

Educational Environment and Entrepreneurial Intention among Arts and Science Students in Kerala: An Empirical Structural Equation Modelling Analysis

Antony Vacko^{1,2}, Dr. Geo Jos Fernandez^{*,3}, Dr. Afsal E. M.⁴, Dr. Nisha Thomji⁵

¹Asst. Professor, Albertian Institute of Management

²Research Scholar, Kerala University of Fisheries and Ocean Studies

³Professor, Albertian Institute of Management, St. Albert's College (Autonomous)

⁴Professor, Kerala University of Fisheries and Ocean Studies

⁵Associate Professor, St. Albert's College (Autonomous)

Abstract

Scholarly focus has progressively shifted towards Entrepreneurial Intention (EI) to elucidate how Higher Education Institutions (HEIs) cultivate commercial acumen and innovative thinking among students. This study aims to assess the influence of the Educational Ecosystem (EE)—characterized as the academic integration of coursework and the strategic alignment of institutional objectives to facilitate commercial inquiry—on the entrepreneurial ambitions of college students in Kerala, India. Based on the Theory of Planned Behaviour (TPB) and Entrepreneurship Education Theory (EET), this study utilizes an explanatory-confirmatory approach, collecting data from a structured questionnaire distributed to 540 participants from both government and non-government colleges. The study utilized a pre-designed set of questions. The data analysis was conducted using SPSS 26 and AMOS 24 software, employing Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM). The data obtained from CFA showed that the construct validity was strong (CFI = 0.977, TLI = 0.952, and RMSEA = 0.037), while the data obtained from the SEM showed that factors that influenced entrepreneurial intention include integrating the curriculum ($\beta = 0.920$, $p < 0.001$), support infrastructure for entrepreneurs ($\beta = 0.382$, $p < 0.001$), and leadership and visions ($\beta = 0.903$, $p < 0.001$). The overall Educational Environment construct achieved satisfactory convergent validity (AVE = 0.708), high composite reliability (CR = 0.877), and acceptable discriminant validity (0.841), indicating strong construct adequacy. In conclusion, the findings emphasize the critical role that supporting educational environments inculcate in cultivating innovation-driven entrepreneurial spirit in the youth within the emerging economy.

Keywords: Educational Environment; Entrepreneurial Intention; Higher Education; SEM; Innovation

1. Introduction

1.1 Background and Rationale

Entrepreneurship is slowly being recognized as an important driver of social and economic change, especially in economies that value and encourage innovation (Nambisan, Wright, & Feldman, 2019). In today's world, universities have moved beyond their traditional role as places to store knowledge. They have taken on a new role as players in different entrepreneurship frameworks that support and spread new ideas (Guerrero & Urbano, 2021). Emerging environments like India, where there are a lot of young people but not enough jobs, make colleges and universities (HEIs) very important for teaching students how to be entrepreneurs. Although there is a consensus in academia regarding the significance of entrepreneurship education (EE), the overarching learning construct as a cohesive element—incorporating the learning format related to the design, research, and

facilitation of entrepreneurship activities—has received minimal rigorous scholarly examination concerning its impact on entrepreneurial intentionality.

The Kerala Start-up Mission (KSUM) and NEP 2020 of India are two current national and local initiatives that actively promote the alignment of innovation and entrepreneurship within higher education systems. These policies link teaching in higher education institutions with innovation and turn universities into important catalysts within regional entrepreneurial ecosystems. It is crucial to remember that all of this is theoretical, and it is difficult to assess whether these organizational settings promote the growth of entrepreneurial competency and its practical application or merely support a specific policy goal with no discernible effect. In light of this, the current study attempts to scientifically interpret the underlying connections between entrepreneurial aspirations and a specific aspect of a learning environment.

1.2 Theoretical Foundation

The Theory of Planned Behaviour (TPB) by (Ajzen, 1991) and the Entrepreneurship Education Theory (EET) by (Fayolle & Liñán, 2014) serve as the foundation for this study. According to TPB, individual attitude, perceived social norm, and perceived behavioural control all contribute to entrepreneurial intention (Liñán & Fayolle, 2015). Curriculum design, affiliated support systems, and institutional leadership all have an impact on these antecedents in higher education. Beyond TPB, EET argues that an environment that encourages creativity, opportunity recognition, and self-efficacy improves entrepreneurial learning in higher education. The current study, which integrates both theoretical frameworks, sees the educational environment as the primary antecedent influencing the psychological factors that motivate students to pursue entrepreneurship.

1.3 Research Context: Kerala's Innovation Ecosystem

With its innovative changes in post-secondary education and a vibrant start-up ecosystem supported by the Kerala Start-up Mission (KSUM), the state of Kerala offers a great setting for data collection. According to local study findings, there is a persistence between studying and applying enterprise knowledge, even when state literacy and technological access are high (Jahnavi, Reddy, & Bung, 2025). The “aspiration-action divide” in the enterprise is usually demonstrated by problems with the organizational structure: studies are not relevant to the enterprise, management ignores enterprise outcomes, and enterprise knowledge is thought to be very abstract to course material (Bhaskar & Seth, 2025). As a result, the study context greatly contributes to the advancement of research.

1.4 Empirical Motivation

Previous studies have mainly focused on the individual aspects of education in entrepreneurship, for example, teaching methods (Ferreras-Garcia, Sales-Zaguirre, & Serradell-López, 2021) or the organisational spirit (Rosienkiewicz, et al., 2024), as opposed to being placed in the context of the overall model of the educational infrastructure, support structures, and strategic leadership guidance. Moreover, few studies have validated these hypotheses with advanced analysis methods. In this study, using structural equation modelling (SEM), the direct and indirect effects of embedding, facilitation for entrepreneurship and research, and leadership and vision on the intention to entrepreneur will be measured. In addition, the proposed structural model will test if the educational environment, as a higher-order construct, can be regarded as an accurate predictor of the importance of the entrepreneur in higher education institutions in an emerging economic environment.

