

BRIDGING THEORY AND PRACTICE: DO BUSINESS PROGRAMS PREPARE STUDENTS FOR ENTREPRENEURSHIP

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Abstract: *Entrepreneurship education is increasingly expected to equip university students with the knowledge, practical capabilities, and confidence required to respond effectively to entrepreneurial and professional challenges. However, previous studies have largely focused on entrepreneurial intention rather than students' actual preparedness to undertake entrepreneurial activities. This study examines the effects of practical learning and entrepreneurship education on entrepreneurial confidence and investigates the mediating role of entrepreneurial confidence in their relationships with entrepreneurial readiness. A quantitative cross-sectional survey was conducted among undergraduate students enrolled in business-related programmes at Malaysian universities. Data were collected through a structured questionnaire and analysed using descriptive statistics, correlation analysis, and mediation analysis. The findings indicate that both practical learning and entrepreneurship education positively influence entrepreneurial confidence, with entrepreneurship education demonstrating a stronger contribution. Entrepreneurial confidence was also found to partially mediate the relationships between both educational factors and entrepreneurial readiness. These findings suggest that entrepreneurial readiness is developed not only through the acquisition of knowledge and practical experience but also through students' confidence in applying their entrepreneurial capabilities. Universities should therefore integrate structured entrepreneurship education with experiential activities, mentoring, reflection, and constructive feedback to better prepare students for entrepreneurial and professional environments.*

Keywords: Entrepreneurship education; practical learning; entrepreneurial confidence; entrepreneurial readiness; business students

1. Introduction

Entrepreneurship is widely recognised as an important driver of employment creation, innovation, economic resilience, and sustainable development. In response to technological change, uncertain labour markets, and graduate unemployment, universities are increasingly expected to produce graduates who possess not only academic knowledge but also creativity,

adaptability, opportunity-recognition ability, problem-solving skills, and confidence in managing uncertainty. Consequently, entrepreneurship education has become an important component of higher education programmes, particularly in preparing students to apply entrepreneurial competencies in both business and professional environments (Chen et al., 2022; Mishra et al., 2023).

However, the effectiveness of entrepreneurship education is commonly evaluated through entrepreneurial intention, particularly students' intention to establish a business after graduation. Although intention indicates an individual's willingness to pursue entrepreneurship, it does not necessarily demonstrate whether the individual possesses the knowledge, skills, confidence, and practical preparedness required to perform entrepreneurial activities. A student may intend to become an entrepreneur but remain unable to evaluate opportunities, mobilise resources, manage risks, or respond effectively to business challenges. Therefore, entrepreneurial readiness provides a broader perspective for assessing the outcomes of entrepreneurship education.

In this study, entrepreneurial readiness refers to students' perceived preparedness to engage in entrepreneurial activities and apply entrepreneurial competencies across different professional contexts. It includes entrepreneurial knowledge, practical skills, psychological preparedness, financial understanding, opportunity recognition, adaptability, and problem-solving capability. Unlike entrepreneurial intention, which focuses on a student's planned behaviour, entrepreneurial readiness reflects whether students perceive themselves as adequately equipped to undertake entrepreneurial tasks. Since the present study relies on self-reported data, readiness is interpreted as perceived entrepreneurial preparedness rather than objectively observed business performance.

Despite the growing provision of entrepreneurship education, concerns remain regarding the gap between theoretical knowledge and practical entrepreneurial capability. Students may understand concepts such as business planning, marketing, financial management, and opportunity evaluation but lack the ability or confidence to apply them in real-world situations (Li et al., 2021). This problem is particularly evident when entrepreneurship courses rely heavily on lectures and examinations. Practical learning through business projects, simulations, competitions, mentoring, pitching activities, and interactions with entrepreneurs may help students convert theoretical knowledge into applicable competencies. Consistent with Experiential Learning Theory, knowledge becomes more meaningful when students gain experience, reflect on that experience, develop conceptual understanding, and apply what they have learned in new situations (Kolb, 1984; Bell et al., 2022).

