100
Private HLIs	21,725	47.2	9,322	20.3	5,739	12.5	6,833	14.9	2,379	5.2	45,998	100
Polytechnics	7,906	44.1	3,675	20.5	3,047	17.0	2,290	12.8	1,003	5.6	17,921	100
Community Colleges	2,206	45.8	660	13.7	745	15.5	889	18.5	315	6.5	4,815	100
Vocational Colleges	2,847	36.6	1,322	17.0	1,860	23.9	1,101	14.2	649	8.3	7,779	100

Source: MOHE higher education statistics (2021)

2. Related Theories

This study's theoretical perspective is grounded in the theory of planned behaviour (TPB). The theory is an updated version of Fishbein's (1963) "theory of reasoned action" (Hackman and Knowlden, 2014). According to the Theory of Reasoned Action, people will have a greater intention or motivation in performing a proposed behaviour or practice if they have a positive attitude toward it (attitude) and feel that others want them to do it (subjective norm) (Mimiaga et al., 2009). Meanwhile, the TPB adds another element (perceived control) onto the framework, which highlights the control beliefs of things that help or hinder a person's behavioural performance (DeNicola et al., 2016). According to Ajzen (2008), there is no conceptual distinction between perceived behavioural control (PBC) and self-efficacy. Self-efficacy aids individuals in determining how much work they will put into a task, how long they will persevere while facing challenges, and how adaptable they will be under adverse circumstances (Bandura, 1986; Van Dinther et al., 2011). Due to the resemblance in the concepts of self-efficacy and PBC, numerous researchers have substituted PBC for self-efficacy in their research (Krueger et al., 2000; Moriano et al., 2012). Therefore, PBC or self-efficacy is also commonly alluded as to 'entrepreneurial self-efficacy' in the context of entrepreneurship studies (Ozaralli and Rivenburgh, 2019). There have been several recent research that have employed self-efficacy as a mediator in conjunction with the theory of planned behaviour (Saeed et al., 2015; Lv et al., 2021).

This theory also helps in examining the entrepreneurial behavioural process within the context of EE because the learning outcomes can influence an individual's inclination to engage in entrepreneurship activities through acquisition of knowledge, which also has the potential to alter behaviour (Lv et al., 2021). Entrepreneurship education, which exposes students on how to recognize opportunities and start new businesses, may help them go down the path of becoming entrepreneurs (Fatoki, 2014), where entrepreneurial intentions will be influenced by learning new behaviours, knowledge, ability, skills, and spirit that impact attitudes (Ferreira et al., 2017), particularly among young people (Ahmed and Kumar, 2021). The integrative model of the TPB framework and EE, like this study is illustrated in Figure 1, which was sourced from Muofhe and Toit (2011).

