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The Mediating Effect of PAE, Subjective Norms, and PBC on the Impact of Diverse Learning Environments on Students Entrepreneurial Intentions

Benediktus Rolando*, Herry Mulyono

Department of Management, Faculty of Business and Management, Universitas Dinamika Bangsa, Jambi, Indonesia

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***Corresponding Author**

Email address:
benediktus@unama.ac.id

ABSTRACT

This study explores the influence of diverse learning environments on the entrepreneurial intentions of undergraduate students in Tangerang, Indonesia—a region where entrepreneurial activity among students remains below national expectations. Drawing on the Theory of Planned Behavior (TPB), we examine how personal attitude, subjective norms, and perceived behavioral control mediate this relationship. A total of 312 students from six universities were surveyed using a purposive sampling method. Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that while diverse learning environments significantly enhance students' attitudes (β=0.862, p<0.001) and perceived behavioral control (β=0.872, p<0.001), they paradoxically reduce entrepreneurial intentions (β=-0.311, p<0.05). Subjective norms showed no significant effect (p=0.156), reflecting cultural nuances in collectivist societies where institutional and structural factors may overshadow social influence. These results suggest that while exposure to diversity fosters creativity and self-efficacy, it may also introduce decision complexity and risk awareness that discourage entrepreneurial action. The study extends TPB by contextualizing its limitations in non-Western settings and offers practical recommendations. These include implementing structured mentorship, industry-specific entrepreneurial curricula, and institutional support systems to help students translate diverse insights into actionable ventures. Educational institutions must balance the benefits of exposure to diverse perspectives with scaffolding mechanisms that mitigate cognitive overload and cultural dissonance. This research contributes to refining entrepreneurship education strategies in emerging economies.

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1. INTRODUCTION

Entrepreneurship has emerged to be one of the engines of the current global economy and an important source of job creation, innovation and economic development (Luz, 2020). Indonesia As an entrepreneurship should have become something that has to be promoted and developed for development and national (Mulyono & Rolando, 2024). Academic institutions, particularly universities, are instrumental in doing so by fostering entrepreneurship between students. Nevertheless, traditional learning approaches cannot generally provide name students with the skills that they will have to face to their life real business situations (Rolando et al., 2024). In response, several authors have begun to suggest that diverse learning environments which encourage interdisciplinary cooperation and cultural exchange, and learning by doing, offer more effective ways of nurturing entrepreneurial intentions (Haddad et al., 2021; Hietanen, 2015a; Rahimi & Listen, 2023).

Indonesia wants to be a developed nation by 2045 and a diverse ecosystem of entrepreneurs is part of how it aims to do so. However, with all the government programs and incentives and entrepreneurial training, here we are still not exciting students about starting a business. This situation is the result of various factors (Andayani et al., 2017; Bhaskara & Inggarwati, 2023; Maryani & Supardi, 2023; Tunjungsari et al., 2021). In terms of structure, the business ecosystem is characterized by challenges, ranging from complicated regulation for start-ups, difficulty in gaining access to early capital, and loose protection of intellectual property (Purnomo 2024). Relation of culture, many families, especially from the middle class, may still prefer secure desk jobs in government or established companies than the uncertainties of entrepreneurship (Sahban et al., 2014). There is also a disconnection between entrepreneurial education and hands-on training. Business plan competitions are where many focus but are without mentors, networking, or exposure to actual entrepreneurial experiences (Ressin, 2024; Sorokin et al., 2024).

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These structural and cultural barriers are compounded by traditional learning contexts which fail to provide pedagogic variety, industry collaboration and cross-sectoral study—each of which are necessary for the development of entrepreneurial mindsets (Foster et al., 2021). Thus, even in areas with strong economic prospects, many students are kept at a distance from entrepreneurial activity.

Referring to the Ministry of Cooperatives and SMEs, the entrepreneurship ratio in Indonesia reaches 3.47%, still below the benchmark of minimum 4% for developed countries (Tunjungsari et al., 2021). Most worrying, university graduates account for only 5.9% of the national entrepreneurs, and only 3.3% of the total current university students are engaging in entrepreneurial activities (Susilaningsih et al., 2023). This is far less than seen in its regional neighbours including Malaysia (8.7%) and Singapore (12.3%) (Balder et al., 2020; Kamaruddin et al., 2017; Nasreen et al., 2024). Younger generations contribute greatly to the rising entrepreneurial landscape in Indonesia. Students are future job creators and they too can help to decrease the levels of unemployment and lead to inclusive economic growth (Love et al., 2024). As a result, promoting students to be entrepreneurs using more successful educational methods is a national need.

This research is based in Tangerang, an urbanizing area with modern development and is densely populated of universities. Even though its economic potential is strong and there are a lot of micro, small and medium enterprises (MSMEs), but in Tangerang, the student entrepreneurship rate is lower than the national student entrepreneurship rate (Rolando & Mulyono, 2024a; Setiawan et al., 2024). This contradiction is at the core of the paradox in which a business-friendly setting exists alongside low entrepreneurial involvement and this paradox indeed prompts critical reflections about the efficacy of current pedagogies. We intend to investigate the effect of various learning process on entrepreneurial intention of university students in Tangerang. The mediating effects of personal attitude, subjective norms, and perceived behavioral control are investigated. Understanding these dynamics will provide an understanding of how educational environments influence the students' preparedness in engaging in entrepreneurship (Efrianto &Tresnawaty, 2021).

Several theoretical frameworks are used to underpin our research. First is the Theory of Planned Behavior (TPB) developed by Ajzen (1991), which posits that behaviour is determin ed by intention, and intention is affected by personal attitude, social norms and perceived control over behaviour. In an entrepreneurial setting, this suggests that students with a greater belief in the utility of entrepreneurship, social support, and self-confidence are more likely to make subsequent decisions to engage in business. Second, the social cognitive theory of Bandura's Social Cognitive Theory (1986) emphasizes the role of role models and social interaction in learning. When used in the context of entrepreneurship, this theory of learning implies that the students develop their entrepreneurial capability via observational learning, that is, by observing and interacting with peers, mentors and practitioners from a variety of backgrounds (Kozhanova, 2020; Udekwe & Iwu, 2024). These experiences build self-efficacy and broaden students' mental models of entrepreneurship (Gilson & Lee, 2023). Third, Hofstede's Cultural Dimensions Theory helps explain how national culture influences entrepreneurial decisions. For instance, Indonesia scores high on power distance and uncertainty avoidance, but low on individualism—factors that may reduce risk tolerance and independent decision-making in students. Diverse learning environments, by exposing students to multicultural viewpoints and collaborative work, may reduce uncertainty and foster more entrepreneurial behavior despite collectivist tendencies (Hietanen, 2015b; Horverak, 2023; Turk & Berman, 2024). Finally, the Entrepreneurial Intentions Model (EIM) by Krueger & Carsrud (1993) complements TPB by incorporating factors like entrepreneurial self-efficacy, perceived desirability, and feasibility. This model is particularly advantageous when it comes to the idiosyncratic psychological and environmental factors determining undergraduates' entrepreneurial intentions. In our case, EIM enables a richer insight into how learning diversity leads to motivation to venture to business (Hartanto et al., 2024; Patonah et al., 2018).