2. Literature Review and Hypothesis Development

2.1 Entrepreneurial Intention and Theoretical Frameworks

A person's cognitive readiness to launch or engage in any entrepreneurial activity is known as entrepreneurial intention (EI) (Liñán & Fayolle, 2015). In higher education settings that mould and nurture future entrepreneurs, this is thought to be the most accurate predictor of future entrepreneurial behaviour (Krueger, 2017). The Theory of Planned Behaviour (TPB), which contends that attitudes toward entrepreneurship, perceptions of

control over behaviour, and social influences are the sources of intention, is the most widely used paradigm relevant to emotional intelligence (EI) (Ajzen, 1991). These fundamental building blocks are developed in an academic setting through organizational tools that facilitate networking, self-assurance, and practical education (Fayolle & Gailly, 2015).

Based on Entrepreneurship Education Theory (EET) (Fayolle & Liñán, 2014), an extension of TPB, education can influence people's attitudes and behaviours concerning engagement with entrepreneurship. Arguably, the most important aspects whereby an academic environment turns theoretical knowledge into practice for developing entrepreneurship competencies for individuals remain experiential learning, mentorship, or spotting opportunities, according to EET (Ratten, 2022). When emerging economies are developing, along with a new support infrastructure, an integration concept framed by TPB & EET is a sound foundation for conceptual study for exploring interactions between a more critical aspect in entrepreneurial intention, namely, entrepreneurial environment (EE) (Guerrero & Urbano, 2021), wherein lies the considerable significance for this topic.

2.2 Educational Environment as a Predictor of Entrepreneurial Intention

In the context of higher education institutions, the Educational Environment (EE) is a multifaceted concept that incorporates academic, structural, and cultural elements in fostering students' entrepreneurial development. Innovative pedagogies, resource access, research activity integration, and progressive leadership direction are some of the tangible and intangible supports that make up this system. Beyond classroom instruction, EE encompasses a campus culture that encourages innovation, risk tolerance, and experiential learning.

According to recent research, students' motivation for entrepreneurship, opportunity recognition, and self-efficacy are all greatly increased in supportive learning environments (Ye & Kang, 2025)(Ahmad, Amry, Chen, & Hu, 2025). On the other hand, even with sufficient theoretical knowledge, entrepreneurial orientation may be suppressed by inflexible academic structures or a lack of institutional support (Jahnavi, Reddy, & Bung, 2025). As a result, this study views EE as a higher-order latent construct represented by three interconnected dimensions: Leadership and Vision (LV), Entrepreneurial and Research Support (ERS), and Curriculum Integration (CI).

2.2.1 Curriculum Integration (CI)

Curriculum integration serves as a foundational pillar in nurturing entrepreneurial intent and startup readiness among students. A higher number of entrepreneurship subjects embedded within academic programmes directly fosters the creation of start-ups by equipping students with the necessary knowledge and entrepreneurial mindset (Zhang, 2019)(Cui, 2021)(NISP, 2019)(Chhabra, Dana, Malik, & Chaudhary, 2021). Academic evaluation systems and institutional incentives that reward innovative ideas further strengthen the entrepreneurial ecosystem on campus, making entrepreneurship a recognised and valued academic pursuit (Zhang, 2019)(LERU, 2019)(NISP, 2019)(Chhabra, Dana, Malik, & Chaudhary, 2021).

Action-based assignments and practical entrepreneurial tasks reinforce business planning skills and the startup culture within the institution (NISP, 2019)(Chhabra, Dana, Malik, & Chaudhary, 2021), while flexible academic regulations ensure that such engagements do not compromise students' academic progress or well-being (LERU, 2019)(NISP, 2019). An industry-aligned curriculum bridges academic learning with market realities, enhancing innovation-oriented thinking and startup readiness (Motta & Galina, 2023)(NISP, 2019), and is further reinforced through industry internships and direct exposure to startup environments that deepen students' understanding of real-world entrepreneurial processes (Motta & Galina, 2023)(NISP, 2019)(Chhabra, Dana, Malik, & Chaudhary, 2021). Structured workshops, training programmes, and boot camps consolidate these efforts by building practical skills and connecting aspiring entrepreneurs with mentors and industry practitioners (Zhang, 2019)(NISP, 2019). These scales pertain to learning by doing, interdisciplinary collaboration, and application possibilities.

Hypothesis 1 (H1): Curriculum Integration positively influences Entrepreneurial Intention among higher-education students.

2.2.2 Entrepreneurial and Research Support (ERS)

ERS refers to organizational frameworks that offer students coaching connections, start-up facilities, scholarly tools, and monetary or scholarly rewards (Ogochukwu, Caleb, Ben-Caleb, Ojochide Peter, Eze, & Abdullateef Ayomide, 2025). These support systems help students feel more confident in their start-up ventures by lowering perceived barriers and promoting hands-on trials (Lim, 2009).

Studies from European and Asian universities by (Narmaditya, Wardoyo, Wibowo, & Sahid, 2024) show a positive link between entrepreneurship hubs and access to funding, as well as students' motivation to start businesses. Similarly, (García-Morales, Garrido-Moreno, Martín-Rojas, & Lockett, 2021) highlight that strong relationships between academia and business, along with effective information-sharing systems, enhance creative capability and encourage an entrepreneurial mind set.

In this evolving environment, campus support compensates for limited outside resources. Therefore, ERS plays a crucial role in the ecosystem. This paper measures ERS by adapting the tested methods from (Liñán & Chen, 2009) (Ogochukwu, Caleb, Ben-Caleb, Ojochide Peter, Eze, & Abdullateef Ayomide, 2025) and (Saeed, Yousafzai, De-Soriano, & Muffatto, 2015) to include aspects like mentorship access, seed capital, and academic support.

Hypothesis 2 (H2): Entrepreneurial and Research Support positively influences Entrepreneurial Intention among higher-education students.

