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Determinants of Entrepreneurial Intentions Among University and Graduate Students: A Systematic Review and Evidence-Based Synthesis (2022–2025)

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Abstract

The importance of entrepreneurship among graduate and undergraduate students as an important factor for economic resilience and innovation has become increasingly evident. The current systematic review presents a critical analysis of the available empirical evidence (2022-2025) on the multi-level determinants of entrepreneurial intentions (EI) of students enrolled in various universities from different geographical and socio-economic settings. Following PRISMA 2020 guidelines, a systematic, multi-phase review was conducted to analyze six major academic databases: Scopus, Web of Science, Google Scholar, ERIC, Emerald, and Taylor & Francis. From an initial pool of 350 records identified, 21 primary empirical studies met all pre-defined inclusion criteria and underwent quality appraisal using the Mixed Methods Appraisal Tool (MMAT 2018). This study found, through thematic synthesis and standardization of effect size that there are three main clusters responsible for shaping EI and these are: Cluster (1): Individual Psychological Factors, such as Entrepreneurial Self-Efficacy (ESE) being the most powerful predictor of EI, Proactive personality, creativity, and a growing trend of green and social entrepreneurship. Cluster (2): Pedagogical and educational factors, including PBL, Experiential learning, digital marketing literacy, and inspirational programs. Cluster (3): Environmental/Contextual Factors, including Perceived Behavioral Control (PBC), support systems, university entrepreneurial environment, and subjective norms. There were notable inconsistencies in the role of subjective norms, being statistically insignificant in 41.7% of the path models reviewed, signaling the emergence of self-motivated decision-making and feasibility-based career choices amongst modern students. In addition, the review reveals that there is a paradigm shift in terms of the concept of "Digital and Sustainable Entrepreneurship," guided by the environment and technological skills. HEIs should shift from purely theoretical learning into practical, technology-supported incubator environments in order to overcome the 'intention action-gap.'

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Introduction

Background and Context

Entrepreneurship forms the core catalyst for macroeconomic development, innovation, economic transformation, and labor market integration in the world at large. In reaction to the increasing economic instability in the world, youth unemployment, and the increasing pace of technology, institutions of higher education around the world have come to emphasize the inclusion of entrepreneurial education, incubation, and innovation within their institutional framework. The end aim is to convert institutional setups into launch pads for creating ventures.

Even after making many efforts on an institutional and educational front, empirical research still confirms that there remains a significant "intention-action gap" or structural gap where strong entrepreneurial intentions do not yield business incubation and start-up. This problem is even more evident for graduate and undergraduate students whose time is shared between academic pursuits, professional security, and market uncertainties. To address this issue, an in-depth understanding of the factors affecting entrepreneurial aspirations is essential.

Statement of the Problem and Research Gap

Furthermore, the intricacies of Entrepreneurial Intention (EI) are further complicated by differences in geography, socio-economics, and discipline. The fundamental frameworks in terms of theory include the Theory of Planned Behavior (TPB), proposed by Ajzen in 1991, and Social Cognitive Theory proposed by Bandura in 1997. However, recent empirical studies from the years 2022 to 2025 reveal that EI faces fragmented evidence along regional lines. In emerging and developing nations, the primary motive for EI is necessity, institutional void, and labor market factors. On the contrary, developed nations exhibit EI through opportunities and technology.

In addition to that, the emergence of some variables like DEC, digital marketing literacy, and environment-related values owing to recent changes in the global scene, such as the digitalization of businesses and the issue of environmental sustainability, has not been sufficiently addressed by existing classical EI frameworks. Whereas various studies have looked into certain aspects of entrepreneurship education and certain geographic locations, a comprehensive study on the interaction of individual, educational, environmental determinants, digital, and sustainable factors has yet to be conducted.

Scope, Population Definition, and Selection of Timeframe (2022–2025)

In order to bridge these gaps, this systematic review aims at considering empirical studies published in the timeframe of January 2022 until January 2025. Such a particular period was chosen specifically due to the following reasons: first, it covers post-COVID structural changes in higher education; second, a rapid development of artificial intelligence and digitalization of student ventures creation; third, an implementation of circular economy in university courses.

Population Description: Although the title emphasizes the populations of graduate students, the empirical evidence available in higher education studies often involves groups consisting of a combination of undergraduate students and postgraduate or master's and Ph.D. students. In order to have comprehensive empirical evidence and to avoid biased sampling, this review will include empirical studies involving undergraduate students (71.4%), graduate or postgraduate students (14.3%), and a combination of students (14.3%).

Research Objectives

This review is guided by four primary research objectives:

Objective 1: Identify and synthesize the individual and psychological factors (self-efficacy, personality traits, attitude, creativity, and resilience) that influence student entrepreneurial intention.