This study contributes to the literature in a number of ways. First, it contributes to the field of entrepreneurship education research through the application of TPB and EIM within a collectivist, emerging market context—providing ethnically specific findings. Second, it emphasizes the dialectic mechanism of education diversity, which can stimulate creativity as well as self-efficacy, as well as decision-making fatigue or uncertainty that suppress action. Third, it offers insights for educators and policymakers regarding how to achieve a synthesis between broad exposure to learning and the provision of structured supports that would help turn knowledge into action. Strategic recommendations are proposed to fill the identified gaps of this study. First, it is critical to design holistic entrepreneurship program curriculums that not only provide students with various points of view but also teach students specific skills necessary to identify opportunities, and make

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timely and sound decision for acting on those opportunities. This where-real-meaning integrates that diversity is not an element of confusion but a spurt of action. Second, institutions should create mentorship programmes that pair students with entrepreneurs who grew up in similar cultural and socio-economic environments. They can possibly act as role models that can counteract the negative influence of subjective norms, by showing realistic stories of successful and resilient people. Third, the scope of experiential learning platforms, such as business incubators, internships and project-based courses, has to be widened. These efforts aid students in testing theory in practice and also in the shift from the classroom to the entrepreneurial field. Finally, the university organizations are required to create institutional arrangements that connect these learning diversity advantages to business creation. This involves improving access to seed funding, developing industry-academia ties, and formulating well-defined progress paths for ventures.

This study explores how diverse learning environments shape the entrepreneurial intentions of Indonesian university students, focusing on the mediating roles of attitudes, subjective norms, and perceived behavioral control. Through integrating several theoretical perspectives and providing pragmatic insights, the study potentially informs more effective and cultural sensitive entrepreneurship education approaches taking into account Indonesia's specific educational and social context.

2. METHOD

Conceptual Framework

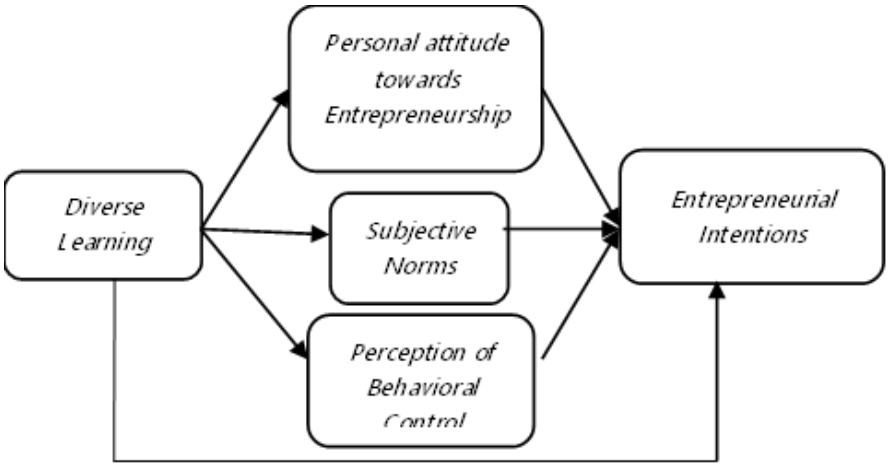

Figure 1. The Research Workflow Diagram

This study employs a quantitative research approach, utilizing a survey method to collect data from college students in the Tangerang area. A survey methodology was selected as it enables efficient collection of standardized data from a large sample, which is essential for testing the proposed relationships within the Theory of Planned Behavior framework. This approach allows for statistical analysis of associations between diverse learning environments and entrepreneurial intentions, providing generalizable findings that can inform educational policy. Additionally, surveys are particularly appropriate for capturing latent constructs such as attitudes and perceived behavioral control, which are central to this study's theoretical framework.

The survey instrument will be designed based on constructs derived from three complementary theoretical frameworks. From the Theory of Planned Behavior, we will utilize scales from the existing literature that measure attitudes towards entrepreneurship (6 items), subjective norms (5 items), perceived behavioral control (7 items) and entrepreneurial intentions (4 items). The Social Cognitive Theory will provide the theoretical basis for items that were developed to measure students' exposure to role models for entrepreneurial behavior (4 items) and self-efficacy in various entrepreneurial tasks (8 items). Our measurement of perceived desirability and feasibility of entrepreneurship (6 items) will be framed based on the Entrepreneurial Intentions Model. All constructs will be measured using 7-point summary rating scales with modifications made to ensure compatibility with the higher education-in-Indonesian learning environment context.

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The present research explores the determinants of people's intentions to venture, such as varied learning environments, personal attitudes, subjective norms, and perceived behavioral control. Through identifying the connections between these variables and entrepreneurial intentions, the study seeks to gain an understanding of the factors that facilitate leading individuals to engage in entrepreneurial behaviours.

Participants

The target population of this study consists of college students located in the Tangerang area, with a particular focus on those enrolled in entrepreneurship-related programs or actively involved in entrepreneurial activities. For the purposes of this research, *entrepreneurship-related programs* are defined as degree programs that offer at least two dedicated entrepreneurship courses or provide entrepreneurship as a major or minor specialization. Students will be classified as *actively engaged in entrepreneurial activities* if they have participated in university business incubators, joined startup competitions, or are currently running student-led business ventures.

Non-probability sampling method (purposive sampling) will be applied to select the participants the participants with relevant characteristics corresponding to the purpose of the study. This approach is considered acceptable for allowing us to target students who have had sufficient exposure to entrepreneurship learning environments and thus can offer more informed and contextually relevant answers with regards to their entrepreneurial intentions. Purposive sampling allows selection bias, which may be said to reduce generalizability to the wider student population, but which is justified as the study is less about finding levels of, for example, entrepreneurial intent among all students than about understanding how the plurality of educational influences upon it.

To address possible selection bias, a number of approaches will be used. First, a stratified quota sampling will be conducted to achieve gender equality, balance of socioeconomic status, and the proportional distribution of the academic year. Second, the participants will be drawn from six institutions of higher education in Tangerang namely both public and private universities as well as vocational colleges to represent different educational systems and student backgrounds. Third, students from diverse majors – business, engineering, computer science, creative arts, social science – who meet the selected entrepreneurship exposure requirement will be enrolled. Fourth, if the number of potential participants eligible for inclusion exceeds the quota in a stratum, participants will be selected randomly for the final analysis. We will also perform an analysis of the non-response bias, by comparing early responding women with women who respond late, with respect to relevant demographic parameters. These measures aim to enhance the representativeness of the sample while maintaining the study's purposive focus on students with substantial entrepreneurial exposure.

Hypothesis

This study utilized associative or relationship-based hypotheses. In line with Sugiyono (2019), an associative hypothesis provides a provisional solution to an associative problem, examining the connections between multiple variables. Accordingly, the hypotheses in this research were formulated based on this conceptual framework, as well as the established theoretical foundations and the research problem statement.

H_1: Personal attitude towards entrepreneurship has a positive effect on Entrepreneurial Intentions.
H_2: Subjective Norms have no significant effect on Entrepreneurial Intentions.
H_3: Perception of Behavioral Control has no significant effect on Entrepreneurial Intentions.
H_4: Diverse learning environment has a positive effect on Entrepreneurial Intentions.
H_5: Diverse learning environment Entrepreneurship has a positive effect on Personal attitude towards entrepreneurship.
H_6: Diverse learning environment Entrepreneurship has a positive effect on Subjective Norms.
H_7: Diverse learning environment Entrepreneurship has a positive effect on Perception of Behavioral Control.

Data Collection

Table 1, Operational Definitions of the Research Variables, outlines the definitions of each variable, along with its dimensions, measurement scale, and the measuring instrument used. This structured approach facilitates the translation of theoretical constructs into measurable variables, ensuring the accuracy and reliability of the study's findings.