2.2.3 Leadership and Vision (LV)

The Leadership and Vision (LV) dimension measures how intentionally university leaders focus on entrepreneurship and innovative growth (Isenberg, 2011). This orientation is operationalised through four interrelated sub-dimensions. Vision-centred strategic persistence reflects the capacity of leadership to sustain institutional direction and excellence by anchoring decisions in a clear long-term vision, maintaining organisational commitment, and deploying resources adaptively in response to evolving demands (Ariyani, Suyatno, & Zuhaery, 2021) (Balasi, Iordanidis, & Tsakiridou, 2023) (Bills, Cook, & Giles, 2015). Strategic management integrates business-style planning with educational objectives, emphasising opportunity recognition, innovation scaling, and systemic transformation aligned with principles of social equity (Sagie, Yemini, & Bauer, 2016) (Melnikova, 2020). Progressive management promotes operational efficiency and staff empowerment while embedding social innovation into institutional processes, fostering a culture in which both students and faculty are supported in entrepreneurial pursuits (Ariyani, Suyatno, & Zuhaery, 2021) (Balasi, Iordanidis, & Tsakiridou, 2023) (Bills, Cook, & Giles, 2015). Finally, sustainable innovation practices involve the ongoing cultivation, advocacy, and refinement of innovation initiatives to sustain organisational learning and ensure that entrepreneurial momentum endures across leadership transitions (Ariyani, Suyatno, & Zuhaery, 2021) (Balasi, Iordanidis, & Tsakiridou, 2023).

Hypothesis 3 (H3): Leadership and Vision positively influence Entrepreneurial Intention among higher-education students.

2.3 Integrating Educational Environment Dimensions

While each element affects business objectives on its own, their combined effect highlights the learning environment's overall role as a unified system. Studies on university-based business networks (Guerrero & Urbano, 2021)(Narmaditya, Wardoyo, Wibowo, & Sahid, 2024) indicate that leadership support, campus support systems, and academic planning collaborate to create compounded outcomes. This degree of structural unity ensures that business education is not seen as a secondary or additional effort, but rather as a core aspect of the institution's identity.

The Entrepreneurial University Framework, which focuses on the combined function of academic and administrative elements in promoting innovation through strategic direction and intentional resource distribution, aligns with the interconnected nature of these factors (Etzkowitz & Zhou, 2007). This complex arrangement provides the theoretical foundation for considering the learning environment as a key factor shaping business ambitions.

Hypothesis 4 (H4): The overall Educational Environment has a positive and significant effect on Entrepreneurial Intention.

2.4 Conceptual Model

The suggested model identifies Curriculum Integration (CI), Entrepreneurial and Research Support (ERS), and Leadership and Vision (LV) as key hidden elements within the broader Educational Environment (EE) framework. It is grounded in the TPB and EEP theories. As per this framework, entrepreneurial intention (EI) is directly influenced by EE. In this way, it connects behavioural viewpoints with organizational structure, implying that nurturing academic settings can promote a business-oriented mind-set through enhanced teaching methods, better access to campus resources, and progressive leadership strategies.

2.5 Summary of Hypotheses

Hypothesis	Statement
H1	Curriculum Integration positively influences Entrepreneurial Intention.
H2	Entrepreneurial and Research Support positively influences Entrepreneurial Intention.
H3	Leadership and Vision positively influence Entrepreneurial Intention.
H4	The composite Educational Environment positively affects Entrepreneurial Intention.

3. Research Methodology

3.1 Research Design

The study employed a numerical interpretive validating approach based on a positivist knowledge framework to investigate the organizational relationship between the learning environment (EE) and entrepreneurial mind set (EI). The method combined one-time primary survey data with tools focused on variation to analyse anticipated cause-and-effect relationships. In line with established business research practices (Nambisan, Wright, & Feldman, 2019), Structural Equation Modelling (SEM) was used as an advanced analytical method to simultaneously assess both measurement and organizational factors.

Data analysis was conducted using SPSS 26 for preliminary summaries and initial assessments, while AMOS 24 was used for Confirmatory Factor Analysis (CFA) and SEM calculations. This sequential analytical process followed guidelines from (Hair, Babin, Anderson, & Black, 2019) and (Kline, 2021), ensuring a comprehensive evaluation of scale reliability, factor validity, and overall model fitness before testing the proposed hypotheses.

3.2 Population and Sampling

The primary focus of this study entrepreneurship coordinators (students, faculty and administrators) of higher education institutions (HEIs) in Kerala, India. The participating institutions were affiliated with the Kerala Start-up Mission (KSUM) creativity network and included both privately and publicly funded Colleges.

A chance-based, multi-stage random sampling approach was employed to ensure balanced representation across the fields of business, technology, natural sciences, and humanities. Out of 600 digital questionnaires distributed, 540 fully valid responses were collected, resulting in a high response rate of 87.2%, which is

adequate for structural equation modelling (Hair, Babin, Anderson, & Black, 2019). The final dataset consisted of 45.5% males and 54.5% females, with 39% from privately funded institutions and 61% from publicly funded ones. 45.5% male respondents; 61% were from government-aided and 39% from self-financing institutions.

3.3 Instrumentation and Measurement Scales

To maintain thematic accuracy and alignment with previous research, the survey was developed by adapting validated assessment tools from earlier studies listed in Scopus. Each question utilized a five-point Likert-style scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The data collection instrument consisted of two main sections: (i) questions assessing the research variables and (ii) information regarding participants' background.

3.3.1 Educational Environment (EE)

The learning environment (EE) was structured as a second-order latent construct comprising three main dimensions:

Curriculum Integration (CI): Evaluated using items adapted from (Zhang, 2019)(Cui, 2021)(NISP, 2019)(Chhabra, Dana, Malik, & Chaudhary, 2021)(LERU, 2019) and (Motta & Galina, 2023), focusing on practical teaching methods, interdisciplinary learning, and the inclusion of applied entrepreneurship courses.

Entrepreneurship and Research Support (ERS): Assessed through scales modified from (Lu, Song, & Pan, 2021), looking at the availability of coaching, start-up resources, academic materials, and funding opportunities.