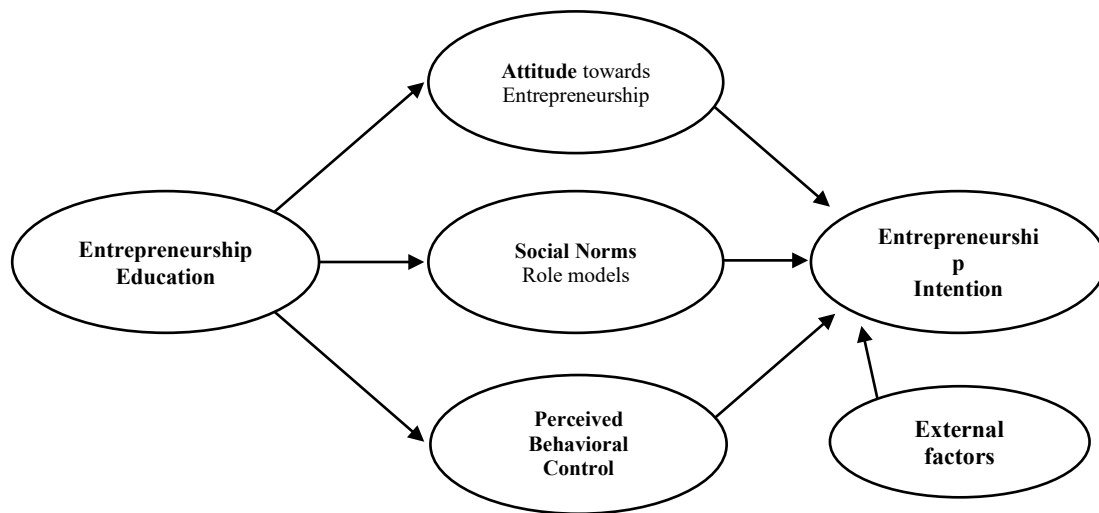


Fig. 1 - Integrative model of TPB framework with entrepreneurship education (EE)
 Source: Muofhe and Toit (2011)

2.1 Entrepreneurship Education (EE) Components

According to Keat et al. (2011), EE is a collection of lectures, courses, or programs that are designed to equip students with essential entrepreneurial competencies, abilities, and knowledge to develop them for career as entrepreneurs. The components of EE used in previous studies over the past ten years are outlined in Table 3, primarily focusing on the previous independent variable role of entrepreneurship curriculum, entrepreneurship lecturers and university entrepreneurship support.

Table 3 - Components of HLI’s entrepreneurship education (EE) in previous studies (from 2011 to 2021)

Author (Year)	Curriculum	Lecturers’ Competency	University Support
Pihie and Bagheri (2011)		✓	
Rengiah (2013)	✓		✓
Patricia and Silangen (2016)		✓	
Hien and Cho (2018)	✓		✓
Lemma (2018)	✓	✓	✓
Moraes et al. (2018)			✓
Iwu et al. (2019)	✓	✓	
Otache (2019)		✓	
Citrawandi and Susanto (2020)	✓	✓	
Lv et al. (2021)	✓		✓
Su et al. (2021)			✓
Huang et al. (2021)			✓
Sherkat and Chenari (2022)	✓		✓

2.1.1 Entrepreneurship Education (EE) and Entrepreneurship Intention (EI)

Maleki (2008) defined curriculum as formal and informal contents, processes, and direct and indirect training by which a learner obtains essential information and abilities, as well as change their attitudes, with the supervision of the institution. In a university context, entrepreneurship curriculum is referred to contents and materials used in their entrepreneurial courses (Hien and Cho, 2018). In a study in China by Lv et al. (2021), it was found that despite students acknowledging that entrepreneurship is a non-easy, high-risk and high uncertainty activity, but still they agreed that EE can help aspiring entrepreneurs enhance their knowledge and abilities, boost their entrepreneurial self-efficacy, and hence improving their entrepreneurial intention.

EE also involves an educator’s effort to foster entrepreneurial mindset and abilities in students (Ekpoh and Edet, 2011; Olokundun et al., 2017). In a study conducted by Otache (2019), it was found that entrepreneurial lecturers and students’ entrepreneurial intentions have a significant positive relationship. According to his finding, EE should be taught by educators who have entrepreneurial attitudes, intents, and behaviours that promote the primary objective of EE, which

is to develop full-fledged entrepreneurs. Lecturers should embrace and cultivate a strong entrepreneurial culture and be able to inspire their students. Similarly, Citrawandi and Susanto (2020), in a study conducted at two universities in Indonesia, found that lecturers' competence significantly influences students' EI, which further implies the importance of lecturer competence in advancing students' entrepreneurial intent in the future.

