Encouraging Eco-Entrepreneurship: The Impact of University Entrepreneurial Support on Developing Students' Green Entrepreneurial Intentions in Skikda University

Rayene Benkhaoua*, Ayoub Messikh

Faculty of Economics, Commerce Sciences and Management Sciences, Laboratory of Economisc, Finance & Management (ECOFIMA), Skikda, Algeria
r.benkhaoua@univ-skikda.dz, a.messikh@univ-skikda.dz

ARTICLE INFO

Original Scientific Article

Article history:
Received May 2025
Revised November 2025
Accepted November 2025

JEL Classification
L26, I23, Q56, M13, R58

Keywords:
University entrepreneurial support
Entrepreneurial intention
Green entrepreneurship
Skikda

UDK: 502.1:378
DOI: 10.2478/ngoe-2025-0020

Cite this article as: Benkhaoua, R. & Messikh, A. (2025). Encouraging Eco-Entrepreneurship: The Impact of University Entrepreneurial Support on Developing Students' Green Entrepreneurial Intentions in Skikda University. *Naše gospodarstvo/Our Economy, 71*(4), 11-24. DOI: 10.2478/ngoe-2025-0020

Abstract

This study examines the effect of university support mechanisms on students' green entrepreneurial intentions at Université 20 Août 1955, Skikda. The research methodically assesses how educational initiatives, institutional policies, and physical infrastructure shape students' commitment to developing environmentally responsible ventures. Descriptive and analytical survey methods are systematically applied to investigate these relationships. The results indicate that university support significantly enhances students' green entrepreneurial intentions. These findings highlight the importance of integrating sustainability into entrepreneurship education and institutional strategies. Nonetheless, the research is limited by its focus on a single university and reliance on self-reported data, which may affect the generalizability of results. This study addresses a gap in Arabic academic literature by examining institutional support as a central factor in sustainable entrepreneurship. The findings indicate that universities and policymakers should enhance entrepreneurial ecosystems to promote green entrepreneurship and strengthen graduates' contributions to sustainable development.

Introduction

Entrepreneurship drives innovation, job creation, and sustainable development (Guerrero et al., 2016, pp. 1-4). Universities play a crucial role in fostering entrepreneurial thinking among students, who will drive future entrepreneurial activity. Governments support this by investing in entrepreneurial ecosystems through policies, incentives, education, and startup support (Guerrero et al., 2020, pp. 2–5).

*Corresponding author

Universities increasingly facilitate entrepreneurship by emphasising technology transfer, intellectual property, and the commercialisation of research. Entrepreneurial programs are designed to adequately prepare students for these opportunities. However, the precise effect of such support on students' green entrepreneurial intentions remains inadequately explored and warrants detailed examination (Qazi et al., 2020, pp. 1033–1038). To promote green entrepreneurship, universities incorporate relevant content into their curricula, organise thematic events, and offer support through business incubators and entrepreneurship centres. Such initiatives encourage environmental awareness and empower students to lead ventures that address sustainability objectives (Bouzidi et al., 2024, pp. 1981–1982).

Currently, Algeria prioritises university entrepreneurship as a component of national development policy. The Ministry of Higher Education and Scientific Research has instituted the "Statut de l'Étudiant Entrepreneur" across universities, enabling students to develop business initiatives during their academic studies (Saoud et al., 2024, pp. 274-276).

Interest in green entrepreneurship is increasing, but research on how university support influences students' green entrepreneurial intentions is limited in emerging economies, such as Algeria. Specifically, there is a gap in understanding the combined effect of university education, strategy, and infrastructure on these intentions. This study directly addresses this gap at Université 20 Août 1955, Skikda, to clarify how these components shape student intentions. The main research question is: *What is the impact of university entrepreneurial support on students' green entrepreneurial intention at this university?*

Based on the components of university entrepreneurial support, the main research question leads to the following sub-questions:

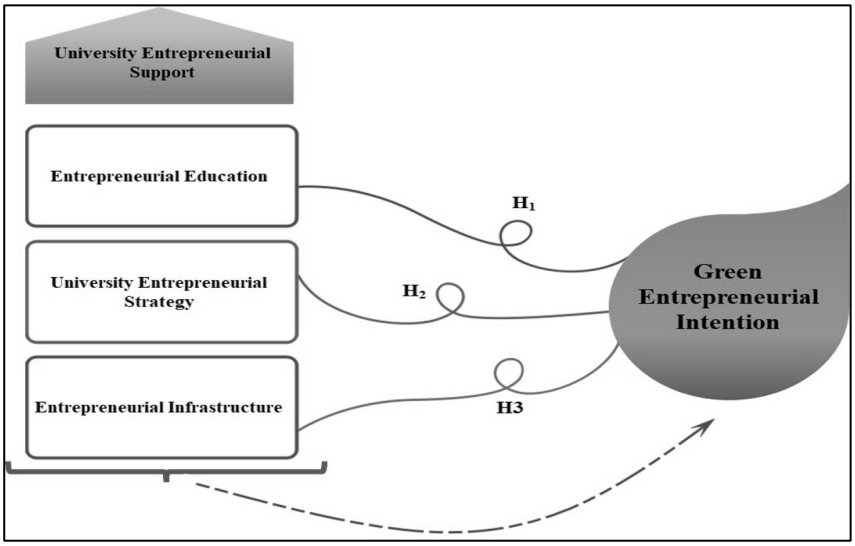
What is the impact of entrepreneurial education on the green entrepreneurial intentions of students at Université 20 Août 1955, Skikda?

What is the impact of the university's entrepreneurial strategy on students' green entrepreneurial intentions at Université 20 Août 1955, Skikda?

What is the effect of entrepreneurial infrastructure on students' green entrepreneurial intentions at Université 20 Août 1955, Skikda?

Drawing from the research questions, the principal hypothesis posits a statistically significant effect (at the specified level) of comprehensive university entrepreneurial support on students' green entrepreneurial intentions at Université 20 Août 1955, Skikda. This overarching hypothesis is disaggregated into three sub-hypotheses that address the respective dimensions of support. Specifically, it is hypothesized that entrepreneurial education, institutional strategy, and entrepreneurial infrastructure each have a statistically significant impact on students' green entrepreneurial intentions at the university. The study's conceptual model is illustrated in Figure 1.

Figure 1
Research Framework



Source: Authors' own research

The conceptual model suggests that university support for entrepreneurship, including entrepreneurial education, institutional strategy, and infrastructure, shapes students' green entrepreneurial intentions. Entrepreneurial education equips students with relevant knowledge and skills, while institutional strategy provides policies and initiatives that foster an enabling environment. Entrepreneurial infrastructure offers resources and facilities to support the development of sustainable ventures. Future research could investigate mediating or moderating factors, such as environmental awareness or students' attitudes toward green entrepreneurship, to gain a deeper understanding of how university support influences entrepreneurial intentions. The overarching objectives of this study are threefold: first, to clearly identify the role of the different dimensions of university entrepreneurial support—specifically entrepreneurial education, entrepreneurial strategy, and entrepreneurial infrastructure—for students at Université 20 Août 1955, Skikda; second, to assess the current level of green entrepreneurial intentions exhibited among those students; and finally, to investigate the overall role of university entrepreneurial support in shaping these green entrepreneurial intentions, with a particular focus on exploring the specific mechanisms that encourage the successful launch of environmentally friendly business projects.

To the best of the authors' knowledge, this study represents the first examination in Algeria and the Arab world of the relationship between university entrepreneurial support and green entrepreneurial intentions among university students. This research contributes empirical evidence to the field and systematically analyses how university support guides students toward green entrepreneurship, elucidating the key determinants of sustainable entrepreneurial practices.

This research employs a descriptive methodology to systematically *observe and record the phenomenon using both quantitative and qualitative approaches. An analytical framework is utilised to evaluate questionnaire data. Results are interpreted using SPSS and an array of statistical tools to support robust conclusions.*

Recent literature on green entrepreneurial intention (GEI) asserts that intention precedes sustainability-oriented behaviour. However, there is a lack of consensus regarding the primary determinants of GEI. Many studies emphasise individual-level factors—including attitude, self-efficacy, and commitment to green consumption (Ali, Ammer, & Elshaer, 2023)—but these often neglect the institutional context, particularly that of universities where entrepreneurial mindsets are cultivated.