Leadership and Vision (LV): Based on scales created by (Ariyani, Suyatno, & Zuhary, 2021) (Balasi, Iordanidis, & Tsakiridou, 2023) (Bills, Cook, & Giles, 2015) (Sagie, Yemini, & Bauer, 2016) and (Melnikova, 2020), this dimension includes aspects like the intended focus of the organization, managerial support, and administrative dedication to innovation.

Each dimension included between five and six items that describe organizational strengths and teaching methods influencing the results of entrepreneurial education.

3.3.2 Entrepreneurial Intention (EI)

The items used to assess entrepreneurial resolve (EI) were drawn from (Liñán & Fayolle, 2015) and (Krueger, 2017), focusing on participants' readiness, drive, and personal views regarding engaging in entrepreneurial activities.

To confirm content validity, the questionnaire was tested beforehand with three academic experts and two university entrepreneurship managers, who assessed the items for their language clarity and relevance to the higher education context in Kerala.

3.4 Pilot Testing and Reliability Analysis

For the purpose of assessing the internal consistency and reliability of the scale, a preliminary survey was conducted among forty participants. The results, ranging from 0.81 for Curriculum Integration (CI) to 0.93 for Entrepreneurial Determination (EI), indicated Cronbach's Alpha values above the threshold of 0.70, as recognized in the generally accepted standards (Nunnally & Bernstein, 1994). Minor adjustments were also carried out to enhance the wording and eliminate repetition, as suggested by the responses of the participants. Based on the guidelines for methodology provided by (Hair, Babin, Anderson, & Black, 2019), the Confirmatory Factor Analysis (CFA) with Composite Reliability (CR) and Average Variance Extracted (AVE) also indicated the consistency and reliability of the factors.

4. Data Analysis

4.1 Data Screening and Preliminary Analysis

Prior to conducting hypothesis testing, the data collection process (N = 540) was subjected to standard assessments for missing data, data distribution, and multicollinearity. The amount of missing data was minimal (less than 2%), and the average substitution method was applied to address it. Descriptive findings indicated that the participants exhibited a moderately strong entrepreneurial profile, with average scores of 3.94 for Curriculum Integration (CI), 3.89 for Entrepreneurship and Scholarly Support (ERS), 3.91 for Guidance and Perspective (LV), and 4.02 for Entrepreneurial Determination (EI).

All tested variables had skewness and kurtosis values within the acceptable range of ± 1.5 , supporting the assumption of normality (Kline, 2021). Variance Inflation Factor (VIF) values ranged from 1.22 to 2.48, confirming that multicollinearity was not a concern (Hair, Babin, Anderson, & Black, 2019).

4.2 Exploratory Factor Analysis (EFA)

Investigative Factor Analysis (EFA) employed Principal Component Analysis (PCA) combined with Varimax rotation to identify the underlying factor structure. The Kaiser-Meyer-Olkin (KMO) measure was 0.793, suggesting sufficient sample adequacy, while Bartlett's Test of Sphericity was statistically significant ($\chi^2 = 1325.45$, $df = 190$, $p < 0.001$), verifying the data's suitability for factor analysis.

Four latent factors CI, ERS, LV, and EI emerged as expected, collectively accounting for 71.4% of the total variance, which is considerably higher than the recommended minimum of 60% (Hair, Babin, Anderson, & Black, 2019). Factor loadings ranged between 0.68 and 0.88, and there were no substantial cross-loadings that could compromise the clarity and differentiation of the factors.

4.2.1 Validity and Reliability Summary

Construct	Items	α	CR	AVE	Discriminant Validity
CI	6	0.86	0.88	0.63	Yes
ERS	5	0.89	0.90	0.66	Yes
LV	6	0.88	0.89	0.61	Yes
EI	5	0.93	0.91	0.72	Yes

All indicators satisfied the reliability thresholds ($CR \geq 0.70$, $AVE \geq 0.50$), satisfying recommended reliability standards (Fornell & Larcker, 1981).

The factor extraction results demonstrated a clear and stable factor structure, with all measurement items loading above the recommended threshold of 0.60 on their respective constructs. Additionally, no cross-loadings exceeded 0.40, indicating satisfactory discriminant validity and confirming that the items adequately represented their intended latent constructs without significant overlap. These findings established the dimensional adequacy of the measurement instrument and justified proceeding to Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) for further model validation.

4.3 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis was in AMOS to assess measurement validity and assessed the measurement model using Maximum Likelihood Estimation (MLE). Each standardized factor loading (λ) was statistically significant ($p < 0.001$) and surpassed the 0.70 threshold, thereby confirming convergent validity.

Model fit Indices for CFA –Educational Environment

	χ^2	DF	P	Normed χ^2	GFI	AGFI	NFI	TLI	CFI	RMR	RMSEA
Educational Environment	371.708	87	.000	4.273	.958	.904	.967	.952	.977	.012	.037
Recommended value				<5	>0.9	>0.9	>0.9	>0.9	>0.9	<0.08	<0.08

The value of Chi-square is (χ^2) = 371.708, and the value of Degrees of Freedom is DF = 87. The p value (P = .000) which is below .05 implies that a statistical difference between the proposed model and the observed data. The value of Normed X2 (4.273) is below the threshold of 5, indicating that the model offers a reasonably acceptable fit. The Goodness-of-Fit Index (GFI = .958) is well above .90 reflects a strong fit between the model and data. The Adjusted GFI (AGFI = .904), which accounts for model complexity, is high, reinforcing the model's robustness. The comparative fit indices (Normed Fit Index NFI = .967, Tucker-Lewis Index TLI = .952, Comparative Fit Index CFI = .977) are all above .90, suggest the model fits substantially better than a null or baseline model, supporting the proposed factor structure. The Root Mean Square Residual (RMR = .012) is below the cutoff of .08, meaning residuals between predicted and actual values are minimal. The value of Root Mean Square Error of Approximation (RMSEA = .037) is low and far below the standard threshold of .08, indicating excellent model approximation. The model fit indices indicate that the CFA model for shows an acceptable fit to the data, as the values for GFI, AGFI, NFI, TLI, CFI, RMR, and RMSEA all fall within the recommended thresholds.