Furthermore, universities are regarded as entrepreneurship boosters since they offer EE and other complementary support services required to increase future business formation intentions (Boldureanu et al., 2020). Establishing entrepreneurship support units, university incubators, and entrepreneurship workshops are examples of university support efforts to encourage students to start businesses (Barba-Sánchez and Atienza-Sahuquillo, 2016). In the study conducted in four universities in Malaysia, Rengiah (2013) found that participation in a university-based entrepreneurship support program increases entrepreneurship intent while traditional teaching approaches are not enough to stimulate entrepreneurship and facilitate the entrepreneurship learning process. Hien and Cho (2018) found that the university's role through extracurricular programs also significantly develops an entrepreneurial culture and an entrepreneurially favourable university environment, ultimately influencing students' EI. Hence, we propose the following hypotheses:

- H₁:** Entrepreneurship curriculum significantly affects students' entrepreneurship intention (EI)
- H₂:** Entrepreneurship lecturers' competency significantly affects students' entrepreneurship intention (EI)
- H₃:** University entrepreneurship support significantly affects students' entrepreneurship intention (EI)

2.1.2 Entrepreneurship Education (EE) and Entrepreneurship Self-Efficacy (ESE)

Students at the undergraduate level are exposed to entrepreneurship curricula to raise their awareness about the field, stimulate their interest in entrepreneurship, and teach them to appreciate the risks and rewards of starting and running their entrepreneurial venture (Udo-Imeh et al., 2016). According to Alvarez et al. (2006), their study conducted at three major local institutions in Tijuana, Mexico, found significant relationships between students' perceptions of entrepreneurial courses, entrepreneurial self-efficacy and inclination toward establishing their businesses. Ismail (2012) also mentioned that the quality of graduates with entrepreneurship skills and drive depends on the competency of the educator. Huang et al. (2021), in their study on 384 college students from Guangdong Province's 22, highlighted that educators with hands-on entrepreneurship expertise should be appointed to mentor students in entrepreneurial practice support, and the institutes should verify the qualifications of these educators.

Lemma (2018) also added that universities support entrepreneurship by offering complimentary assistance and training required to enhance business formation and subsequent growth. Through the outreach activities provided in the university environment, students can practice entrepreneurship by taking part in events, seminars, business incubators, startups, academic administrations and centers, college and faculty clubs, and other student associations (Moraes et al., 2018). Accordingly, Saeed et al. (2015), in their research on 805 Pakistani university students, found a significant relationship between students' perceived institutional support and entrepreneurial self-efficacy. Hence, from the discussion above, we propose the following hypotheses:

- H₄:** Entrepreneurship curriculum significantly affects students' entrepreneurial self-efficacy (ESE)
- H₅:** Entrepreneurship lecturers' competency significantly affects students' entrepreneurial self-efficacy (ESE)
- H₆:** University entrepreneurship support significantly affects students' entrepreneurial self-efficacy (ESE)

2.1.3 Entrepreneurship Self-Efficacy (ESE) and Entrepreneurship Intention (EI)

Entrepreneurship self-efficacy can be referred to as an individual's belief in their ability to establish a business, as well as their entrepreneurial skills and ability to achieve desired results. Accordingly, Moraes et al. (2018) in their finding proposed a positively influencing model where self-efficacy was explained by students' planning, leadership, and innovation capability about entrepreneurship. Besides, Hien and Cho (2018) found exposure to entrepreneurship will benefit students by creating stronger talents, self-efficacy, and positive attitudes about starting a company, as well as solid networks to assist them in obtaining the resources they need to get started. Besides, Shah et al. (2020), utilising data collected from several higher education institutions in Oman, revealed that EE elevates the perception level of self-efficacy and subsequently leads toward EI. Hence, from the discussion above, the following hypothesis was proposed:

- H₇:** Entrepreneurial self-efficacy (ESE) significantly affects students' entrepreneurship intention (EI)

2.1.4 Mediating Role of Entrepreneurship Self-Efficacy (ESE) Between Entrepreneurship Education (EE) and Entrepreneurship Intention (EI)

Lv et al. (2021), in a study on college students in the Yangtze River Delta of China, found that entrepreneurial practicing support on student's entrepreneurial intention is mediated by entrepreneurial competency. They also suggested that to better-guiding students in their pursuit of entrepreneurial endeavours, educational institutions should aggressively engage business owners or successful graduates to provide frequent special lectures and classes to students. In another similar

study, Yang (2019) found that entrepreneurial self-efficacy mediates the relationship between role models and entrepreneurial intention of 440 Korean and Chinese university students. They categorised lecturers as one of the role models who inspires and stimulates others through entrepreneurship course to make entrepreneurial decision. Besides that, Patricia and Silangen's (2016) outcome suggested that even if there is an insignificant relationship between entrepreneurship lecturers' competency and EI, the inclusion of a mediator variable may have a mediating effect.