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Table 1. Operational Definitions of the Research Variables

Variable	Definition	Indicators	Scale	Source
Entrepreneurial intention (EI)	The deliberate state of mind and conviction that directs an individual's attention, experience, and behavior toward planning to launch a new venture. It encompasses the intention to recognize and act upon business opportunities, willingness to accept calculated risks, commitment to innovation and value creation, and the resolve to organize necessary resources to establish a new business venture with economic potential, rather than pursuing traditional employment options.	-Attitude -Perceived desirability -Self-efficacy -Risk tolerance -Motivation -Social capital -Proactiveness	1-5	(Pratana & Marguna ni, 2019)
Personal Attitude toward Entrepreneurship (PAE)	A student's positive or negative evaluation of entrepreneurship as a career path, encompassing both affective dimensions (enjoyment, satisfaction, enthusiasm) and instrumental dimensions (perceived benefits and drawbacks). These dimensions manifest through attitudes toward entrepreneurial autonomy (desire for independence in decision-making), ambition (aspiration for growth and achievement), self-realization (fulfillment of personal potential), and economic opportunity assessment (perception of financial prospects and rewards relative to employment alternatives).	- Autonomy - Achievement - Independence - Confidence - Ambition	1-5	(Amofah & Saladrigu es, 2022)
Percived Behavioral Control (PBC)	An individual's belief in their ability to overcome entrepreneurial challenges, including both their skills and control over essential resources like finances, networks, and support systems.	- Self-efficacy -Control beliefs -Resource availability -Problem-solving skills -Decision making ability	1-5	(Liñán & Fayolle, 2015)
Subjective Norms (SN)	The influence of others' opinions, like family, friends, and mentors, on entrepreneurial intentions. In the Indonesian context, these norms are particularly shaped by collectivist cultural values, family expectations regarding career stability, community perceptions of entrepreneurship as a legitimate profession, and societal attitudes toward risk-taking, initiative, and business ownership relative to traditional employment paths.	- Social pressure - Family support - Peer influence -Cultural expectations - Role models	1-5	(Obscho nka & Silbereis en, 2012)
Diversed Learning Environment (DLE)	An educational setting that incorporates a range of learning approaches, perspectives, and experiences to promote inclusive interaction and collaboration, thereby enriching the entrepreneurial learning experience. Diversity in this study is measured across multiple dimensions: pedagogical diversity (variety of teaching methods including case studies, simulations, and project-based learning), disciplinary diversity (integration of knowledge and perspectives from different academic fields), experiential diversity (incorporation of real-world entrepreneurial activities and industry exposure), and collaborative diversity (interaction with peers, mentors, and practitioners from varied backgrounds). This multidimensional construct reflects the richness and complexity of entrepreneurial education environments across the sampled institutions.	- Multidisciplinary - Collaborative - Cultural - Experiential - Critical	1-5	(Haddad et al., 2021)

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Data Analysis

This study employs a variance-based Structural Equation Modeling (SEM) approach using Partial Least Squares (PLS-SEM) version 4.0 as the primary analytical method. PLS-SEM was chosen over the more traditional covariance-based SEM (CB-SEM) due to several methodological advantages relevant to the objectives of this research. First, PLS-SEM is highly recommended especially for dealing with complex theoretical model with multiple mediating effect like those associated with the influence of various learning environment on entrepreneurial intentions through constructs of Theory of Planned Behavior (TPB) (Hair et al., 2021). Second, PLS-SEM performs better in handling formative measurement models, which is applicable to our study, particularly for the construct of diverse learning environments that integrates multiple dimensions of educational diversity. Third, this method offers greater statistical power with relatively small sample sizes and is more robust against violations of normality—an important consideration when analyzing attitudinal and behavioral constructs that are often non-normally distributed (Hair et al., 2021). Furthermore, the exploratory focus of this study – on entrepreneurial learning in the Indonesian higher education context – would sit more naturally within the prediction-oriented framework of PLS-SEM than with the parameter estimation focus of CB-SEM. The main objective of PLS is to maximize the explained variance by searching for predictive relationships between linear combinations of data.

The analysis in this study is conducted in three main stages. First, the outer model analysis (measurement model) assesses the reliability and validity of the measurement instruments by evaluating convergent validity, discriminant validity, composite reliability, Average Variance Extracted (AVE), and Cronbach's Alpha. Convergent validity is confirmed if factor loadings exceed 0.7 and AVE values surpass 0.5. Discriminant validity is determined using the Fornell-Larcker criterion—where the square root of AVE must exceed inter-construct correlations—and the Heterotrait-Monotrait (HTMT) ratio, which must be below 0.85. Composite reliability and Cronbach's Alpha values above 0.7 indicate good internal consistency. Items with loadings between 0.4 and 0.7 are retained if their removal does not improve composite reliability or AVE (Hair et al., 2021). Second, the inner model analysis (structural model) tests the relationships between latent variables using R-squared (R^2) and Q-squared (Q^2) values, path coefficients, and effect size (f^2). R^2 values of 0.75, 0.50, and 0.25 indicate substantial, moderate, and weak explanatory power, respectively. Significance is confirmed through bootstrapping (5,000 resamples), with t-values > 1.96 indicating $p < 0.05$, and effect sizes categorized as small (0.02), moderate (0.15), or large (0.35) (Hair et al., 2021). Third, mediation analysis explores the mediating roles of personal attitude, subjective norms, and perceived behavioral control in the link between diverse learning environments and entrepreneurial intentions. Indirect effects are assessed using bootstrapping, and the Variance Accounted For (VAF) ratio determines mediation type: full (> 0.80), partial (0.20–0.80), or none (< 0.20). Q^2 values from blindfolding must exceed 0, with thresholds of 0.02, 0.15, and 0.35 indicating small, medium, and large predictive relevance (Bougie & Sekaran, 2019). Finally, research hypotheses are tested by examining t-statistics and p-values, where t > 1.96 and $p < 0.05$ indicate significant relationships. Bootstrapping with 5,000 subsamples is used to ensure robust standard errors and confidence intervals, making it well-suited for PLS-SEM due to its distribution-free nature (Hair et al., 2021).

3. RESULTS

Analysis of Measurement Model

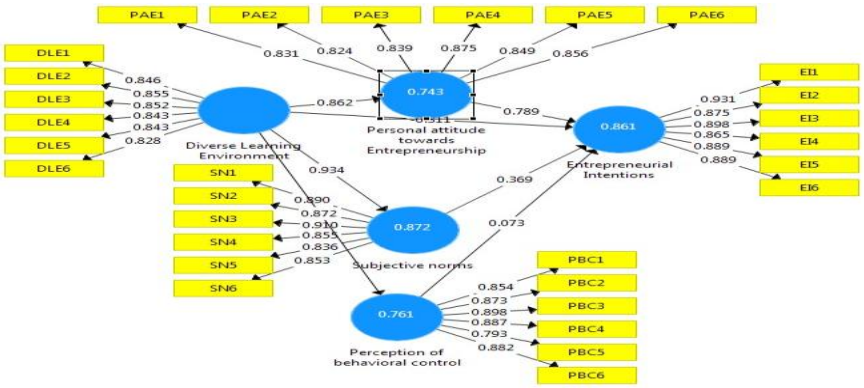

Figure 2. Outer Model Actual Research

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In PLS-SEM, the measurement model (referred also to as the outer model) is tested based on two main steps, validation and reliability testing. These processes are necessary to establish whether the variables and items employed in the study are valid and reliable measures of the constructs investigated. In this study, the measurement model was tested with SmartPLS 4 software to test the construct validity and the internal consistency of the measurement instruments employed in the current study.