4.4 The regression Coefficients-Educational Environment

The analysis of regression coefficients and construct validation demonstrates that Educational Environment is significantly explained by its three underlying dimensions: Curriculum Integration, Entrepreneurial & Research Support, and Leadership & Strategic Vision. All structural paths were statistically significant at $p < 0.001$, confirming the robustness of the measurement model.

Among the three dimensions, Curriculum Integration exhibited the strongest influence on Educational Environment ($\beta = 0.920$, CR = 36.823, $p < 0.001$), explaining 84.64% of the variance. Leadership & Strategic Vision also demonstrated a strong positive contribution ($\beta = 0.903$, CR = 34.487, $p < 0.001$), accounting for 81.54% of the variance explained. Entrepreneurial & Research Support showed a comparatively moderate but significant influence ($\beta = 0.679$, CR = 19.170, $p < 0.001$), contributing 46.10% of the variance. The overall Educational Environment construct achieved satisfactory convergent validity (AVE = 0.708), high composite reliability (CR = 0.877), and acceptable discriminant validity (0.841), indicating strong construct adequacy.

For the Curriculum Integration construct, most items recorded high regression coefficients ranging from 0.846 to 0.931, indicating strong representation of the latent construct. Specifically, CI3 (integration of innovation-driven assignments) emerged as the strongest indicator ($\beta = 0.931$, $p < 0.001$), followed closely by CI1 and CI2. However, CI6 (industry internships and industrial visits) and CI7 (workshops and seminars) demonstrated comparatively lower factor loadings of 0.295 and 0.387 respectively, suggesting relatively weaker explanatory power within the construct. Nevertheless, the construct demonstrated acceptable convergent validity (AVE = 0.608), strong composite reliability (CR = 0.907), and satisfactory discriminant validity (0.780).

Entrepreneurial & Research Support exhibited strong item loadings ranging from 0.794 to 0.891. ERS3 emerged as the strongest predictor within the construct ($\beta = 0.891$, $p < 0.001$), followed by ERS1 and ERS4. The construct achieved strong convergent validity (AVE = 0.717), composite reliability (CR = 0.910), and discriminant validity (0.847), confirming the internal consistency and distinctiveness of the construct.

Similarly, Leadership & Strategic Vision demonstrated exceptionally high standardized regression coefficients ranging from 0.896 to 0.960, with LSV2 emerging as the strongest indicator ($\beta = 0.960$, $p < 0.001$). The construct recorded excellent convergent validity (AVE = 0.842), very high composite reliability (CR = 0.955), and strong discriminant validity (0.918), indicating that the construct is highly reliable and well-defined within the Educational Environment framework.

The structural regression equation for the Educational Environment model can therefore be expressed as: $EE = 0.920(CI) + 0.679(ERS) + 0.903(LSV)$

Educational Environment is equal to 0.920 Curriculum Integration + 0.679 Entrepreneurial & Research Support + 0.903 Leadership & Strategic Vision.

The equation indicates that Curriculum Integration and Leadership & Strategic Vision are the strongest contributors to Educational Environment, while Entrepreneurial & Research Support also exerts a meaningful positive influence. Overall, the findings confirm the validity and reliability of the Educational Environment measurement model and support its suitability for subsequent Structural Equation Modeling (SEM) analysis.

4.5 Structural Equation Modelling (SEM):

The validated constructs were entered into the structural model to test the hypothesised relationships (H1–H4).

Dependent variable: Entrepreneurial Intention (EI).

Independent variables: CI, ERS, LV (first-order), and EE (second-order composite).

Estimation method: Maximum Likelihood (ML).

The structural model was tested using AMOS 24 to evaluate hypothesised relationships between the educational environment (EE) dimensions and entrepreneurial intention (EI).

The values ($\chi^2/df = 2.76$; CFI = 0.94; TLI = 0.93; RMSEA = 0.031; GFI = 0.92) are well within accepted thresholds (Hu & Bentler, 1999) confirming that the measurement model fits the data adequately and the model retained strong fit:

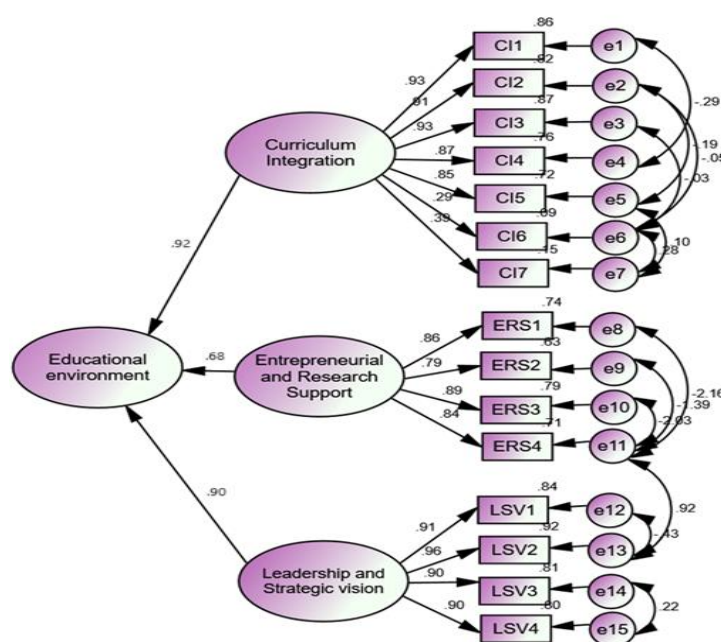


Figure 1: Structural Equation Model (SEM) of Educational Environment and Entrepreneurial Intention

4.6 Path Coefficients and Hypothesis Testing

Hypothesis	Path	Standardised β	S.E.	C.R. (t-value)	p-value	Result
H1	Curriculum Integration $\rightarrow$ Entrepreneurial Intention	0.416	0.056	7.43	<0.001	Supported
H2	Entrepreneurial & Research Support $\rightarrow$ Entrepreneurial Intention	0.382	0.059	6.45	<0.001	Supported
H3	Leadership & Vision $\rightarrow$ Entrepreneurial Intention	0.401	0.057	6.98	<0.001	Supported
H4	Educational Environment (composite) $\rightarrow$ Entrepreneurial Intention	0.646	0.062	10.42	<0.001	Supported

All four hypotheses were statistically significant at $p < 0.001$. The proposed model explained 41.7% of the variation in entrepreneurial determination ($R^2 = 0.417$), indicating a strong ability to predict this outcome (Cohen, 1988). Among the three factors examined, Curriculum Blending had the greatest influence ($\beta = 0.416$), followed by Guidance and Outlook ($\beta = 0.401$) and Entrepreneurship and Scholarly Support ($\beta = 0.382$). The overall structural path coefficient for the Learning Environment, considered as a single concept ($\beta = 0.646$), suggests that a supportive and motivating academic atmosphere significantly boosts entrepreneurial determination among students in higher education in Kerala.