Similarly, Shi et al. (2019) also revealed a significant association between perceived university support and growth-oriented intentions mediated by entrepreneurial self-efficacy. Their findings suggest that when people have high levels of entrepreneurial self-efficacy, they are more prone to establish growth-oriented business ventures. Hence, the following hypotheses were proposed:

- H₈** : Entrepreneurial self-efficacy has a significant mediating effect between entrepreneurship curriculum and students entrepreneurship intention (EI)
- H₉** : Entrepreneurial self-efficacy has a significant mediating effect between entrepreneurship lecturers' competency and students' entrepreneurship intention (EI)
- H₁₀**: Entrepreneurial self-efficacy has a significant mediating effect between university entrepreneurship support and students' entrepreneurship intention (EI)

2.2 Conceptual Framework

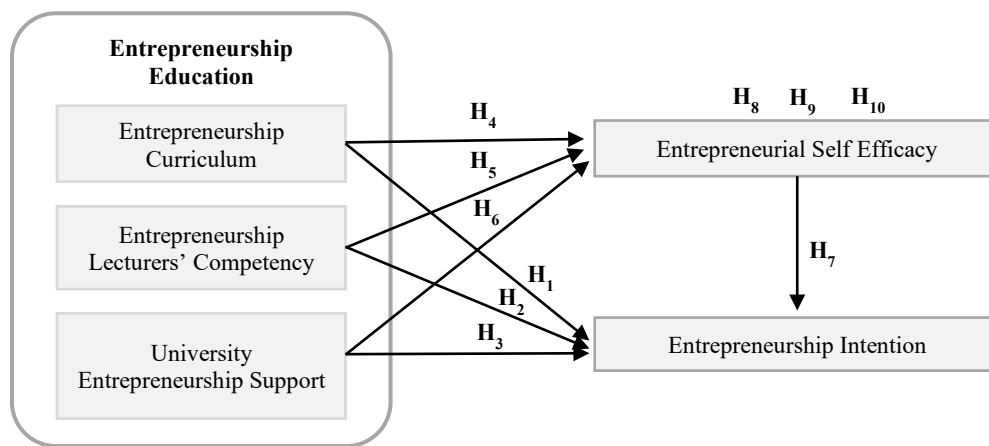


Fig. 2 - Conceptual framework of this study

3. Methodology

This study was conducted using a quantitative methodology, with a survey questionnaire as the primary data collection method. The questionnaire items were constructed using a Likert scale with a range of five points, from 1 (strongly disagree) to 5 (strongly agree), as suggested by previous authors in the same field (Pihie and Bagheri, 2011; Saeed et al., 2015; Udo-Imeh et al., 2016; Lemma, 2018; Iwu et al., 2019; Wardana et al., 2020). Meanwhile, the population chosen for this study are the undergraduate students of Universiti Teknologi Malaysia (UTM) who had already taken UHAK/UBSS 1032 'Introduction to Entrepreneurship' class, as they would have excellent exposure and understanding of the context of entrepreneurship, as well as EE after undergoing the course which is compulsory in this institution. The questionnaire set contains four sections: Section A on respondents' demographic, Section B about the three independent variables of this study (i.e. entrepreneurship curriculum, entrepreneurship lecturers' competency and university entrepreneurship support), Section C on entrepreneurial self-efficacy, and Section D on EI. From a population of 15,526 undergraduate students at Universiti Teknologi Malaysia, 212 respondents provided feedback through questionnaires distributed using simple random probability sampling. The questionnaires were adopted using references from previous empirical literature studies, as shown in Table 4. Despite adapting questionnaires from earlier studies, a pre-test was still conducted to validate the content's clarity, comprehension, fluency and interpretation. Thus, three academicians with expertise on this subject matter and three undergraduates were approached for feedback on content validity.