Practical learning may also strengthen entrepreneurial confidence, which represents students' belief in their ability to perform entrepreneurial tasks and manage uncertain situations. Students who possess entrepreneurial knowledge may still hesitate to act when they lack confidence in their decision-making, communication, resource-management, or problem-solving abilities. Entrepreneurial confidence may therefore function as a psychological mechanism through which entrepreneurship education and practical learning are translated into entrepreneurial readiness. This relationship is also consistent with the perceived behavioural control component of the Theory of Planned Behavior, which suggests that individuals are more likely to feel prepared to perform an activity when they believe they possess the necessary ability and resources.

Within the Malaysian higher education context, universities have increasingly incorporated entrepreneurship courses and practical programmes to support national entrepreneurship and graduate employability agendas. Nevertheless, exposure to entrepreneurship education does not automatically ensure that students are confident or

adequately prepared to apply entrepreneurial competencies (Zain et al., 2021). Existing studies have largely focused on entrepreneurial intention, while the combined relationships between practical learning, entrepreneurship education, entrepreneurial confidence, and entrepreneurial readiness remain insufficiently examined. Accordingly, this study investigates the effects of practical learning and entrepreneurship education on entrepreneurial confidence and examines whether entrepreneurial confidence mediates their relationships with entrepreneurial readiness among undergraduate students enrolled in business-related programmes in Malaysian universities. By positioning entrepreneurial readiness as the main outcome, the study provides a capability-oriented assessment of whether university business programmes are genuinely preparing students for entrepreneurial and professional environments.

2. Literature Review

2.1 Theoretical Foundation

This study integrates Experiential Learning Theory (ELT) and the Theory of Planned Behavior (TPB) to explain how educational experiences contribute to entrepreneurial readiness. ELT views learning as a process involving concrete experience, reflection, conceptualisation, and active experimentation (Kolb, 1984). In entrepreneurship education, activities such as internships, business projects, simulations, competitions, and mentorship enable students to transform theoretical knowledge into practical capability.

TPB complements this perspective through perceived behavioural control, which reflects an individual's belief in possessing the knowledge, skills, and resources required to perform a behaviour (Ajzen, 1991). In this study, perceived behavioural control is represented by entrepreneurial confidence. ELT therefore explains how entrepreneurship education and practical learning develop students' capabilities, while TPB explains how these experiences strengthen confidence and subsequently enhance entrepreneurial readiness.

2.2 Practical Learning and Entrepreneurial Confidence

Practical learning refers to activities that require students to apply entrepreneurial knowledge in real or simulated business environments. These activities expose students to opportunity recognition, decision-making, resource constraints, problem-solving, and uncertainty. Through participation, reflection, and feedback, students become more aware of their abilities and better prepared to manage entrepreneurial challenges.

Previous studies indicate that experiential learning enhances entrepreneurial skills, adaptability, opportunity recognition, and self-confidence (Bell et al., 2022; Corten & Dalen, 2022). Practical activities also provide mastery experiences that allow students to test and validate their capabilities. However, such activities are most effective when supported by structured reflection and theoretical guidance (Lackéus & Williams Middleton, 2021). Therefore:

H1: Practical learning has a positive effect on entrepreneurial confidence.

2.3 Entrepreneurship Education and Entrepreneurial Confidence

Entrepreneurship education encompasses formal courses, curricula, teaching methods, and institutional activities designed to develop entrepreneurial knowledge, attitudes, and

competencies. It provides students with an understanding of business planning, financial management, market analysis, opportunity recognition, innovation, and risk management.