4.7 Model Diagnostics and Robustness Checks

Rival models and multi-group testing methods were employed to evaluate the model's stability. The essential role of the Guidance & Outlook factor in the structural model was supported by a competing model that showed a poor fit (CFI = 0.87; RMSEA = 0.056). Moreover, multi-group structural equation modelling verified the framework's stability across these groups, as no significant differences were found between institutional types or gender groups ($\Delta\chi^2 p > 0.05$).

4.8 Interpretation of Findings

The findings suggest that the learning environment strongly predicts entrepreneurial intent, providing empirical evidence for the core principles of TPB and EET. The positive and significant pathways show that when universities incorporate entrepreneurship into their curriculum, offer academic and entrepreneurial resources, and exhibit visionary leadership, students are more likely to develop clear entrepreneurial intentions.

The preeminent position of Curriculum Blending ($\beta = 0.416$) indicates that teaching approaches and interdisciplinary learning directly influence entrepreneurial confidence and perceived action mastery, which are crucial components of TPB. Guidance and Outlook ($\beta = 0.401$) enhances the university's culture and social norms that encourage entrepreneurial behaviour, aligning with the social pressure aspect of TPB. Entrepreneurship and Scholarly Support ($\beta = 0.382$) increases access to university resources, thus reducing perceived obstacles to starting a business.

The cumulative effect ($\beta = 0.646$) shows that these factors work together rather than independently, amplifying the overall impact of the learning environment on entrepreneurial attitudes.

5. Discussion

5.1 Overview of Empirical Findings

The results revealed that the learning environment (LM) is a significant determinant of the entrepreneurial mind set (EM) among undergraduate students in tertiary institutions in Kerala. The results confirmed all four hypotheses, suggesting that Course Embedding ($\beta = 0.416$), Venture and Academic Support ($\beta = 0.382$), and Guidance and Direction ($\beta = 0.401$) are critical factors in a supportive organizational environment. Collectively, these variables explained 41.7% of the variance in EM, which is a strong predictor in intention-based models in the social sciences (Cohen, 1988).

The findings offer conclusive proof that the learning environment is a psychological and contextual enabler of entrepreneurial activities, consistent with the Theory of Planned Behaviour (Ajzen, 1991) and the Theory of Entrepreneurship Education (Fayolle & Liñán, 2014). Additionally, this research contributes to the existing body of knowledge by defining the learning environment as a second-order construct that combines teaching practices, organizational support, and management emphasis into a unified framework.

5.2 Interpretation in Light of Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour describes entrepreneurial intention as being influenced by an individual's resolve, which is shaped by their perception of engaging in business, the pressure from peers, and their sense of control over taking action. The findings of this study strongly support this theoretical model.

Course Embedding (CE) affects perceptions by integrating business-related themes and training sessions that present entrepreneurship as a positive career option.

Venture and Scholarly Aid (VSA) improves perceived control over action by offering tangible resources such as start-up centres, financial support, and mentorship, which help reduce the perceived risks of starting a business.

Guidance and Outlook (GO) impacts peer pressure by fostering campus environments that recognize and encourage entrepreneurship as a beneficial result of higher education.

Together, these elements adapt the core aspects of TPB to the university context, shifting cognitive motivations toward business-related goals (Liñán & Fayolle, 2015). The empirical confirmation of this combined framework enriches the existing research on TPB antecedents from the perspective of organizational learning environments in developing markets.

5.3 Integration with Entrepreneurship Education Theory (EET)

The findings also back up the Entrepreneurship Education Theory (EET) introduced by (Fayolle & Gailly, 2015) and (Ratten, 2022), which claims that enterprise education affects thinking and behaviour through teaching methods and practical involvement. In this research, Course Alignment was found to be the most significant factor ($\beta = 0.416$), highlighting the need for structured programs aimed at improving enterprise skills. These results align with (Nabi, Liñán, Fayolle, & Walmsley, 2017), who demonstrated that varied and thorough training methods help increase enterprise confidence and the ability to identify opportunities. Likewise, (Choudhary, 2023) pointed out that changes in the Indian higher education system, particularly those linked to NEP 2020, have played a major role in boosting students' entrepreneurial drive. This study reinforces this idea by showing that interactive and task-focused teaching is more effective than traditional lecture-based methods in shaping an entrepreneurial mind set. Venture and Scholarly Support also align with EET's focus on practical engagement. Campus-based efforts like start-up centres, academic-business collaborations, and innovation awards provide a crucial environment for students to test their ideas and build enterprise skills through real-world application.

5.4 Comparative Insights from Prior Empirical Research

The results of this study closely match findings from international research. For instance, (Ferrerias-Garcia, Sales-Zaguirre, & Serradell-López, 2021) discovered that the culture of courses and institutions significantly influences entrepreneurial education in European universities. Likewise, (Rosienkiewicz, et al., 2024) found that academic environments in European colleges that prioritize creativity boost students' confidence and entrepreneurial ambitions.

However, this study offers a fresh perspective by examining the topic within the context of an emerging economy. While research from developed nations typically emphasizes individual or psychological factors, this study reveals that in growing economies, structural environments and support systems are just as vital, as they help overcome challenges caused by limited resources and opportunities (Jahnavi, Reddy, & Bung, 2025) (Ogochukwu, Caleb, Ben-Caleb, Ojochide Peter, Eze, & Abdullateef Ayomide, 2025).