Table 4 - Source of research instrument

Variables	Source	Number of Items
Entrepreneurship Curriculum (ECC)	Iwu et al. (2019)	8
Entrepreneurship Lecturers' Competency (ELC)	Patricia and Christian Silangen (2016)	10
University Entrepreneurship Support (UES)	Rahim and Mukhtar (2021)	10
Entrepreneurship Self-Efficacy (ESE)	Shah et al. (2020)	6
Entrepreneurship Intention (EI)	Shah et al. (2020)	7

The data gathered from 212 respondents were analysed using the SPSS statistical analytical tool by applying descriptive, regression and mediation analysis. The Cronbach's Alpha values for all independent, dependent, and mediation variables in this study scored values greater than 0.90, indicating that the questionnaire items were highly reliable. This study used percentages and frequencies to interpret respondents' demographics, whereas mean and standard deviation were used to analyse the variables. Meanwhile, linear and multiple regression testing evaluated the influence between EE, ESE and EI. Mediation was examined following Hayes's (2022) methodology for investigating mediating effects by bootstrapping the sampling distribution of the indirect impact because bias-corrected bootstrapping is a very effective strategy in examining mediation (Memon et al., 2018). Preacher and Hayes (2004) and Zhao et al. (2010) consider an indirect effect or medication statistically significant if the t-value is less than 1.96 and the p-value is less than 0.05.

Additionally, analysing confidence intervals is also a key criterion for validating a mediation effect, which can be confirmed if the confidence interval for the indirect impact does not straddle a zero in between (Memon et al., 2018). Zhao et al. (2010) also noted that the sole criterion in a proper mediation study is that the indirect effects of paths "a" and "b" be significant. Hence a significant "X and Y" is not necessary as suggested by Baron and Kenny (1986). Therefore, SPSS Process Macro version 4.1 Software by Andrew F. Hayes was used to evaluate the mediating effect.

4. Data Analysis

4.1 Respondents' Profile

Table 5 shows the demographic profile of the respondents, including personal information such as gender, age, citizenship, year of study, level of study, place of origin and faculty. As per Table 5, the descriptive analysis shows that respondents were 61.8% male and 38.2% female, with a majority from age 20 to 21 (50.9%) and 22 to 23 (42.9%). The majority were Malaysian students (89.2%) from urban areas (69.3%). Most were second-year (62.3%) and Faculty of Engineering (72.2%) students.

Table 5 - Profile of respondents (N = 212)

Demography		Frequency	Percentage
Gender	Male	131	61.8%
	Female	81	38.2%
Age	18-19	6	2.8%
	20-21	108	50.9%
	22-23	91	42.9%
	24-25	7	3.3%
	26 and above	0	0%
Citizenship	Malaysian	189	89.2%
	International	23	10.8%
Place of origin	Rural	65	30.7%
	Urban	147	69.3%
Faculty	Azman Hashim International Business School	11	5.2%
	Faculty of Built Environment & Surveying	32	15.1%
	Faculty of Engineering	153	72.2%
	Faculty of Science	5	2.4%
	Malaysia-Japan International Institute of Technology	3	1.4%
	Faculty of Social Sciences & Humanities	6	2.8%

	UTM Razak Faculty of Technology & Informatics	2	0.9%
Year of Study	First Year	33	15.6%
	Second Year	132	62.3%
	Third Year	13	6.1%
	Fourth Year	34	16.0%
	Fifth Year and Above	0	0%

4.2 Descriptive Statistics

The descriptive statistics for each item and variable were calculated to explore their prevalence among respondents. The mean levels were classified as suggested by Pallant (2020), where categories consisted of low (1.00 - 2.33), medium (2.34 - 3.67), and high (3.68 - 5.00). Table 6 shows the descriptive statistics for each variable of this study, where the overall mean was high for entrepreneurship curriculum, entrepreneurship lecturers' competency, and university entrepreneurship support. In contrast, ESE and EI had a medium-level overall mean.