Validity Test

The evaluation of the measurement model was conducted in accordance with the criteria established by Bougie and Sekaran (2019), which state that an indicator is considered valid if it demonstrates an outer loading (standardized loading estimate) greater than 0.70 and the Average Variance Extracted (AVE) exceeds 0.50. Based on the confirmatory factor analysis, the results showed that all indicators exhibited standardized loadings ranging from 0.770 to 0.931, which not only met but significantly surpassed the minimum recommended threshold of 0.50 (Hair et al., 2021). These high factor loadings provide strong evidence of convergent validity, indicating that the measurement items accurately represent their respective latent constructs.

Notably, the loadings in this study are comparable to, or even higher than those reported in related work on entrepreneurial intentions. For example, average loadings of 0.74 has been reported by Kaur and Chawla (2024), while Haddad et al. (2021) realized loadings from 0.68 to 0.87. High levels in loadings especially for the Entrepreneurial Intentions factor (0.854–0.931) and Perceived Behavioural Control (0.774–0.898) were detected in this research, thereby also supporting the discriminant validty of the model within the five focal constructs. These findings affirm the psychometric robustness of the measurement model and provide a sound empirical basis for evaluating the structural relationships posited in the research framework.

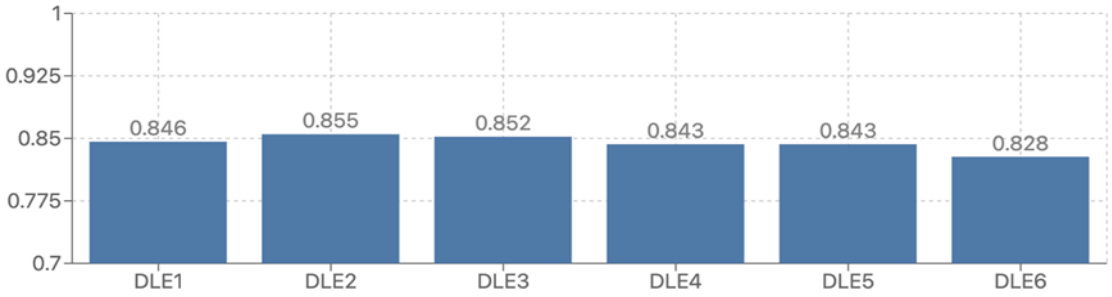

Figure 3. Diverse Learning Environment (DLE) Outer Loading Validity Test Results

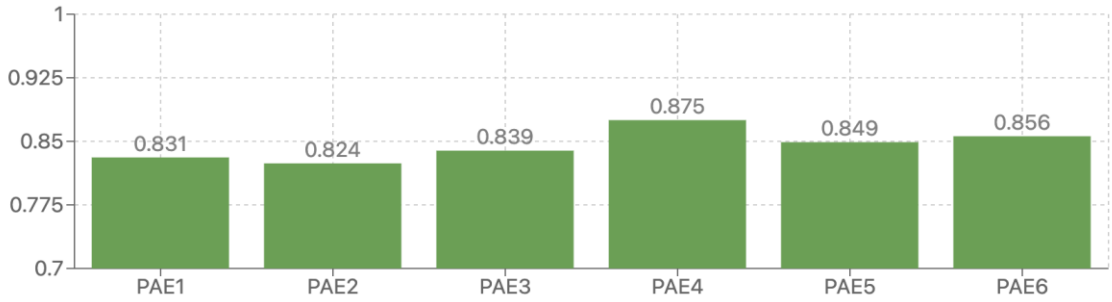

Figure 4. Personal Attitude towards Entrepreneurship (PAE) Outer Loading Validity Test Results

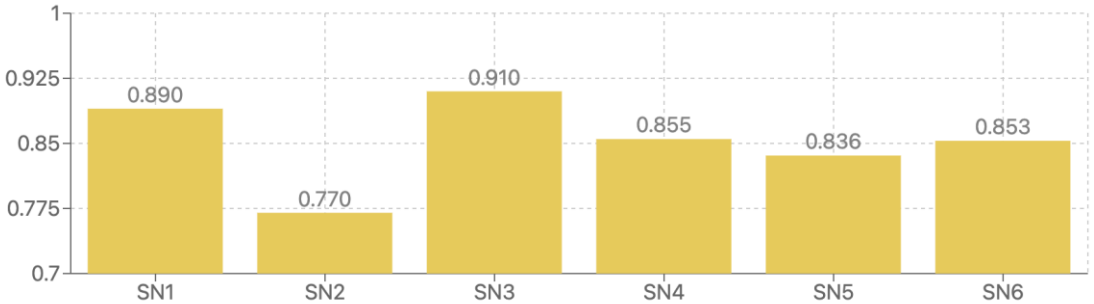

Figure 5. Subjective Norms (SN) Outer Loading Validity Test Results

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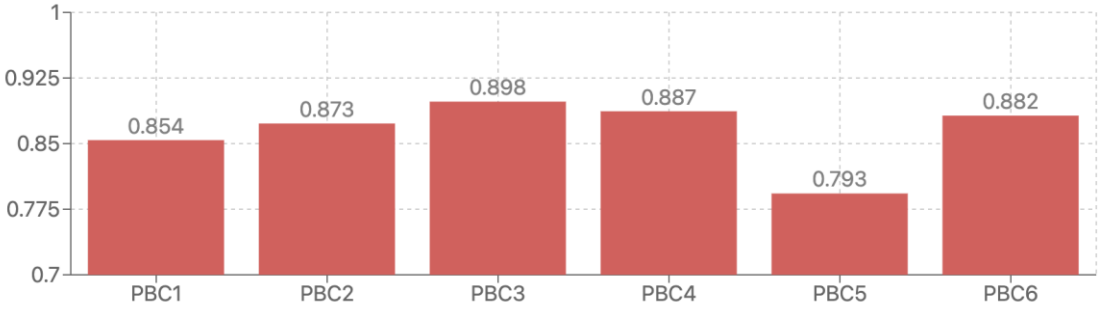

Figure 6. Perception of Behavioral Control (PBC) Outer Loading Validity Test Results