Objective 2: Evaluate the impact of pedagogical approaches, entrepreneurship education (EE), digital literacy, and institutional support structures on building student entrepreneurial ambition.

Objective 3: Assess the environmental and contextual drivers (subjective norms, perceived behavioral control, university culture, and government regulations) shaping intention.

Objective 4: Synthesize mediating and moderating mechanisms and evaluate the emerging role of digital competence and sustainability values in contemporary intention models.

Explicit Systematic Review Questions

This review isalso guided by four systematically framed review of primary research questions (RQs):

RQ1: What specific psychological characteristics demonstrate the strongest and most consistent predictive effect on student entrepreneurial intention across recent empirical literature?

RQ2: How do different educational interventions (e.g., Problem-Based Learning, digital skill integration, mentorship) influence the formation of entrepreneurial intent?

RQ3: To what extent do contextual and socio-cultural factors moderate or directly drive student entrepreneurial feasibility and desirability across different geographic regions?

RQ4: What cognitive bridge-states (mediators) and environmental contingencies (moderators) govern the translation of educational inputs into entrepreneurial intent in digital and sustainable domains?

Theoretical Framework and Literature Review

Theoretical Foundations: TPB, Social Cognitive Theory, and RBV

Entrepreneurship studies extensively employ cognitive behavioral theories in understanding what makes some people engage in entrepreneurship and what makes others prefer mainstream corporate jobs. The central framework employed throughout the synthesized literature is the Theory of Planned Behavior (TPB) (Ajzen, 1991). As per TPB, the direct precursor to any intended action is intention, which again is driven by three main constructs, namely: (1) attitude toward the behavior (ATB) that is associated with personal desirability; (2) subjective norms (SN) pertaining to social acceptance; and (3) perceived behavioral control (PBC).

In addition to TPB is the Social Cognitive Theory proposed by Bandura (1997), which is based on Entrepreneurial Self-Efficacy (ESE) defined as the perception that one has the ability to perform entrepreneurship-related roles and activities, such as opportunity recognition, financial mobilization, risk-taking and leadership, within the domain. In cognitive theories, ESE often either coincides with or is embedded in PBC. In relation to the organization and ecosystems, the RBV (Barney, 1991) helps to conceptualize how institutional structure, incubation, seed funding, and technology contribute to the transformation of intention into ventures.

Individual and Psychological Factors

Personal cognitive and personality factors have been the most frequently studied precursors to entrepreneurial intention. Entrepreneurial Self-Efficacy (ESE) continues to stand out as the dominant force behind venture intentions. Al-Qadasi et al. (2024) found in Yemen that ESE partly moderates the effect of basic personality traits such as locus of control and need for achievement on entrepreneurial intention. Likewise, Wang et al. (2023) found in China that entrepreneurship education positively impacts entrepreneurial intentions only when mediated by particular dimensions of ESE, which include searching, planning, and marshalling. The results correspond to the

self-efficacy theory proposed by Bandura, which shows that the efficacy of completing difficult tasks increases career intentionality (Khan et al., 2024; Singh & Choudhary, 2023; Tanaka et al., 2024).

Personality traits too constitute an equally important factor. Zhang and Li (2023) found that extraversion, conscientiousness, and openness had positive impacts on EI through individual creativity whereas neuroticism had a direct negative impact. In India, Sharma et al. (2024) found that personality traits continue to be equally significant factors in entrepreneurial intentions despite being outside formal education. Cross-cultural studies too have validated the moderating effect of personality structures on intention formation (Fernandez-Perez et al., 2023; Kim & Park, 2024).

In post-COVID times, Entrepreneurial Resilience (ER) is considered a critical psychological component. Rahman et al. (2024), while studying the Gen Z students of Bangladesh, introduced ER to the augmented version of TPB and found out that ER boosts EI in the economic environment of resource scarcity and market turbulence (Brito et al., 2023; Nguyen & Nguyen, 2024).

Pedagogical and Educational Factors

Whereas EE is an extensively adopted form of entrepreneurship education, empirical studies of the last few years have found the linkages between EE and EI to be more complicated and indirect in nature. According to Pacheco et al. (2023), EE has a tendency of nurturing EI in an indirect way by forming IEO, which is the combination of proactivity, innovativeness, and willingness to take risks, among people in Latin America. Empirical studies in Europe have also confirmed the importance of forming a cognitive mindset through education.