Table 6 - Descriptive statistics for variables

Variables	Number of Items	Mean	SD Range	Mean Level
Entrepreneurship Curriculum (ECC)	8	4.33	0.668 to 0.888	High
Entrepreneurship Lecturers' Competency (ELC)	10	4.44	0.664 to 0.896	High
University Entrepreneurship Support (UES)	10	4.03	0.775 to 0.954	High
Entrepreneurship Self-Efficacy (ESE)	6	3.52	0.911 to 1.095	Medium
Entrepreneurship Intention (EI)	7	3.64	1.030 to 1.158	Medium

4.3 Regression Analysis Results

The findings of regression testing are presented in Table 7. Multiple regression was conducted to test H1, H2, H3, H4, H5 and H6, whereas H7 was tested using linear regression. Nevertheless, when linear regression was carried out for all the variables from hypotheses 1 to 7, they all showed significant effects with a P value less than 0.05. Besides that, multiple regression analysis indicated that H1, H3, H4, H6 are supported, with H2 and H5 not supported. The multiple regression analysis also showed that the most influential factor towards EI and ESE is University Entrepreneurship Support, followed by Entrepreneurship Curriculum, with Entrepreneurship Lecturers' Competency being insignificant.

Table 7 - Regression testing results (H1 to H7)

Hypotheses	Variables Path	Beta	P-Value	Result
H1	ECC>EI	.243	.016	Supported
H2	ELC>EI	-.163	.065	Not Supported
H3	UES>EI	.468	.000	Supported
H4	ECC>ESE	.283	.003	Supported
H5	ELC>ESE	-.168	.051	Not Supported
H6	UES>ESE	.517	.000	Supported
H7	ESE>EI	.702	.000	Significant

4.4 Mediation Analysis Results

Table 8 shows the mediation test results of entrepreneurship self-efficacy, in which all H8, H9 and H10 are supported. This is because if only one of the paths in the mediation framework, either path a ($x > m$) or b ($m > y$) is significant, indirect effect or mediation can still be significant. Even if one of the individual paths is insignificant, the indirect effect can be significant (Hayes, 2022).

Table 8 - Results of examining the mediation effect of entrepreneurship self-efficacy

Hypotheses		Indirect Effect ($x > m > y$)	Direct Effect ($x > m$)	Direct Effect ($m > y$)
H ₈	Bootstrapping Significance Value	95% CI (0.3758, 0.7352)	95% CI (0.0079, 0.3758)	95% CI (0.5750, 0.8211)
	<i>Path:</i> <i>ECC>ESE>EI</i>	Result Significant	Significant	Significant
Hypothesis Result		Supported		
H ₉	Bootstrapping Significance Value	95% CI (0.2575, 0.5718)	95% CI (-0.0770, 0.2737)	95% CI (0.6304, 0.8558)
	<i>Path:</i> <i>ELC>ESE>EI</i>	Result Significant	Insignificant	Significant
Hypothesis Result		Supported		
H ₁₀	Bootstrapping Significance Value	95% CI (0.3474, 0.7339)	95% CI (0.0836, 0.4334)	95% CI (0.5122, 0.7765)
	<i>Path:</i> <i>UES>ESE>EI</i>	Result Significant	Significant	Significant
Hypothesis Result		Supported		