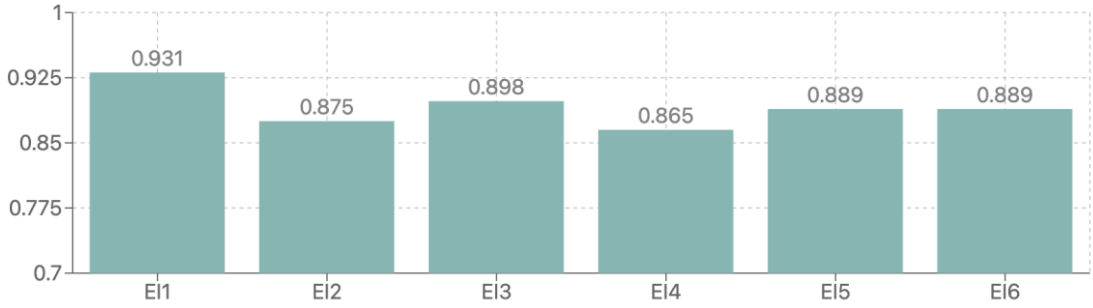

Figure 7. Entrepreneurial Intentions (EI) Outer Loading Validity Test Results

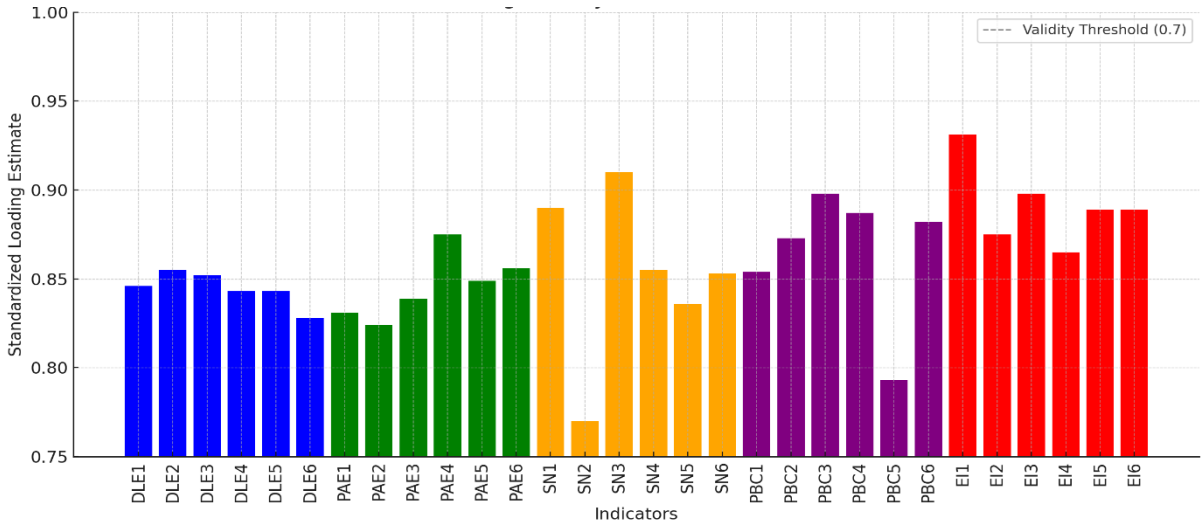

Figure 8. Outer Loading Validity Test Results for Actual Test

Table 2. Average Variance Extracted

Variabel	AVE
Diverse Learning Environment	0,713
Personal attitude towards entrepreneurship	0,715
Subjective Norms	0,728
Perception of Behavioral Control	0,749
Entrepreneurial Intentions	0,795

The results of the reliability test show excellent internal reliability between all constructs, with the following *Cronbach's Alpha* values: 0.919-0.948, far exceeding the traditional 0.7 threshold that indicates satisfactory reliability

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(Hair et al., 2021). These exceed the higher threshold of 0.8 that is generally considered to be illustrative of good reliability in social science research. The Entrepreneurial Intentions, mainly, is at 0.948 as alpha, which means at the evidence of alpha, the internal consistency of its indicators suggests nearperfect. These high reliability coefficients indicate that the measurement items in each construct are highly interconnected and all tapping the same underlying idea. These findings are similar to those observed by Martínez-Gregorio et al. (2023), with alpha between 0.948 on average among similar constructs to over those found in Duong et al. (2022) meta-analysis of the mean reliability of entrepreneurial intention measures was 0.70. The high reliability of our measures offers sound ground for the subsequent structural model examination and for verifying the validity of our findings.

Table 3. Table of Reliability Test Results with Cronbach's Alpha

Variabel	Cronbach's Alpha
Diverse Learning Environment	0,919
Personal attitude towards entrepreneurship	0,920
Subjective Norms	0,925
Perception of Behavioral Control	0,932
Entrepreneurial Intentions	0,948

Structural Model Results in the Actual Research

The structural model—also referred to as the inner model—in PLS-SEM was evaluated using three key indicators: the coefficient of determination (R^2), predictive relevance (Q^2), and path coefficients for hypothesis testing (Hair et al., 2021). These analytical components are essential for assessing the relationships among the latent variables specified in the research framework. The R^2 values measure the model's explanatory power, Q^2 values assess its predictive accuracy, and the path coefficients determine the strength and significance of the hypothesized relationships. Collectively, these measures provide a comprehensive understanding of the capability of the proposed model to reflect the intricate interplay among various learning environments and entrepreneurial intentions among university students.

Actual Test of Coefficient of Determination (R^2)

The results of the coefficient of determination (R^2) test can be seen in the following table 5.

Table 4. Actual Test of Coefficient of Determination (R^2)

Variable	R^2 Results
Entrepreneurial Intentions	0,861
Perception of Behavioral Control	0,761
Personal attitude towards entrepreneurship	0,743
Subjective Norms	0,872

Based on the results presented in the table, it is evident that the variable Entrepreneurial Intentions is explained by the predictors—Diverse Learning Environment, Personal Attitude towards Entrepreneurship, Subjective Norms, and Perceived Behavioral Control—with an R^2 value of 86.1%. The remaining 13.9% of the variance is attributable to other factors not examined in this study. Similarly, Perceived Behavioral Control is explained by the model variables at 76.1%, with the rest influenced by unaccounted external factors. The variable Personal Attitude towards Entrepreneurship is explained by 74.3%, while Subjective Norms show the highest explanatory value at 87.2%, again leaving a small proportion unexplained.

This high R^2 indicates the soundness of the structural model adopted from TPB, showing a strong good fit and extremely high explanatory power. But of course, we've only accounted for some of the variance here. This remaining variance might derive from some environmental factors of our framework which were not included in our study, example local economic conditions in Tangerang, differences in terms of access to entrepreneuri al finance, individual differences in terms of risk aversion and the existence of a family business background—factors that have been pointed out as significant in entrepreneurial intention research (Liñán & Fayolle, 2015).

In addition, because this study focused specifically on college students involved in entrepreneurship,

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there is potential selection bias that could lead to an inflated perception of the model's explanatory power compared to the general student population. Future scholars are also recommended to include more contextual and individual characteristics, and widen the sample to more diversified student groups, in order to contribute to our understanding of the entrepreneurial intentions in different educational environments.

Predictive Relevance (Q^2)