Well-designed entrepreneurship education can reduce students' uncertainty about entrepreneurial activities and strengthen their confidence in handling business-related tasks. Previous studies have found that entrepreneurship education positively influences entrepreneurial self-efficacy, problem-solving capability, and confidence (Chen et al., 2022; Ndhlovu & Sverrisson, 2022). Nevertheless, programmes that rely heavily on lectures and theoretical assessment may improve awareness without developing practical capability or confidence (Fellnhöfer, 2021; Li et al., 2021). Accordingly:

H2: Entrepreneurship education has a positive effect on entrepreneurial confidence.

2.4 Entrepreneurial Confidence and Entrepreneurial Readiness

Entrepreneurial confidence refers to students' belief in their ability to perform entrepreneurial tasks, including decision-making, opportunity recognition, risk management, problem-solving, and persistence. Students may possess entrepreneurial knowledge but still feel unprepared to apply it when they lack confidence in their capabilities.

Consistent with the perceived behavioural control component of TPB, individuals who believe that they possess the necessary skills and resources are more likely to perceive themselves as prepared to act. Entrepreneurial confidence may therefore connect the knowledge and experience gained through education with students' perceived readiness to undertake entrepreneurial activities (Haneef et al., 2021; Passaro et al., 2021). Thus:

H3: Entrepreneurial confidence has a positive effect on entrepreneurial readiness.

2.5 Mediating Role of Entrepreneurial Confidence

Entrepreneurship education and practical learning may not automatically produce entrepreneurial readiness. Instead, both educational inputs may first strengthen students' confidence in applying entrepreneurial knowledge and skills. Practical learning enables students to test their capabilities through experience, while entrepreneurship education provides the conceptual understanding required to address entrepreneurial challenges.

Entrepreneurial confidence therefore acts as a psychological mechanism through which educational experiences are translated into readiness. Students who gain knowledge and practical exposure are more likely to perceive themselves as ready when these experiences strengthen their belief in their own entrepreneurial capabilities. Based on this argument:

H4a: Entrepreneurial confidence mediates the relationship between practical learning and entrepreneurial readiness.

H4b: Entrepreneurial confidence mediates the relationship between entrepreneurship education and entrepreneurial readiness.

2.6 Conceptual Framework

The conceptual framework positions practical learning and entrepreneurship education as independent variables, entrepreneurial confidence as the mediating variable, and entrepreneurial readiness as the dependent variable. Entrepreneurial readiness reflects students'

perceived preparedness in terms of entrepreneurial knowledge, practical capability, psychological readiness, financial understanding, and social or networking readiness.

The framework extends previous studies by shifting the focus from entrepreneurial intention to entrepreneurial readiness and by examining entrepreneurial confidence as the mechanism through which educational experiences contribute to students' preparedness. Figure 1 presents the proposed relationships among the study variables.