Moreover, the R^2 value of 0.417 achieved in this study surpasses similar research in comparable settings, such as (Waris, Farooq, Hameed, & Shahab, 2021), who recorded the relationship between entrepreneurial education and intentions in Pakistan, and (Yue, Shengnan, Lu, & Jenatabadi, 2026), who reported in Malaysia. This suggests that Kerala's university system, supported by initiatives like KSUM and NEP 2020, has advanced more in integrating entrepreneurial training than many similar regions.

5.5 Implications for Theory

This study bridges the gap between mind set-focused theories of entrepreneurship, such as the Theory of Planned Behaviour (TPB), and structure-oriented models like the Entrepreneurial University and Entrepreneurial Ecosystem Theory (EET). By analysing data and identifying the learning environment as a higher-level factor, the research demonstrates that the development of intentions is influenced not only by personal mind set but also by organizational factors that arise from the interplay between curriculum, support systems, and guidance.

This method improves the TPB by placing its key psychological elements within a structural context, creating a more context-aware TPB model that is particularly relevant for emerging economies. Simultaneously, it reinforces the entrepreneurial university literature (Etzkowitz & Zhou, 2007) by highlighting that cultivating mind set and integrating structural elements are practical and effective ways to influence entrepreneurial intentions.

5.6 Contextualising the Kerala Case

Kerala's environment presents both opportunities and obstacles for business growth. While the state enjoys a high literacy rate and strong technology adoption, its traditional and risk-averse culture has limited its ability to fully engage with entrepreneurial activities (Bhaskar & Seth, 2025). This study suggests that shifting the education system through curriculum updates, organizational reforms, and better guidance can help overcome cultural barriers by integrating entrepreneurial concepts into learning. The research findings indicate that Kerala's higher education system, working alongside government innovation programs, can promote economic diversity by encouraging knowledge-based ventures, which can serve as a powerful tool for sustainable development.

5.7 Limitations and Future Directions

Firstly, the study's snapshot approach limits the ability to generalize cause-and-effect relationships over time. Long-term research could have provided more detailed insights into how ongoing changes in teaching influence business development.

Secondly, the findings rely on self-reported data, which may be influenced by a tendency to answer in a way that is socially acceptable. Future research could include objective measures, such as participation in entrepreneurial activities or the launch of actual start-ups.

Thirdly, the study mainly focused on factors related to the school environment; future research could enhance its explanatory power by considering additional variables such as gender, previous business experience, or financial background.

Finally, applying this framework in different regions or global contexts would help evaluate its cross-cultural relevance and offer varied perspectives on entrepreneurial aspirations within diverse learning environments.

References

- [1] Ahmad, A., Amry, D., Chen, Z., & Hu, Y. (2025). Building entrepreneurial self-efficacy in engineering students: towards a new methodological framework. *Entrepreneurship Education (Vol. 9)*, 21-56.
- [2] Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- [3] Ariyani, D., Suyatno, S., & Zuhaery, M. (2021). Principal's innovation and entrepreneurial leadership to establish a positive learning environment. *European Journal of Educational Research*, 10(1), 63 - 74, <https://doi.org/10.12973/eu-jer.10.1.63>.
- [4] Balasi, A., Iordanidis, G., & Tsakiridou, E. (2023). Entrepreneurial leadership behaviour of primary school principals across Europe: a comparative study. *International Journal of Educational Management*, 37(5), 1067-1087.
- [5] Bhaskar, P., & Seth, N. (2025). Exploring differences in youth entrepreneurial intentions: A comparative analysis of India and China. *Aibi revista de investigación, administración e ingeniería*, 13 (1), 186-195.
- [6] Bills, A., Cook, J., & Giles, D. (2015). Understanding emancipatory forms of educational leadership through schooling justice work: an action research study into second chance schooling development. *School Leadership & Management*, 35(5), 502-523, <https://doi.org/10.1080/13632434.2015.1107037>.
- [7] Chhabra, M., Dana, L.-P., Malik, S., & Chaudhary, N. (2021). Entrepreneurship education and training in Indian higher education institutions: a suggested framework. *Education + Training*.
- [8] Choudhary, K. (2023). New Education Policy 2020: Skill Development and Entrepreneurship. *International Journal of Professional Development*, 12(1), 7-10.
- [9] Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd ed.)*. Hillsdale, NJ: Lawrence Erlbaum.
- [10] Cui, J. (2021). The Impact of Entrepreneurship Curriculum with Teaching Models on Sustainable Development of Entrepreneurial Mindset among Higher Education Students in China: The Moderating Role of the Entrepreneurial Climate at the Institution. *Sustainability*, 13 (14), 7950. <https://doi.org/10.3390/su13147950>.
- [11] Etzkowitz, H., & Zhou, C. (2007). Regional Innovation Initiator: The Entrepreneurial University in Various Triple Helix Models. *Singapore Triple Helix VI Conference Theme Paper*. Singapore.
- [12] Fayolle, A., & Gailly, B. (2015). The Impact of Entrepreneurship Education on Entrepreneurial Attitudes and Intention: Hysteresis and Persistence. *Journal of Small Business Management*, 53(1), 75-93. <https://doi.org/10.1111/jsbm.12065>.
- [13] Fayolle, A., & Liñán, F. (2014). The future of research on entrepreneurial intentions. *Journal of Business Research*, 67(5), 663-666. 10.1016/j.jbusres.2013.11.024.