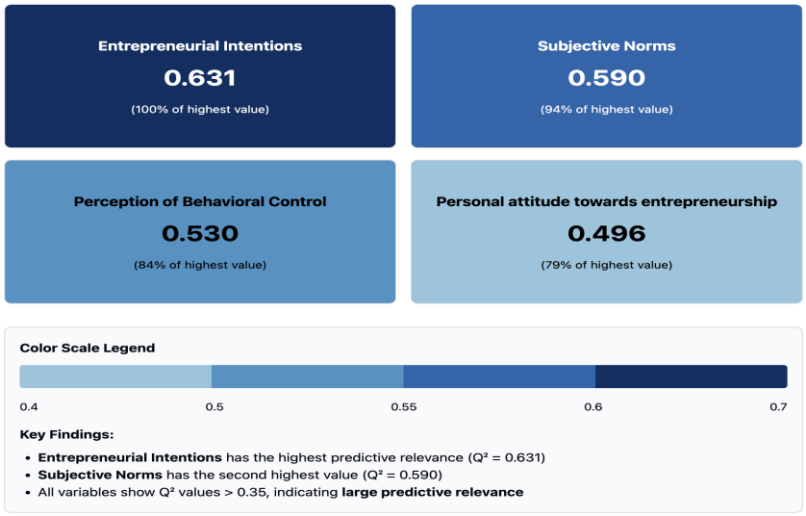

Figure 9. Visual Q^2 Heatmap Comparison

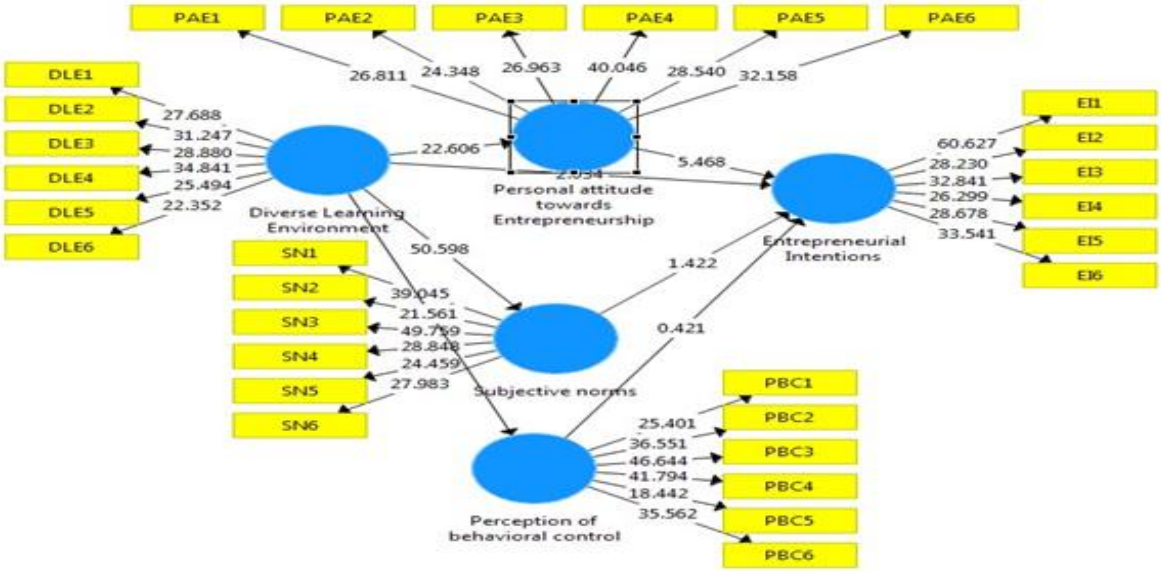

Figure 10. Inner Model Actual Research (Bootsraping)

Table 5. Coefficient of Determination (Q^2) Results

Variable	Q^2 Results
Personal attitude towards entrepreneurship	0,496
Subjective Norms	0,590
Perception of Behavioral Control	0,530
Entrepreneurial Intentions	0,631

Based on Table 6, it is clear that the Q^2 predictive relevance value is greater than 0, indicating that the model has predictive relevance.

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Path Coefficients Test (Hypothesis Testing)

Table 6. Path Coefficients Test (Hypothesis Testing) Results

	Hypothesis	*Path Coefficients*	*T statistics*	*P Values*	Decissions
H1	Personal attitude towards entrepreneurship has a positive effect on Entrepreneurial Intentions	0,789	5,468	0,000	*Supported*
H2	Subjective Norms has no effect on Entrepreneurial Intentions	0,369	1,422	0,156	*Not Supported*
H3	Perception of Behavioral Control has no effect on Entrepreneurial Intentions	0,073	0,421	0,674	*Not Supported*
H4	Diverse learning environment has a positive effect on Entrepreneurial Intentions	-0,311	2,034	0,043	*Supported*
H5	Diverse learning environment Entrepreneurship has a positive effect on Personal attitude towards entrepreneurship	0,862	22,606	0,000	*Supported*
H6	Diverse learning environment Entrepreneurship has a positive effect on Subjective Norms	0,934	50,598	0,000	*Supported*
H7	Diverse learning environment Entrepreneurship has a positive effect on Perception of Behavioral Control	0,872	21,561	0,000	*Supported*

The findings of the path coefficient test in this research is provided in Table 7. In addition to the statistical significance, these results has several practical and theoretical implications: the strong positive influence of attitude on the entrepreneurial intention (*β=0.789, p<0.001*) indicates that students' own perceptions of and evaluations of entrepreneurship still comes in the lead as a motivator for intending to pursue entrepreneurship. In support of this phenomenon, the current observation has recently been replicated by Haddad et al., (2021) and highlights the applied relevance of stimulating positive entrepreneurial attitudes in the formative years through success stories, entrepreneurial role models, and experiential learning curricula in the educational settings. The surprising adverse effect of diversity learning on entrepreneurial intentions (*β=-0.311, p=0.043*) contradicts common beliefs on the advantage of diversity for entrepreneurial performance. This observation indicates that as much as diversity enhances learning, it can also bring diversity and uncertainty that many students may find challenging if not fully integrated and supported. Educational formats should not leave them to their own devices but instead, academic institutions should offer structured platforms in which students are capable of distilling these diverse approaches into entrepreneurial insight.

The non-significant impacts of subjective norm (*p=0.156*) and perceived behavioral control (*p=0.674*) on entrepreneur intention are consistent with other entrepreneurship models developed in the West, but consistent with those studies in a collectivist culture, it plausible that cultural and institutional factors could override the mediation effects of individual perceptions (Obschonka & Silbereisen, 2012). This has implications for policy makers, suggesting that general advertisement campaigns aimed at increasing social approval or self-efficacy to encourage entrepreneurship may be less effective in a society such as Indonesia than focused issues that address cultural barriers to small business, along with tangible resources and opportunities. The rather strong positive effect of diverse learning environment on personal attitudes (*β=0862*), subjective norms (*β=0934*), and perceived behavioral control (*β=0872*) suggests that educational diversity does contribute to the entrepreneurial antecedents even it when does not directly raise intention. In respect to entrepreneurship education literature, this result provides evidence of a more nuanced, mediated relationship between educational interventions and entrepreneurial outcomes than so far theorized by scholars. It underscores the importance of curricula that does more than simply teach students that other people are different, but also teaches them how to overcome the decision paralysis of multiple competing

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perspectives.

4. DISCUSSION

Personal Attitude and Entrepreneurial Intentions

The findings of the data demonstrate that people's attitude toward entrepreneurship has a significant effect on their entrepreneurial intentions (*p-value of 0.000*). This suggests that people who have favourable attitude towards entrepreneurship have a higher propensity to identify opportunities, be risk-taking and be actively engaged in business. These results are consistent with theory of planned behavior (TPB), which implies that attitude will is one of the main predictors of intention togther with perceived behavioral control and subjective norms (Liñán & Fayolle, 2015). The results corroborate prior studies by Haddad et al. (2021) and Liñán and Fayolle (2015), further strengthening the empirical foundation of TPB in the context of entrepreneurial research.

This association can be explained in terms of both cognitive and affective dimensions. To a large extend, on the cognitive plane, positive attitudes toward entrepreneurship are based on rational weighing up the cost benefits –for example, autonomy, financial gain, and personal accomplishment – that are considered to be greater than the costs and risks involved. This rational consideration causes students to regard entrepreneurship as a possible and rational career path (Amer et al., 2022, 2023; Liñán & Fayolle, 2015). Emotionally, one characteristic of positive attitudes is enthusiasm, passion and anticipated gratification which activate intrinsic motivation, above and beyond mere instrumental reasoning (Amofah & Saladrigues, 2022).

While these findings are consistent with Haddad et al. (2021), we show a substantially greater effect size than the $\beta = 0.67$ presented in their paper. This implies, in Tangerang condition, personal attitudes could be a more crucial factor to determine the entrepreneurial intention. One explanation could be the fact that the labour market in Indonesia is in transition, with its traditional work arrangements becoming more precarious. In poverty-stricken areas like those of Baringo North, positive belief is one of the enablers in involvement in entrepreneurship. In addition to its toxic mix of collection culture that abounds in Tangerang, students face an added layer of tension between the desires of the family and community for a steady job and their own will for entrepreneurial calls. Such cultural setting could also magnify the presence of personal attitudes as counterforce to conservative career norms (Afandi et al., 2021; Fitriyah et al., 2024; Rolando & Mulyono, 2024a).