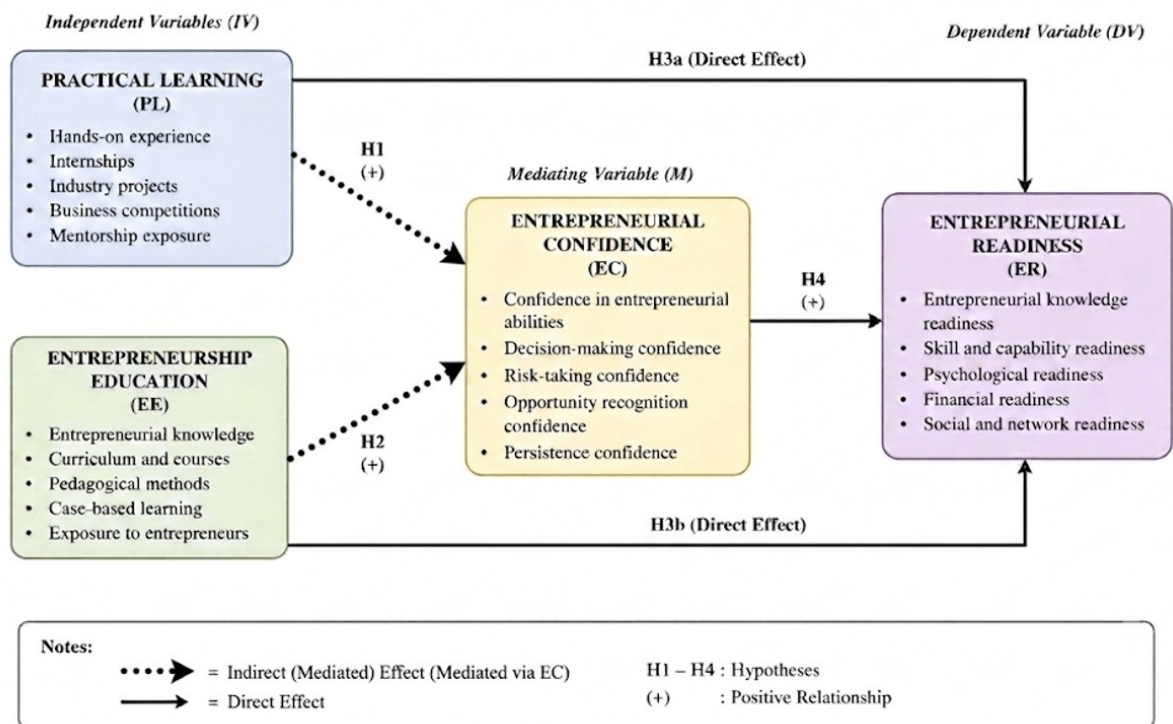


Figure 1. Conceptual Framework of the Study

3. Methodology

This study employed a quantitative cross-sectional survey design to examine the relationships among practical learning, entrepreneurship education, entrepreneurial confidence, and entrepreneurial readiness. Respondents were undergraduate students enrolled in business-related programmes at Malaysian universities who had completed at least one entrepreneurship course. Purposive sampling was used, with approximately 200 valid responses targeted based on the minimum sample requirement determined through G*Power.

Data were collected using an online self-administered questionnaire. The instrument contained demographic items and six items for each construct. Practical learning items were adapted from Mack et al. (2024), entrepreneurship education from Thomas (2022) and Chen et al. (2022), entrepreneurial confidence from Adeniyi (2023), and entrepreneurial readiness from Farradinna et al. (2023), Ambarita et al. (2024), and Bhatthad et al. (2024). All items were measured using a five-point Likert scale. Three experts reviewed the questionnaire to establish content validity.

Data were analysed using IBM SPSS Statistics 29. Descriptive statistics, Cronbach's alpha, variance inflation factor, and Pearson correlation were first conducted. The mediating

effect of entrepreneurial confidence was then tested using Hayes' PROCESS Macro Model 4 with 5,000 bootstrap samples. An indirect effect was considered significant when the 95% confidence interval did not include zero.

Participation was voluntary and anonymous, and all responses were treated confidentially. The discussion and conclusions should state concisely the most important propositions of the paper as well as the author's views of the practical implications of the results.

4. Results

A total of 90 responses were initially collected through the online survey. Following the data-screening process, three responses were excluded because the respondents were not enrolled in business-related programmes and therefore did not meet the inclusion criteria. This resulted in a final sample of 87 valid responses, exceeding the minimum sample size of 85 determined through the G*Power analysis.

As presented in Table 1, the respondents were predominantly female (74.7%), while male respondents represented 25.3% of the sample. Most respondents were between 21 and 24 years old (55.2%), followed by those aged between 18 and 20 years (35.6%). In terms of study level, 66.7% were degree students and 33.3% were diploma students. Respondents were drawn from several business-related programmes, including business management and technology, entrepreneurship, business management, accounting, marketing and Islamic management.