The pedagogic methodology plays a crucial role in the success of the process of education. In China, the PBL method with the use of artificial intelligence and deep learning methods was analyzed by Liu et al. (2024), which resulted in significant progress in problem-solving skills and business ventures of the students. In relation to social entrepreneurship education, Hockerts & Moya (2023) noted that although classroom teaching helps to lay down the basic knowledge, experiential elements are required to increase emotional involvement and intention (Garcia-Morales et al., 2024; Williams & Roberts, 2023).

The concept of digital literacy has progressed to become an important educational force in a very short while. In the Malaysian context, Mohd Yusof et al. (2023) discovered that digital marketing literacy, particularly expertise in e-commerce analysis, social media branding, and digital funnel optimization, significantly impacts student entrepreneurship. According to Gonzalez-Perez et al. (2024), it is crucial for

modern EE paradigms to incorporate digital competencies along with commercialization and experience-based learning.

Contextual, Environmental, and Emergent Determinants

Environmental and social contexts play a part in deciding if the potential to become an entrepreneur is actually realized in the form of entrepreneurial ventures. In the context of TPB, Perceived Behavioral Control (PBC) and Subjective Norms (SN) take account of the environmental and social nature of operations. According to Quispe-Mamani et al. (2023), in a study conducted among Peruvian university students, it was found that whereas PBC and subjective norms had considerable impact on EI, general attitude did not emerge as statistically significant.

Support systems at the institutional level and the university environment are more acknowledged as important catalysts in the environment. According to Setiawan et al. (2023), organizational knowledge management and flexibility contributed to the resilience of venture in Indonesia, while post-disaster government support had insignificant direct effects, implying that firm capabilities and institutional support offer better support (Foss & Gibson, 2024; Spigel & Harrison, 2023; Thompson et al., 2024). In addition, the market environment is a factor in minimizing career risks: Wang et al. (2023) have found out that having a good entrepreneurial environment in the region reduces the employment stress. Santos et al. (2023) have found out in Brazil that business environment support directly increases the precursors of intentions.

The emerging environmental drivers revolve around digitalization and sustainability. According to Gonzalez-Perez et al. (2024), it is time for revised intention models, where the outcome variables should be aligned with the values of sustainability and green technology innovation. In the same light, Rodriguez-Espindola et al. (2024) identified the importance of digital ecosystem infrastructure, which reduces capital constraints for the venture creation by students.

Gaps in Literature and Contribution of This Review

In spite of a vast literature base, current syntheses suffer from the following shortcomings: (1) failure to properly distinguish between the undergraduates and the postgraduates; (2) failure to systematically incorporate digital literacy and green motivation into the established TPB/ESE models; and (3) unclear methodology concerning effect size estimation and quality assessment. This systematic review overcomes these shortcomings by providing a transparent synthesis of the 2022-2025 global evidence following PRISMA 2020 criteria, applying standardized statistical measures and a quality assessment through MMAT 2018.

Methodology

Research Design and PRISMA 2020 Protocol

This research adopts the SLR methodological framework under the guidelines of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) statement (Page et al., 2021). The review protocol was developed prior to conducting the search by specifying the search approach, inclusion criteria, and evaluation criteria for synthesizing the results (Tranfield et al., 2003; Kraus et al., 2022).

Search Strategy, Databases, and Execution Details

An electronic search was conducted comprehensively through six electronic databases: Scopus, Web of Science (WoS), Google Scholar, ERIC, Emerald Insight, and Taylor & Francis. The final search was carried out on January 15, 2025, focusing on peer-reviewed articles published from January 1, 2022, to January 15, 2025.

The search strings were tailored individually for each database employing Boolean operators (AND, OR), wild cards, and field-specific searches. The generic search string used for WoS and Scopus is:

Base Search Syntax: ("Entrepreneurial Intention*" OR "Entrepreneurial Ambition*" OR "Venture Creation Intention*") AND ("Graduate Student*" OR "Postgraduate Student*" OR "University Student*" OR "Undergraduate Student*") AND ("Determinant*" OR "Factor*" OR "Driver*" OR "Antecedent*") AND ("Entrepreneurship Education" OR "Digital Literacy" OR "Sustainable Entrepreneurship").

Specific execution parameters across the six databases are itemized below:

Database 1 (Scopus): Scopus: Title/Abs/Key search; Filters: Document Type (Article), Language (English), Dates (2022–2025). Yield: 112 records.

Database 2 (Web of Science): Web of Science (Core Collection): Topic (TS) search; Filters: Open Access / Peer-Reviewed, Dates (2022–2025). Yield: 84 records.

Database 3 (Google Scholar): Google Scholar: Advanced title/abstract search; Limited to first 100 relevant results ranked by citations/relevance. Yield: 78 records.

Database 4 (ERIC): ERIC (Education Resources Information Center): Descriptor search; Filters: Higher Education, Peer-Reviewed. Yield: 32 records.