These implications are critical for schools. In particular, there is a need to create interventions that purposefully target student attitudes dynamically via culture-specific tactics. Such interventions might include site visits to successful local entrepreneurs, contact with successful local role models, and applied exercises related to the micro-economically grounded daily problems faced by entrepreneurs in Tangerang, for instance. Whereas, much of the western context may well function in such a way that mere exposure as an entrepreneur is enough our findings point out that a more profound change in attitude covering both rational considerations and emotionally driven commitment is necessary in this context to make the constraction of new occupational career paths successful.

Subjective Norms and Entrepreneurial Intentions

The findings show that subjective norms does not have a significant impact on entrepreneurial intentions (*p-value* = 0.156). Despite subjective norms being an essential dimension of the Theory of Planned Behavior (TPB), this result challenges previous research byLiñán and Fayolle (2015) and Obschonka and Silbereisen (2012), who pointed out the impact of social referents (like family, peers, and mentors) on individuals' entrepreneurship decisions. Because social approval has been such a strong precedent for career choice in Indonesian society in the context of a collectivist culture, this surprising outcome calls for more exploration.

A number of factors of context might explain the lack of effect of subjective norms in this study. First, there is a potential for entrepreneurship to be seen as significantly about individual intention and autonomy in Indonesian youth culture. Students with entrepreneurial tendency are likely to have a predisposition to challenge the dominant paragdigm that places emphasis on job security described as linked to government or corporate sectors (Tunjungsari et al., 2021). Accordingly, such students may be cultivating psychological immunity to social messengers; particularly in the presence of entrepreneurial stories which underscore autonomy and self-reliance.

Second, the functions of family and mentors in shaping entrepreneurial decisions could be shifting—

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especially in urban areas such as Tangerang. Among traditional family practices that are known to discourage risk-taking, our findings may indicate a generational shift such that future decisions made by younger respondents regarding career and occupation is adjudged more by personal nature than the initial support that the family could offer in this period of their professional orientation (Rolando & Mulyono, 2024a). Furthermore, since it is likely that students will have access to various, and sometimes competing, influences such as peers, faculty, incubator mentors, and media role models, students are able to experience novelty in multiple contexts of learning and development in an entrepreneurial environment. This plethora of sources of influence could undermine the saliency of any single normative influence, and hence attenuate the overall predictive ability of subjective norms.

Third, social norms in university setting in which there are institutional and structural constraints that may supersede the influence of social norms on students' entrepreneurial intentions. In Tangerang, students encounter barriers of capital access, strict policies, and the absence of entrepreneurial infrastructure that is likely to be tending to dominate in influencing entrepreneurial feasibility (Pasaribu et al., 2021; Rolando & Mulyono, 2024b). Thus, when college students do perceive social support, they may not value it if they also believe that barriers are insurmountable.

These results indicate that policy interventions in entrepreneurial promotion in similar environment should redefine target focus. Instead of emphasizing the encouragement of social acceptance or approval of the career of entrepreneurship, more efforts should be given to removing institutional obstacles, promoting the resource accessibility and facilitating the institutional support system according to the local situation. Meanwhile, schools may get more bite for their buck if they invest in teachable skills, mentorship, and regulatory knowledge, rather than having dependence on social referents for motivated action.

Perceived Behavioral Control and Entrepreneurial Intentions

There was no significant relationship between perceived behavioual control and entrepreneurial intentions (p-value = 0.674). Another finding, not confirmed in this study, was that according to Theory of Planned Behavior (TPB), students' perceived control is an important predictor of intention to act, that is entrepreneurial intention. This is in contrast to previous results byAffolderbach and Krueger (2017) and Haddad et al. (2021), that reported a positive relationship. This difference might be due to few specific conditions in Tangerang entrepreneurial landscape.

The external factors may overwhelm what students feel their capabilities are (in their opinion of themselves) so much so that self-efficacy may not be able to play a necessary role given the boundaries of regulatory agency they are working under. Indonesia's chal-lenging regulatory environment, including burdensome licensing processes and tax compliance procedures, as well as general bureaucratic inefficiencies, pose formidable barriers that are difficult to overcome through an individual's competencies alone (Tunjungsari et al., 2021). Similarly, in Tangerang, access to startup capital is limited, meaning a lack of developed venture capital and angel networks as Jakarta and Bandung. Therefore, even if the students hold strong entrepreneurial self-efficacy, they might still acknowledge that the financial and institutional factors play a critical role in whether a venture is feasible or not. Second, the lack of a relationship found, might be a consequence of a realism gap in the entrepreneurship education. They not only succeed in raising students' perceived self-efficacy, but they also make students aware of the realities of life as an entrepreneur. This opening of the black box of theoretical predictability of perceptions of control sows it with the potential for a paradoxical effects, where increases in confidence from being exposed to the same types of advertisements are counteracted by greater exposure to external competing forces that cancel out any positive effects of perceived control on intention formation (Rolando & Mulyono, 2024a). This interpretation is supported by Liñán and Fayolle (2015), that a higher level of entrepreneurship education can reduce naive optimism and hence make people more hesitant or even cooler about the startup process. Third, perceived behavioral control would be moderated by cultural differences on the relationship between entrepreneurial intention. In collectivist culture in Indonesia (especially in the city such as Tangerang), students may consider the role of social support (family, network, institution) as more important than self-ability in achieving success or success or the self-ability for instrument goals. In these cultural contexts also collective resource beliefs may be considered more important than self-efficacy which in turn may lessen the effect of perceived control on intentions.

These results indicate that the role of entrepreneurship education and policy intervention needs to be re-evaluated. Rather than concentrating on increasing personal self-confidence, the emphasis should be on

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creating supportive entrepreneurial environments that deal with the systemic barriers of accessibility to finance, regulatory burden and institutional support. Enhancing their external influences may be more fruitful for nurturing entrepreneurial intention than interventions focused exclusively on individual confidence and perceived control.

Negative Impact of Diverse Learning Environment on Entrepreneurial Intentions

Entrepreneurial intentions (*p = 0.043*) is negatively influenced by diversity of learning. Being exposed to new ideas and cultures often fill skill space, but in this case, they seem to dissuade entrepreneurial activities, possibly by making people too diverse. This is consistent with Mueller-Fichepain et al. (2021) who argued that dissimilar networks provide access to resources, but complexity decision-making. his abrupt fall in popularity can be explained by various theoretical perspectives. The phenomenon of choice overload or decision paralysis (a condition in which students' exposed to a variety of arguments, business models, and possible entrepreneurial pathways become unable to make a decision, possibly due to the amount of stimuli per time frame) could be operating here (Mueller-Fichepain et al., 2021). This aligns with (Schwartz, 2004) paradox of choice theory, that having too many options causes anxiety rather than empowerment. In the context of entrepreneurship education, in particular, being exposed to different case studies, conflicting success formulas as well as different cultures in which the enterprise can exist make it harder for students to invest in a specific entrepreneurial journey.

Second, exposure to various learning settings may sensitize students to the complexity and risk of entrepreneurship. Telling why the course does not fail is difficult; we believe that having students look at the same entrepreneurial challenges (funding, operations, regulations, culture) from multiple points of view leads to a more nuanced view of where potential failure points can be found. This risk awareness will result with a '*paralysis by analysis*' issue, where students know better but choose not to be an entrepreneur (Rolando & Mulyono, 2024a). This interpretation is supported by Simon's (1990) bounded rationality, which indicates that when capacity for information processing is exceeded, rational decision-making is replaced by heuristics decision-making or satisficing, that is, making the best selection given extrative limitations in this case fallback to safe career option perhaps.