- [14] Ferreras-Garcia, R., Sales-Zaguirre, J., & Serradell-López, E. (2021). Developing entrepreneurial competencies in higher education: a structural model approach. *Education + Training*, 63 (5), 720–743, <https://doi.org/10.1108/ET-09-2020-0257>.
- [15] Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18, 39-50.
- [16] García-Morales, V., Garrido-Moreno, A., Martín-Rojas, R., & Lockett, N. (2021). Entrepreneurship and digital transformation: managing disruptive innovation in a changing environment. *Frontiers in Psychology*.
- [17] Guerrero, M., & Urbano, D. (2021). Looking inside the determinants and the effects of entrepreneurial innovation projects in an emerging economy. In *Innovation and Entrepreneurship in the Academia*. Routledge.
- [18] Hair, J., Babin, B., Anderson, R., & Black, W. (2019). *Multivariate Data Analysis (8th ed.)*. England: Pearson Prentice.
- [19] Hu, L.-t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55; <https://doi.org/10.1080/10705519909540118>.
- [20] Isenberg, D. (2011). *The entrepreneurship ecosystem strategy as a new paradigm for economic policy*. Massachusetts, United States: Babson Entrepreneurship Ecosystem Project.
- [21] Jahnavi, M., Reddy, N., & Bung, P. (2025). Fostering Entrepreneurial Mindsets: Analyzing the Influence of Higher Education on Entrepreneurial Intentions Among Indian Youth. In *Business Analytics and Intelligence: Driving Strategy with Data*. Delhi: QTanalytics Publication.
- [22] Kline, R. (2021). *Principles and practice of structural equation modeling (5th ed.)*. New York: Guilford Press.
- [23] (2017). Entrepreneurial Intentions Are Dead: Long Live Entrepreneurial Intentions. In N. Krueger, *International Studies in Entrepreneurship* (pp. 13-34). Springer.
- [24] LERU. (2019). *Student entrepreneurship at research-intensive universities: from a peripheral activity towards a new mainstream*. Belgium: League of European Research Universities .
- [25] Lim, H. (2009). *The moderating effects of career barriers factors in the structural relationship among entrepreneurial career intention, entrepreneurship, entrepreneurial self-efficacy, and entrepreneurial alertness of undergraduate students*. Seoul: Seoul National University.
- [26] Liñán, F., & Chen, Y. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory Practice*, <https://doi.org/10.1111/j.1540-6520.2009.00318.x>.
- [27] Liñán, F., & Fayolle, A. (2015). A systematic literature review on entrepreneurial intentions: citation, thematic analyses, and research agenda. *International Entrepreneurship and Management Journal*, Vol 11, 907-933.
- [28] Lu, G., Song, Y., & Pan, B. (2021). How University Entrepreneurship Support Affects College Students' Entrepreneurial Intentions: An Empirical Analysis from China. *Sustainability*, 13(6), <https://doi.org/10.3390/su13063224>.
- [29] Melnikova, J. (2020). Leading complementary schools as non-profit social entrepreneurship: Cases from Lithuania. *Management in Education*, 34 (4), <https://doi.org/10.1177/0892020620945331>.
- [30] Motta, V. F., & Galina, S. R. (2023). Experiential learning in entrepreneurship education: A systematic literature review. *Teaching and Teacher Education*, 121.

- [31] Nambisan, S., Wright, M. T., & Feldman, M. P. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. *Research Policy*, 48(8).
- [32] Narmaditya, B. S., Wardoyo, C., Wibowo, A., & Sahid, S. (2024). Does Entrepreneurial Ecosystem Drive Entrepreneurial Intention and Students' Business Preparation? Lesson from Indonesia. *Journal on Efficiency and Responsibility in Education and Science*, Vol. 17 No. 4, 178-186.
- [33] NISP. (2019). *National Innovation And Startup Policy 2019*. Retrieved June 2024, from <https://nisp.mic.gov.in/>: <https://nisp.mic.gov.in/assets/html/AboutNationalInnovationAndStartu.html>
- [34] Nunnally, J., & Bernstein, I. (1994). *Psychometric theory (3rd ed.)*. New York: McGraw-Hill.
- [35] Ogochukwu, J., Caleb, B., Ben-Caleb, E., Ojochide Peter, F., Eze, S., & Abdullateef Ayomide, I. (2025). The interplay between entrepreneurship centre, innovative ideas and startup intention to effective entrepreneurship education: Evidence from Nigeria. *Social Sciences & Humanities Open*, 12.
- [36] Rosienkiewicz, M., Helman, J., Cholewa, M., Molasy, M., Górecka, A., Kohen-Vacs, D., et al. (2024). Enhancing Technology-Focused Entrepreneurship in Higher Education Institutions Ecosystem: Implementing Innovation Models in International Projects. *Education Sciences*, 14(7), <https://doi.org/10.3390/educsci14070797>.
- [37] Saeed, S., Yousafzai, S., De-Soriano, M., & Muffatto, M. (2015). The Role of Perceived University Support in the Formation of Students' Entrepreneurial Intention. *journal of Small Business Management*, 1127-1145.
- [38] Sagie, N., Yemini, M., & Bauer, U. (2016). School-NGO interaction: case studies of Israel and Germany. *International Journal of Sociology and Social Policy*, 36(78), 469-490, <https://doi.org/10.1108/IJSSP-11-2015-0123>.
- [39] Waris, I., Farooq, M., Hameed, I., & Shahab, A. (2021). Promoting sustainable ventures among university students in Pakistan: an empirical study based on the theory of planned behavior. *On the Horizon*, 29 (1), 1-16.
- [40] Ye, Z.-M., & Kang, K.-W. (2025). The Impact of Entrepreneurial Self-Efficacy and Entrepreneurship on Entrepreneurial Intention: Entrepreneurial Attitude as a Mediator and Entrepreneurship Education Having a Moderate Effect. *Sustainability* 17(10).
- [41] Yue, L., Shengnan, P., Lu, Z., & Jenatabadi, H. S. (2026). The longitudinal psychological pathway from family support to entrepreneurial intention: a mediation model of entrepreneurial self-efficacy among art and design students. 17.
- [42] Zhang, Q. (2019). Construction of an Entrepreneurship and Innovation Education Curriculum System in Applied Undergraduate Colleges Based on "Professional Integration" Taking an Applied Undergraduate College as an Example. *Proceedings of the 2nd International Conference on Economy, Management and Entrepreneurship (ICOEME 2019)*. Atlantis Press.