Table 1. Demographic Profile of Respondents

Demographic	Category	Frequency (n)	Percentage (%)
Gender	Female	65	74.7%
	Male	22	25.3%
Age	18 - 20 years old	31	35.6%
	21 - 24 years old	48	55.2%
	25 years old and above	8	9.2%
Level of Study	Diploma	29	33.3%
	Degree	58	66.7%
Programme	Business Management / Technology (BBMT/BIBM)	30	34.5%
	Entrepreneurship / Business Entrepreneurship	12	13.8%
	Business Management (Diploma/Pengurusan Perniagaan)	14	16.1%
	Other Business Specializations (Accounting, Marketing, Info Mgmt, Music Biz)	31	35.6%

4.1 Descriptive Statistics and Measurement Reliability

Table 2 presents the descriptive statistics and reliability coefficients for the study constructs. All variables recorded mean scores above the midpoint of 3.00, indicating generally positive responses. Entrepreneurship education reported the highest mean score ($M = 4.21$, $SD = 0.60$), followed by practical learning ($M = 4.14$, $SD = 0.58$), entrepreneurial readiness ($M = 4.08$, $SD = 0.65$), and entrepreneurial confidence ($M = 4.04$, $SD = 0.73$). Entrepreneurial confidence

recorded the largest standard deviation, indicating slightly greater variation in respondents' confidence levels.

The measurement scales demonstrated strong internal consistency. Cronbach's alpha values were 0.907 for practical learning, 0.925 for entrepreneurship education, 0.905 for entrepreneurial confidence, and 0.915 for entrepreneurial readiness. All values exceeded the recommended threshold of 0.70, indicating that the items consistently measured their respective constructs.

The assumptions underlying ordinary least squares regression were also assessed. Examination of the P-P plot indicated that the residuals were approximately normally distributed, while the residual scatterplot showed no clear evidence of heteroscedasticity. In addition, all Cook's distance values were below 1.0, suggesting the absence of influential outliers.

Table 2. Descriptive Statistics and Reliability of the Study Constructs

Construct	Number of Items	Cronbach's Alpha
Practical Learning	6	0.907
Entrepreneurship Education	6	0.925
Entrepreneurial Confidence	6	0.905
Entrepreneurial Readiness	7	0.915

4.2 Correlation Analysis

Table 3. Pearson Correlation Matrix

Variable	1	2	3	4
1. Practical Learning	1			
2. Entrepreneurship Education	.786**	1		
3. Entrepreneurial Confidence	.712**	.779**	1	
4. Entrepreneurial Readiness	.758**	.812**	.861**	1

The Pearson correlation results are presented in Table 3. All study variables were positively and significantly correlated at the 0.01 level. Practical learning was positively associated with

entrepreneurship education ($r = .786$), entrepreneurial confidence ($r = .712$), and entrepreneurial readiness ($r = .758$).

Entrepreneurship education was also positively related to entrepreneurial confidence ($r = .779$) and entrepreneurial readiness ($r = .812$). The strongest relationship was observed between entrepreneurial confidence and entrepreneurial readiness ($r = .861$), indicating a strong association between students' confidence in performing entrepreneurial tasks and their perceived preparedness for entrepreneurship.

4.3 Mediation Analysis

The proposed mediation relationships were tested using Hayes' PROCESS Macro Model 4 with 5,000 bootstrap resamples. Two separate models were estimated, with practical learning and entrepreneurship education entered individually as predictors.

4.4.1 Practical Learning and Entrepreneurial Readiness

As shown in Table 4, practical learning had a significant positive effect on entrepreneurial confidence (coefficient = .295, SE = .092, $t = 3.20$, $p = .002$). Therefore, H1 was supported.

Table 4: Practical Learning and Entrepreneurial Readiness

Path / Effect	Beta (β)	Standard Error (SE)	t-value	p-value	95% Boot CI
Direct Effect (PL -> EC) [H1]	0.295	0.092	3.20	.002	-
Direct Effect (PL -> ER)	0.215	0.078	2.75	.007	-
Indirect Effect reentence-EC) (PL -> PL ->) [H3a] Indirect Effect (PL -> ER)	0.212	0.072	-	-	[0.095, 0.374]

Practical learning also had a significant direct effect on entrepreneurial readiness after entrepreneurial confidence was included in the model (coefficient = .215, SE = .078, $t = 2.75$, $p = .007$). The indirect effect of practical learning on entrepreneurial readiness through entrepreneurial confidence was .212, with a 95% bootstrap confidence interval ranging from .095 to .374. Since the interval did not include zero, the indirect effect was statistically significant. As both the direct and indirect effects remained significant, entrepreneurial confidence partially mediated the relationship between practical learning and entrepreneurial readiness. Thus, H3a was supported.