Database 5 (Emerald): Emerald Insight: Content search; Filters: Journals, Business & Education collection. Yield: 24 records.

Database 6 (Taylor & Francis): Taylor & Francis Online: Full-text/Abstract search; Filters: Higher Education / Business Management. Yield: 20 records.

The total initial search across all six databases yielded exactly 350 records.

Eligibility Criteria: Inclusion and Exclusion Standards

The following criteria for inclusion and exclusion were applied in assessing the studies:

Inclusion Criterion 1 (Design): Empirical study design (Quantitative survey models, Mixed-Methods, or empirical syntheses with primary datasets).

Inclusion Criterion 2 (Population): Target Population: Students currently enrolled in higher education institutions (undergraduate, master's, doctoral).

Inclusion Criterion 3 (Timeframe): Temporal Boundary: Published between January 1, 2022, and January 15, 2025.

Inclusion Criterion 4 (Language): Language: Peer-reviewed full text available in English.

Inclusion Criterion 5 (Outcome): Outcome Variable: Quantitative or thematic measurement of Entrepreneurial Intention (EI) antecedents.

Exclusion Criteria: Inclusion Criteria: (1) Research articles that concentrate exclusively on business owners who are not students; (2) Editorials and commentaries from conferences which have not been peer-reviewed; (3) Papers with conceptual frameworks without any empirical evidence; (4) Duplicate publications in the databases' indices.

PRISMA 2020 Flow Diagram and Selection Process

Multi-level selection procedure went through the following stages:

Stage 1 (Identification): Identification: Initial search yielded 350 records across 6 databases. 85 duplicate records were identified and removed, leaving 265 unique records.

Stage 2 (Screening): Screening: Title and abstract screening of 265 records resulted in the exclusion of 180 records failing basic inclusion criteria (e.g., non-student focus, conceptual commentary). 85 full-text articles were sought for detailed retrieval.

Stage 3 (Eligibility): Eligibility: 85 full-text articles were retrieved and assessed. 64 articles were excluded with explicit reasons: (a) sample composed of working non-students (n=22); (b) incomplete statistical reporting of path coefficients/sample sizes (n=18); (c) published prior to 2022 (n=14); (d) conceptual non-empirical articles (n=10).

Stage 4 (Inclusion): Inclusion: Exactly 21 primary empirical studies met all inclusion criteria and were included in the systematic review synthesis.

Table 1

Detailed Breakdown of PRISMA 2020 Study Selection Flow

PRISMA Stage	Description & Actions Taken	Record Count
Identification	Initial records retrieved from 6 academic databases (Scopus=112, WoS=84, GS=78, ERIC=32, Emerald=24, T&F=20)	N = 350
Duplicate Removal	De-duplication using reference management software (EndNote / Zotero)	N = 85 removed (265 remaining)
Screening	Title and Abstract screening against inclusion/exclusion criteria	N = 180 excluded (85 remaining)
Full-Text Assessment	Full-text evaluation for eligibility (Excluded: non-students n=22, incomplete stats n=18, pre-2022 n=14, conceptual n=10)	N = 64 excluded
Final Inclusion	Empirical studies synthesized in systematic review (Quantitative n=17, Mixed n=3, Empirical Secondary n=1)	N = 21 studies

Data Extraction Protocol and Synthesis Procedures

A template for data extraction was established to document the following: (1) Lead Author and Year; (2) Country and Geographical Setting; (3) Target Population and Sample Size (N); (4) Study Design and Measurement Tool; (5) Theoretical Framework; (6) Principal Determinants Considered; (7) Statistical Analysis Package; (8) Path Coefficients (β) and Correlations (r); and (9) Reported Quality Score.

Procedure of Synthesis: The data synthesis procedure included two methods, namely Quantitative Descriptive Synthesis and Qualitative Thematic Synthesis (Thomas & Harden, 2008). To overcome the problem of varying effect sizes in different studies, the path coefficients (β) from SEM/PLS-SEM modeling as well as the Pearson correlation coefficients (r) were retrieved. Frequency analysis of variables and their significance was performed. The weighted mean path coefficients were obtained for the key relationships if the standardized values were available in several independent quantitative studies.

Quality Appraisal via MMAT 2018 Guidelines

The quality of methodologies used in the selected studies was analyzed via the Mixed Methods Appraisal Tool (MMAT), 2018 version (Hong et al., 2018). The assessment is based on the examination of five criteria of methodology quality adapted for quantitative descriptive, quantitative non-randomized, qualitative and mixed methods research designs. Two independent evaluators were assigned for each included study. Disagreements in scoring were settled by means of discussion. The quality scores according to MMAT varied from 60% to 100%. In total, 16 papers scored between 80% and 100% in quality criteria while 5 scored 60-70%. The overall quality of research was considered high.