5. Discussions

The findings of this study have revealed that entrepreneurship curriculum (Beta=0.243, p=0.016) and university entrepreneurship support (Beta=0.468, p=0.000) have played a significant role in influencing students' EI. The same viewpoint that entrepreneurial intention and motivation can be initiated through the relevance and appropriateness of curriculum and course materials was supported by previous literature (Gelaidan and Abdullateef, 2017; Ahmad et al., 2018). It is evident that achieving these two elements enhances students' learning and practical knowledge gains and fuels their entrepreneurial desire. Meanwhile, the environment and support system of the university are the components that have the most significant impact on entrepreneurial intention through the development of students' attitudinal traits (Moraes et al., 2018). Additionally, the increase in accessible access to services and support offered by higher learning institutions, such as funds, places, assistance, and training, improves the number of students who gain awareness of entrepreneurial activities and reduces future concerns about entrepreneurship (Lv et al., 2021).

The outcome on the impact of EE components towards entrepreneurship self-efficacy also yielded similar results, with entrepreneurship curriculum (Beta=0.283, p=0.003) and university entrepreneurship support (Beta=0.517, p=0.000) having a significant effect. Therefore, EE helps students gain the broad information and abilities needed to be an entrepreneur and at the same time, improves students' entrepreneurial self-efficacy (Saeed et al., 2015). They also further highlighted that academic institutions can significantly encourage entrepreneurial self-efficacy among their students by providing wider assistance beyond their typical teaching method. This form of support may involve giving funds for students to establish a new company, using the university's reputation to help them, and serving as a lead customer for the students' new business endeavours. Subsequently, students also have high expectations for high-quality education from educational institutions as it not only helps in starting a business venture but also prepares them for future occupations that need entrepreneurial skills (Hien and Cho, 2018). They also noted that practically all university programs will impact students' attitudes, with curriculum and extracurricular activities significantly impacting students' capabilities.

However, entrepreneurship lecturers' competency was found to have an insignificant relationship with both entrepreneurship self-efficacy and EI, although the descriptive statistics for entrepreneurship lecturers' competency showed an overall mean at a high level (Mean=4.44). This outcome directly contradicts some previous literature which has demonstrated a significant effect of entrepreneurship lecturers' competency on EI (Citrawandi and Susanto, 2020; Otache, 2019, Iwu et al., 2019; Lemma, 2018). Patricia and Silangen (2016) had a similar insignificant relationship between entrepreneurship lecturers and EI. They found that entrepreneurial intention is not directly related to lecturers' enthusiasm for promoting and teaching entrepreneurship, as many entrepreneurship educators and professors come from the academic world rather than the professional sector. Similarly, Pihie and Bagheri (2011) also had an insignificant relationship between entrepreneurship lecturers' competency and students' entrepreneurship self-efficacy, where lecturers had considerably strong entrepreneurial self-efficacy, meanwhile, students had moderately high entrepreneurial self-efficacy. This indicates that although lecturers are highly effective in carrying out the roles and tasks of an entrepreneur and participating in entrepreneurial activities, students may still choose to completely avoid engaging in entrepreneurial learning opportunities, failing to adapt to the complexities of the entrepreneurship learning process, and consequently failing to uplift their entrepreneurial efficacy.

Meanwhile, the impact of entrepreneurship self-efficacy toward EI was also significant. This result is also consistent with previous literature which had similarly resulted in a significant relationship between entrepreneurship self-efficacy

and EI (Hien and Cho, 2018; Moraes et al., 2018; Saeed et al., 2015; Liu et al., 2019). Lastly, the mediating effect of ESE between EE components (curriculum, lecturers' competency, and university entrepreneurship support) and EI was significant. Therefore, entrepreneurial intention is influenced by the development of entrepreneurial competence. Thus, EE refinements must encourage the development of entrepreneurial skills at all levels of education to increase EI (Luis-Rico et al., 2020). Whereas, in the case of entrepreneurship self-efficacy, despite having insignificant results with H2 and H5, a significant mediating effect was attained with the inclusion of entrepreneurship self-efficacy as a mediator. Remarkably, the H2 result is similar to Patricia and Silangen (2016) outcome, where they suggested that even if there is an insignificant relationship between entrepreneurship lecturers' competency and EI, the inclusion of a variable as a mediator may mediate the influence of lecturers' enthusiasm on entrepreneurial intention, in which this study has proven. Therefore, the lecturing team can improve students' entrepreneurial intention by enhancing their entrepreneurial self-efficacy, as improved self-efficacy will lead students to be more confident and well-prepared in their trajectory towards pursuing entrepreneurship.