Third, the sociocultural background of Tangerang may also enhance the effect. In the context of a collectivist culture in transition to entrepreneurial mentality diverse educational inputs can generate identity clashes between traditional values and the new imperative of being entrepreneurs. However, students who are presented with Western-based models of entrepreneurship in conjunction with those of traditional Indonesian business do not have a system of integration to reconcile the dissonance in values that result (Gunawan et al., 2021; Liñán & Fayolle, 2015). This cultural contradiction may explain why diversity increases entrepreneurial attitude and perceived control while decreasing actual entrepreneurial intention: students are inspired by entrepreneurship in principle but encounter cultural barriers to personal embodiment. These results imply that educational institutions should not just promote diversity in entrepreneurship education, but that they also need to offer integrative frameworks assisting students in integrating diverse input, dealing with complexity, and making sense of cultural transitions. Disciplined decision-making tools, culturally aware entrepreneurial roadmaps, and gradual exposure to complexity can turn diverse learning from potential handicap to entrepreneurial strength.

Positive Influence of Diverse Learning Environment on Personal Attitudes

The heterogeneity of learning increases a personal positive stance to entrepreneurship (*p-value = 0.000*) which reflects that a diverse teaching of the subject exchanges diverse viewpoints which in turn triggers creativity and supports a positive attitude towards entrepreneurial opportunities (Fayolle & Gailly, 2015). However, this effect illuminates a gap between attitude and intention in the Tangerang's entrepreneurial education pipeline. Although the diversity of settings you describe can help build appreciation for the entrepreneur, they may not be as effective in helping develop the practical skills and confidence necessary to act on these dispositions (Liñán & Fayolle, 2015). In such cases, diversity remains theoretical, leading to entrepreneurial appreciation rather than readiness. This gap likely stems from an implementation deficit within entrepreneurship education. While diverse inputs can effectively explain why entrepreneurship matters, they

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often fail to communicate how to engage in it. According to Ajzen & Fishbein's (2005) attitude–behavior framework, attitudes translate into intention only when actionable pathways are clearly defined. In Tangerang, inspirational learning may not be supported by sufficient structural guidance, leaving students enthusiastic but unprepared.

To address this, educational institutions should embed experiential learning within diverse curricula. Business incubators, mentored by entrepreneurs from various sectors, could offer safe environments for applied experimentation. Structured internships with local startups, active case-based simulations, and adoption of lean startup methodologies could convert abstract knowledge into tangible entrepreneurial competencies (Fitriyah et al., 2024; Giovanni et al., 2024). By systematically linking diverse perspectives to real-world entrepreneurial action, institutions can help transform positive attitudes into concrete entrepreneurial intentions.

Positive Influence of Diverse Learning Environment on Subjective

Main effects of diverse learning environment on subjective norms There are significant effects of diverse learning environment on subjective norms (*p-value = 0.000*), which seems to indicate that being exposed to diverse role models and ideas functions to increase students' perception of the support of society on entrepreneurship. This result is in line with Obschonka & Silbereisen (2012), who impress upon the idea that a variety of social influences broaden students' normative reference group thereby surpassing traditional career expectations. This strength of relationship suggests that these environments assist in rebuilding the social environment for entrepreneurial decision making – even though these strengthened norms are not directly impact entrepreneurial intentions within the current model. To amplify this normative effect, future research should explore how pedagogical methods shape the link between subjective norms and intentions. For instance, project-based learning—which promotes collaboration across diverse student teams—may foster stronger peer validation of entrepreneurial thinking than traditional lectures. Likewise, community-engaged learning, which connects students with local entrepreneurs from varied backgrounds, could provide more authentic normative reinforcement than textbook cases. These approaches may be especially impactful in collectivist cultures like Indonesia, where social approval plays a key role in career decisions.

Comparative, experimental studies of these interventions could demonstrate which of them are most conducive in converting heightened subjective norms into entrepreneurial intentions. Similarly, looking at how this effect varies (or can be moderated) by student characteristics, which include background of family business, social economic condition, or urban-rural origin, provides policy implications for customizing entrepreneurship education to Tangerang's equally diverse student population.

Positive Influence of Diverse Learning Environment on Perceived Behavioral Control

Perceived behavioral control is greatly improved by diversity of learning environment (*p-value = 0.000*), since students' confidence is strengthened once they are exposed to entrepreneurial challenges and success stories coming from different backgrounds. This result supports the argument of Fayolle & Gailly (2015) and Obschonka & Silbereisen (2012), of the importance of a variety of experiences for enhancing the entrepreneurial self-efficacy. Nevertheless, it can be seen that despite increasing self-confidence, the perceived behavioural control -as shown by our study -is not a significant predictor of entrepreneurial intention (*p = 0.674*), which suggests a serious gap between the goal and the implementation of a Tangerang context. This contradiction indicates that confidence as motivation is not enough to generate entrepreneurial activity when the students confront serious external restrictions. Structural barriers, such as lack of access to startup capital, which is the case in Tangerang's conservative banking sector, as well as low depth of entrepreneurial infrastructure, such as the absence of co-working spaces, incubators and prototyping tools, can hinder students from utilizing their perceived competencies in practice. To close this gap, targeted interventions are necessary. Structured mentorship programs pairing students with experienced entrepreneurs can offer practical guidance and role-modeling. Student-focused funding schemes, such as university-backed seed grants or business competitions with substantial awards, can help overcome capital-related obstacles. Furthermore, embedded incubation programs within campuses and industry–academia partnerships can provide safe, resource-rich environments for students to test and launch ventures. By integrating these structural supports with diverse learning environments, institutions can help transform perceived control into entrepreneurial intention

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and action, creating a more effective pathway from confidence to commitment.

5. CONCLUSION

This research investigates the influence of variety of learning environments on entrepreneurial intention with student in Tangerang by mediating personal attitude, subjective norms, perceived behavioral control that developed from Theory of Planned Behavior (TPB). Results indicate a complex picture in which it emancipates how despite the positive impact of enriching students by complex Environments on their attitudes, perceived behavioral control, paradoxically they have a negative direct effect on entrepreneurial intentions. Furthermore, subjective norms were not observed to be significant. These findings highlight the applicability and constraints of TPB in collectivist and transitional countries such as Indonesia. While personal attitude is a strong determinant of intention (Liñán & Fayolle, 2015), the nonsignificance of subjective norms and perceived control leads to the fact that cultural and structural aspects (e.g., institutional support, decision complexity) can be assumed to moderate TPB"s explanatory capacity within this study.

The study also underscores a significant attitude–intention gap, suggesting that while heterogeneous learning environments foster inspiration and confidence, these do not necessarily lead to entrepreneurial behavior. This void arises from an absence of tangible scaffolding in the current entrepreneurship curricula. Closing this gap, educators can curate co-curricular experiences, formalized mentorship and student-oriented funding models around actionable results. At the same time, policymakers should work to remove external barriers by reducing the regulatory burden and enabling infrastructure for student entrepreneurs. Notwithstanding the self-reported and purposeful sampling limitations, this study adds to the growing conversation on entrepreneurial education in developing countries. Given more attention, longitudinal and experimental designs and also cross-cultural ones should be used in future studies if researchers want to answer these and other questions related how educational diversity influence the graduate entrepreneurial process over time.

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