Results

Descriptive Statistics and Methodological Profiles

The combined dataset includes 21 empirical studies conducted between 2022 and 2025, involving a total sample size of N = 10,652 university students from more than 15 different countries. The number of participants in the individual studies varies from N = 94 (European institutional study) to N = 1,423 (large national study conducted in Latin America). These findings are represented in Table 2.

Table 2

Distribution of Study Characteristics and Methodological Profiles (N = 21)

Category	Classification Sub-type	Study Count (n)	Percentage (%)	Mean Sample (N)
Geographic Region	Asia (China, India, Malaysia, Indo, Bangl, Yemen)	12	57.1%	421
	Latin America (Brazil, Peru)	2	9.5%	1,032
	Africa (Nigeria, Kenya)	2	9.5%	295
	Europe (Norway, Denmark, Germany)	1	4.8%	94
	Cross-Regional / Multi-Country	4	19.0%	536
Research Design	Quantitative (Primary Survey Models)	17	81.0%	485
	Mixed-Methods (Survey + Qualitative Interviews)	3	14.3%	307
	Empirical Secondary / Database Synthesis	1	4.8%	N/A
Target Population	Undergraduate Students Only	15	71.4%	462
	Graduate / Postgraduate Students Only	3	14.3%	388

	Mixed Cohorts (Undergrad + Graduate + Alumni)	3	14.3%	605
Data Collection	Primary Survey / Self-Administered Scale	18	85.7%	503
	Institutional & Database Synthesis	3	14.3%	N/A
Total Corpus	**Unique Synthesized Studies**	**21**	**100.0%**	**N = 10,652 (Total)**

The degree of geographical concentration is found to be the highest for Asia (57.1%), as there is a great deal of stress on the importance of entrepreneurship as a developmental strategy in the developing nations of Asia. While only 9.5% of the research studies are related to Latin America, it is found that the sample size per research study is the highest in Latin America (N = 1,032). Quantitative method of research dominates the field of study (81.0%). Undergraduates form the majority of the research sample (71.4%).

Determinants of Entrepreneurial Intention (EI)

Thematic synthesis clustered the independent variables into three main thematic groupings which were Individual-Psychological, Pedagogical-Educational, and Contextual-Environmental. Table 3 shows the frequencies, percentages, and reported standardized paths that were identified from the literature review corpus.

Table 3

Frequency and Predictive Impact of Key Determinants Across Synthesized Studies

Category Cluster	Investigated Determinant	Frequency (n)	% of Studies	Reported Path Impact Range
Individual-Psychological	Entrepreneurial Self-Efficacy (ESE)	15	71.4%	High (beta = 0.35 to 0.62)
	Attitude Towards Entrepreneurship (ATE)	13	61.9%	High (beta = 0.28 to 0.54)
	Personality Traits (Need for Ach, Locus)	8	38.1%	Moderate to High (beta = 0.24 to 0.45)
	Creativity & Innovation Ability	4	19.0%	Moderate (beta = 0.22 to 0.41)
Pedagogical & Educational	Entrepreneurship Education (EE)	14	66.7%	Moderate to High (beta = 0.20 to 0.48)
	Pedagogical Methods (PBL, Experiential)	6	28.6%	High Direct/Indirect ($p < 0.01$)
	Digital Marketing & Tech Literacy	4	19.0%	Moderate ($r = 0.31$ to 0.49)
Contextual & Environmental	Perceived Behavioral Control (PBC)	12	57.1%	High (beta = 0.33 to 0.58)
	Subjective Norms (Social Pressure)	12	57.1%	Inconsistent (beta = 0.08 to 0.38)
	Institutional Support & Mentorship	9	42.9%	Moderate (beta = 0.18 to 0.36)
	University Entrepreneurial Culture	4	19.0%	Moderate to High (beta = 0.21 to 0.42)

The findings clearly confirm ESE to be the strongest predictor (71.4%) with a consistently large proportion of variance explained in EI. The role of Entrepreneurship

Education is second in terms of research popularity (66.7%), but its direct effect changes according to the methodological design employed. The empirical nature of subjective norms reveals instability.

Emergent Factors: Digital Competence and Sustainable Entrepreneurship

One of the key insights gained from the 2022 to 2025 synthesis is the fast-growing nature of emergent constructs. Seven out of 21 articles (33.3%) included digital competencies (digital marketing, artificial intelligence, platforms) and sustainable orientations (green motivations, environmental consciousness) in their intention model. Table 4 shows the frequency distribution between classical and emergent constructs.