To sum up, EE indeed motivate people to be entrepreneurs and encourage them to be innovative, skilled, and creative (Ahmad et al., 2018). To bolster this entrepreneurial drive, particular emphasis must be paid to the adequacy of entrepreneurial education. Expanding pedagogies and introducing innovative approaches are needed to sufficiently prepare students for their future occupations, such as supporting student-led activities in the classroom to stimulate engagement in the learning process while emphasising the relevance of the underlying theories (Deale, 2016). As for entrepreneurship lecturers, most of them tend to concentrate on theories, and students learn about entrepreneurship from a theoretical standpoint (Lackeus, 2015). Furthermore, most university lecturers in Malaysia are actively involved in university teaching after completing their postgraduate degrees. Therefore, they might still lack hands-on experience with innovation and entrepreneurship and delivering it effectively. Besides that, to encourage entrepreneurial competence development, some experts recommend adopting methodological and strategic shifts, namely decreasing reliance on theory-based approaches, fostering action-based learning and direct engagement, and increasing self-directed study (Arranz et al., 2017). Ultimately, it is imperative to emphasise the harmonious integration of theoretical knowledge and practical experience when developing innovation and entrepreneurship education systems and designing entrepreneurship courses. This approach helps mitigate the potential contradiction arising from the disparity between tacit knowledge and entrepreneurial experience and the necessity for consistent classroom teaching requirements (Huang et al., 2021).

6. Conclusion

The findings revealed that EE components, except for entrepreneurship lecturers' competency, have played an essential and significant role in influencing EI among undergraduate students. The outcome on the influence of EE components towards entrepreneurship self-efficacy also yielded similar results. Therefore, it may be concluded entrepreneurship curriculum, and university entrepreneurship support play a crucial role in enhancing both ESE and EI of students. While lecturers are excellent at entrepreneurship teaching methods standardized by the university, providing awareness and channelling the spirit of entrepreneurship, as well as what is needed to be entrepreneurs, their delivery method is not enough and requires serious attention, which may need some innovative approach in improving students' entrepreneurship motivation and characteristics. Besides that, the outcome on the impact of ESE towards EI was also significant. Meanwhile, the mediating effect of ESE between EE components (curriculum, lecturers' competency, and university entrepreneurship support) and EI were all significant. Therefore, this leads to the conclusion that exposure to entrepreneurship will benefit students in creating stronger ESE, followed by a positive outlook about starting a business venture.

Although all the research objectives of this study were addressed, this research has several theoretical, methodological, and contextual limitations. Hence, it is recommended that future research incorporate a mix of quantitative and qualitative methodologies to obtain deeper insights into the subject matter. Furthermore, other variables such as entrepreneurship orientation, innovativeness, characteristics, and attitude can be included and explored as mediators. Besides that, exploring stratified sampling could facilitate comparative studies among different groups or faculties. In conclusion, various stakeholders should play an essential and instrumental role in funnelling and strategizing EE resources into creating more numbers of successful entrepreneurs. Thus, the mapping of EE components, which includes entrepreneurship curriculum, entrepreneurship lecturers' competency, and university entrepreneurship support, requires occasional refining to suit better the ever-changing economic and innovation advancements to produce more job creators continually. Therefore, stakeholders and other related organisations should implement several corrective measures, including improving lecturers' delivery of entrepreneurship teachings, effective integration of theoretical entrepreneurship knowledge and practical experience, and necessary entrepreneurship support mechanisms that complement classroom learning.

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