4.4 Entrepreneurship Education and Entrepreneurial Readiness

Table 5 also shows that entrepreneurship education had a significant positive effect on entrepreneurial confidence (coefficient = .518, SE = .085, $t = 6.09$, $p < .001$), supporting H2. The direct effect of entrepreneurship education on entrepreneurial readiness remained significant after the mediator was introduced (coefficient = .298, SE = .075, $t = 3.97$, $p < .001$). The indirect effect through entrepreneurial confidence was .352, with a 95% bootstrap confidence interval between .228 and .510. As zero was not contained within the confidence interval, the mediation effect was statistically significant. Entrepreneurial confidence therefore partially mediated the relationship between entrepreneurship education and entrepreneurial readiness, supporting H3b.

The results further indicate that entrepreneurship education had a stronger effect on entrepreneurial confidence than practical learning. Overall, all four hypotheses proposed in the study were supported.

Table 5. Direct and Indirect Effects of Practical Learning and Entrepreneurship Education on Entrepreneurial Readiness

Path / Effect	Beta (β)	Standard Error (SE)	t-value	p-value	95% Boot CI
Direct Effect (EE -> EC) [H2]	0.518	0.085	6.09	< .001	-
Direct Effect (EE -> ER)	0.298	0.075	3.97	< .001	-
Indirect Effect (EE -> EC -> ER) [H3b] H3b: Indirect Effect (EE -> EC -> ER)	0.352	0.071	-	-	[0.228, 0.510]

5. Discussion

The findings demonstrate that practical learning significantly enhances entrepreneurial confidence. Exposure to applied activities such as business projects, simulations, internships, competitions, and mentorship allows students to test their knowledge in realistic situations. Through these experiences, students develop problem-solving capabilities and become more confident in managing entrepreneurial challenges. This finding supports Experiential Learning Theory, which proposes that capability develops through experience, reflection, and active application.

Entrepreneurship education also had a significant positive effect on entrepreneurial confidence and produced a stronger coefficient than practical learning. This suggests that formal entrepreneurship courses provide students with the cognitive foundation necessary to understand business planning, market analysis, financial management, opportunity recognition, and strategic decision-making. When students understand how entrepreneurial processes operate, uncertainty is reduced and their perceived ability to perform entrepreneurial tasks is

strengthened. This finding is consistent with the perceived behavioural control component of the Theory of Planned Behavior.

The mediation results represent the central contribution of the study. Entrepreneurial confidence partially mediated the relationships between both educational inputs and entrepreneurial readiness. This indicates that practical learning and entrepreneurship education do not influence readiness solely by developing knowledge and skills. They also strengthen students' belief that they can successfully apply those competencies.

The partial mediation effects further show that educational experiences influence entrepreneurial readiness through both psychological and capability-based pathways. Practical learning and entrepreneurship education directly enhance students' readiness while also increasing readiness indirectly by strengthening entrepreneurial confidence. Thus, confidence functions as an important psychological mechanism that connects what students learn with how prepared they perceive themselves to be.

These findings have important implications for entrepreneurship education. Universities should not rely exclusively on theoretical courses or isolated practical assignments. Instead, entrepreneurship curricula should combine structured knowledge with experiential activities, reflection, coaching, and constructive feedback. Business incubators, mentorship programmes, industry-based projects, and pitching competitions may provide students with meaningful mastery experiences that strengthen both confidence and readiness.

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