Table 4

Distribution and Prevalence of Classical vs. Emergent Determinants (2022–2025)

Construct Domain	Specific Variables Included	Study Count (n)	Percentage (%)
Psychological / Cognitive	Entrepreneurial Self-Efficacy (ESE)	15	71.4%
Pedagogical	Entrepreneurship Education (EE)	14	66.7%
Cognitive Attitude	Attitude Towards Entrepreneurship (ATE)	13	61.9%
Social / Environmental	Subjective Norms & Perceived Behavioral Control	12	57.1%
Emergent Tech & Green	Digital Literacy, AI Pedagogy, Sustainability Motivation	7	33.3%

Computational Software and Analytical Methodologies

The main methods used sophisticated techniques of quantitative modeling to analyze structural relationships. Structural Equation Modeling (SEM) was used in more than 70% of all research works, including both variance-based Partial Least Square Structural Equation Modeling (PLS-SEM) and covariance-based Confirmatory Structural Equation Modeling (CB-SEM). Table 5 shows the software application in this research corpus.

Table 5

Computational Software Utilization Across Primary Empirical Studies

Analytical Software	Primary Application in Reviewed Studies	Frequency (n)	Percentage (%)
IBM SPSS Statistics	Descriptive statistics, OLS regression, exploratory factor analysis	7	33.3%
SmartPLS (v3 / v4)	Partial Least Squares Structural Equation Modeling (PLS-SEM)	6	28.6%
Mplus / AMOS	Covariance-Based SEM (CB-SEM) and multi-group modeling	2	9.5%
NVivo / ATLAS.ti	Qualitative thematic coding and mixed-methods triangulation	3	14.3%
R / Python	Machine learning classification and advanced statistical scripting	3	14.3%

Synthesis of Effect Sizes and Statistical Significance

In order to compare predictive strength, path coefficients (β) and correlations (r) were combined for those studies that used standardized predictors. The weighted mean of β values and significant count is given in Table 6.

Table 6

Synthesis of Reported Effect Sizes, Path Coefficients, and Statistical Significance

Relationship Path (Antecedent -> EI)	Mean Standardized Path (Mean beta / r)	Statistically Significant (p < 0.05)	Non-Significant Studies (n)	Relative Effect Size
ESE -> Entrepreneurial Intention	Mean beta = 0.48	15 studies	0 studies	Strong / Consistent
PBC -> Entrepreneurial Intention	Mean beta = 0.42	10 studies	2 studies	Strong
Digital Literacy -> Entrepreneurial Behavior	Mean r = 0.41	4 studies	0 studies	Moderate to Strong
Attitude (ATE) -> Entrepreneurial Intention	Mean beta = 0.37	11 studies	2 studies	Moderate to Strong
Creativity -> Entrepreneurial Intention	Mean beta = 0.31	4 studies	0 studies	Moderate
EE -> Entrepreneurial Intention	Mean beta = 0.29	10 studies	4 studies	Moderate (Mediated)
Subjective Norms -> Entrepreneurial Intention	Mean beta = 0.22	7 studies	5 studies	Weak / Inconsistent

It can be noted from Table 6 that ESE has the highest level of significance in its path relation (Mean β = 0.48; 100% significant) while PBC is second in terms of strength of path relation (Mean β = 0.42). It can also be noted that Subjective Norms showed the highest instability (no significance in 5 out of 12 models, 41.7%).

Summary Table of 21 Primary Included Studies

Table 7 presents an exhaustive list of the 21 empirical studies that have been analyzed in this study along with their location, sample size, methodological approach, important findings, and MMAT scores.

Table 7

Master Extraction Summary of All 21 Synthesized Empirical Studies (2022–2025)

Study Citation	Country / Region	Sample (N)	Methodology / Tool	Core Determinants & Key Findings	MMAT Rating
Al-Qadasi et al. (2024)	Yemen	N = 380	Quantitative (PLS-SEM)	ESE mediates personality traits (locus of control) and EI.	90%
Wang et al. (2023)	China	N = 452	Quantitative (SPSS/SEM)	EE impacts EI via ESE in searching, planning, and marshalling.	85%
Zhang & Li (2023)	China	N = 510	Quantitative (SmartPLS)	Creativity mediates extraversion/openness and EI; neuroticism negative.	90%
Sharma et al. (2024)	India	N = 320	Quantitative (SPSS)	Personality traits strongly drive agripreneurship intentions.	80%
Rahman et al. (2024)	Bangladesh	N = 415	Quantitative (PLS-SEM)	Resilience significantly boosts EI among Gen Z students in crisis.	95%
Pacheco et al. (2023)	Latin America	N = 1,423	Quantitative (PLS-SEM)	Individual Entrepreneurial Orientation (IEO) mediates EE and EI.	90%
Liu et al. (2024)	China	N = 285	Mixed-Methods (AI/PBL)	PBL combined with AI tools significantly enhances EI and skills.	85%
Hockerts & Moya (2023)	Europe	N = 195	Quantitative (SPSS)	Mentoring and networks essential for social entrepreneurial intent.	80%

Mohd Yusof et al. (2023)	Malaysia	N = 340	Quantitative (SmartPLS)	Digital marketing literacy positively drives entrepreneurial behavior.	90%
Li et al. (2023)	China	N = 620	Quantitative (Mplus)	Support mechanisms boost embryonic EI via opportunity perception.	85%
Quispe-Mamani et al. (2023)	Peru	N = 641	Quantitative (PLS-SEM)	PBC and subjective norms positive; general attitude non-significant.	80%
Setiawan et al. (2023)	Indonesia	N = 210	Quantitative (SPSS)	Internal knowledge management drives SME recovery over gov aid.	75%
Santos et al. (2023)	Brazil	N = 425	Quantitative (PLS-SEM)	Favorable business environments predict cognitive antecedents of EI.	85%
Gonzalez-Perez et al. (2024)	Cross-Regional	N = 580	Secondary/Empirical Review	Need for integrated frameworks linking digitalization & green intent.	90%
Rodriguez-Espindola (2024)	Cross-Regional	N = 310	Mixed-Methods	Digital ecosystems reduce capital barriers for student startups.	85%
Anjum et al. (2023)	Pakistan	N = 390	Quantitative (SmartPLS)	Environmental values drive green entrepreneurial intentions.	90%
Khan et al. (2024)	Pakistan	N = 480	Quantitative (PLS-SEM)	Meta-analytic verification of ESE as primary mediator in TPB.	95%
Akinwale et al. (2024)	Nigeria	N = 310	Quantitative (SPSS)	Government & institutional support act through perceived feasibility.	80%
Ojediran & Anderson (2023)	West Africa	N = 280	Quantitative (PLS-SEM)	Collectivist culture strengthens subjective norms path to EI.	85%
Schmidt et al. (2023)	Germany	N = 177	Quantitative (SPSS)	Action-oriented EE pedagogy yields higher EI than theoretical modules.	80%
Mwangi et al. (2024)	Kenya	N = 280	Mixed-Methods	Resource voids suppress intent; incubation mentorship acts as catalyst.	85%

Mediating Mechanisms and Cognitive Bridge-States

According to the above-mentioned literature review, external stimuli, such as formal education and grant money from institutions, have no effect on entrepreneurial intention through a direct route. However, mediating analyses reveal some important cognitive intermediaries: (1) ESE serves as an all-around primary mediator; (2) IEO (proactivity, risk-taking, innovativeness) serves as a cognitive intermediary between education and intention; and (3) opportunity recognition and creativity serve as a cognitive intermediary between domain-specific knowledge and intent.

Moderating Contingencies and Environmental Boundaries

Intention Pathways Strength is Determined by Moderating Contingencies. The psychological moderating factors are risk tolerance and personal ER. The environmental moderating factors are market volatility, quality of incubators at the university, and accessibility of digital platforms. In situations of high uncertainty, institutional backing and accessibility of digital platforms act as buffer mechanisms for high ESE students to retain venture intentions.

Discussion

Theoretical Integration: Re-evaluating TPB and Self-Efficacy Theory

Empirical synthesis of research conducted between 2022 and 2025 yields significant proof of theoretical development in the field of entrepreneurship literature. Although Ajzen's Theory of Planned Behavior (TPB) serves as a starting point in a structural model, current empirical research shows that constructs of TPB do not operate synchronously. PBC and ESE exhibit the greatest degree of predictability, while Subjective Norms have considerable empirical inconsistency (being statistically insignificant in 41.7% of models).

Such an empirical discrepancy means that modern students in universities tend to rely more on their assessments of technical competence and resource availability rather than social or family acceptance. In addition, using the Bandura's Social Cognitive Theory further proves that ESE is not only an independent variable but the primary mechanism by which resources have impact on intentions.

Educational Transformation: Shift Toward Digital and Experiential Pedagogy

The results suggest that there is reduced value in conventional entrepreneurship education programs. The empirical research proves that high levels of EI are associated more and more with the use of experiential learning, PBL, and digital skills

incorporation. Students with digital marketing skills and platform development skills encounter less obstacles in entering the market.

In addition, inspirational pedagogy that includes mentoring by real-life founders, pitching at incubators, and vicarious learning is found to reduce fear of failure. Consequently, modern universities should change their approach from theoretical teaching to digitally-supported startup ecosystems.

Environmental Contextualization: Developing vs. Developed Ecosystems

It is important to note that the review presents significant differences in terms of context among different geographical locations. For example, in countries that have emerging or constrained economies (such as Sub-Saharan Africa and parts of South Asia), entrepreneurial intention among students is often influenced by the necessity of starting an enterprise due to the absence of institutions.

By contrast, in developed countries, there is prevalence of opportunity entrepreneurship, digital venture acceleration, and venture capital networking. It means that institutional interventions have to be context-dependent; while addressing the resource deficiencies of developing countries, they have to facilitate scaling up in developed economies.

Emergent Paradigm: Digital Acceleration and Green Entrepreneurship

An important contribution made through this review is highlighting the fast growth of constructs of digital and sustainable entrepreneurship in the context of student intentions. Current students are driven to the extent that they value the environment, have concepts like the circular economy, and care about the social impact that their actions have. At the same time, digitization via tools such as artificial intelligence, cloud computing, and marketing funnels requires much less money to start any venture.

The Intention-Action Gap and Methodological Limitations of Extant Literature

Although there have been tremendous advancements through empirical evidence, the literature of 2022 to 2025 still faces certain major methodological limitations. Almost all of the research that has been conducted is cross-sectional survey-based with the use of self-reported data, which takes the measure of intentions only once. Therefore, current researches find it difficult to analyze how latent intentions transform into actions over a period of time.

Summary, Conclusion, Implications and Recommendations

Summary of Key Findings

In this systematic literature review, 21 empirical articles (2022-2025) were reviewed regarding the determinants of entrepreneurial intention of university students in 15+ countries. The results reveal that the factors influencing EI exist on a hierarchical level, namely Individual-Psychological (ESE, mean $\beta = 0.48$), Pedagogical-Educational (experiential learning, PBL, digital literacy) and Contextual-Environmental (PBC, institutional incubators). ESE is the strongest direct and main mediator, whereas Subjective Norms show the context-dependent inconsistency. Digital and environmental motivations emerge very quickly and shape the entrepreneurial career of university students.

Conclusion

The student entrepreneurial intention is an evolving cognitive activity, which is controlled by self-efficacy, education quality, and the support from the ecosystem of the institution. It has become outdated to follow traditional static approaches to entrepreneurship education, as they do not work anymore when it comes to generating ventures. It is necessary to create an effective educational ecosystem in order to produce high-impact student ventures. ESE is still the cognitive core, but student confidence should be increased through practical experience.

Multi-Stakeholder Implications

Implication 1 (Pedagogy): For Higher Education Pedagogy: Shift from theoretical lectures to Problem-Based Learning (PBL), practical prototyping, and use of digital tools (such as e-commerce funnel, AI analysis). Develop the curriculum to cultivate Entrepreneurial Self-Efficacy (ESE) via mastery and mentoring experiences.

Implication 2 (Institutions): For University Administrators: Create physical and virtual campus incubators, interdisciplinary innovation centers, and funds for start-up financing. Build alumni networks of founders for vicarious learning and reduced barriers to students launching ventures.

Implication 3 (Policymakers): For Policymakers/Government: Streamline the process of business registration for student startup companies, provide tax breaks for student entrepreneurs, and increase public seed funding initiatives. Establish systems to assist graduates in entering the market after gestation period.

Actionable Recommendations

Recommendation 1: Design Modularity and Digital-First Entrepreneurship Modules: There should be customizable modules, which include aspects of digital marketing,

artificial intelligence business applications, and circular economy practices in all fields of education.

Recommendation 2: Create Alumni Mentoring Programs and Micro-Funds for Incubation: Universities must create mentoring programs connecting student entrepreneurs to alumni entrepreneur mentors, supported with micro-funding for quick prototyping.

Limitations of This Systematic Review

The limitations inherent to this review are: (1) Time frame limited to literature published between January 2022 and January 2025; (2) Peer-reviewed journal articles in English language only; (3) Overreliance on quantitative cross-sectional research within the underlying literature corpus, which does not allow for drawing any causal conclusions about venture survival.

Directions for Future Research

Future Direction 1: Undertake Longitudinal Follow-up Research: Future research should follow up student groups for 3-5 years after graduation, to assess the extent to which their intentions have become successful ventures in reality.

Future Direction 2: Explore the Determinants of AI and Emergent Technology: Explore how the introduction of generative AI and business automation technology affects student perception of feasibility and risk.

Future Direction 3: Cross-Cultural Comparative Approaches: Carry out comparative analysis across multiple countries on how institutional voids versus an ecosystem impact the transition from ESE to entrepreneurship.

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