Conversely, another stream of research highlights the pivotal role of the university context. For instance, (Ip, 2024) demonstrated that university entrepreneurial support significantly strengthens GEI, while Soonsan et al. (2025) showed that such support can indirectly foster GEI by enhancing students' self-efficacy. Additionally, Li et al. (2023) emphasized that higher education institutions play a crucial role in shaping women's green entrepreneurial intentions, highlighting the importance of both structured university support and social support. Their findings suggest that universities serve not only as providers of knowledge but also as enablers of sustainable entrepreneurial behaviour.

A majority of studies have concentrated on contexts outside the Arab world, typically within well-developed educational systems. This prompts questions regarding the applicability of such findings to universities in emerging economies, where infrastructure, strategy, and educational processes may differ substantially. Many previous investigations also relied chiefly on student samples, thus providing a limited cultural context. The present research also focuses on students, acknowledging this scope limitation.

In summary, while certain scholars emphasise internal psychological factors, others underscore the enabling role of universities. Nevertheless, systematic examination of how university entrepreneurial support—specifically through education, strategic focus, and infrastructure—shapes GEI in Arab academic environments remains limited. The current study addresses this gap through a case study at the Université 20 Août, 1955.

Theoretical Framework

Green Entrepreneurial Intention

Ajzen (1991) defined intention as the degree of effort an individual is prepared to exert to attain a specific objective (Ali A. M., 2023, p. 05). Generally, intention represents a mental orientation that determines a person's behavioral direction, influences actions, and compels progress toward achieving a goal. Specifically, green entrepreneurial intention refers to planned and organised efforts to establish environmentally sustainable ventures that reconcile economic aims with

ecological considerations.

Entrepreneurial intention refers to a person's desire or plan to start a new business. According to Bird (1988), it is a mental state that directs a person toward developing and starting a business. This approach focuses on processes and highlights the complex relationship between entrepreneurial ideas and the outcomes they produce (Brito et al., 2022, p. 293**)**.

For this study, green entrepreneurial intention is defined as Students' willingness and ambition to start environmentally friendly projects that contribute to achieving the goals of sustainable development. **(**Hartiwi et al., 2022, p. 7), It is influenced by *environmental psychology*, where pro-environmental attitudes and awareness shape individuals' motivation to engage in green entrepreneurship (Utami, 2024, p. 568). At the same time, sustainable innovation provides the tools and processes that allow students to transform their environmental awareness into practical products, services, or business models that generate economic, social, and environmental value. (Shields, 2022), The entrepreneurial ecosystem, including social, cultural, economic, and political factors, supports these intentions by offering resources, guidance, networks, and policies that enhance the feasibility and success of green ventures (Paricahua et al., 2022, p. 46). This integration illustrates how green entrepreneurial intention emerges from the interplay of personal values, innovative capabilities, and supportive systemic conditions, contributing to environmentally responsible entrepreneurship and long-term sustainable development.

Determinants of Green Entrepreneurial Intention

Researchers have identified various factors that influence entrepreneurial intention. For example, the study by Gubik (2021, p. 54) found that the main determinants are Attitude toward behaviour, Subjective norms, Self-efficacy (confidence in one's ability), Family background, and University entrepreneurial environment. Rahayu (2024, p. 3) demonstrated that factors positively affecting green entrepreneurial intention include Green entrepreneurial self-efficacy, Environmental awareness, and Motivation for green entrepreneurship. One of the most widely used and supported theories for predicting intention is Ajzen's Theory of Planned Behavior (1991). This theory explains how different types of intentions are formed, including green entrepreneurial intention. According to the theory, intention is shaped by three main variables: Attitude toward the entrepreneurial behavior and perceived behavioral control. In addition to Subjective norms: e.g., family, friends, professors (Ajzen, 1991, pp. 179,188).

University Support Factors for Green Entrepreneurial Intention

Many universities aim to spread entrepreneurship and encourage students to turn their research into marketable products and services. Universities play a key role in promoting economic development, supporting entrepreneurial thinking, and guiding students through their entrepreneurial journey.

Entrepreneurial Education

In today's competitive world, entrepreneurship is one of the main topics of interest for many institutions, including universities. This growing interest is due to its positive effect on economic growth. Entrepreneurial education is recognised as a valuable tool for increasing the number of entrepreneurs, fostering innovation, enhancing productivity, and generating employment opportunities. For this reason, many countries are investing in building strong institutional and educational systems to support entrepreneurship (Betáková et al., 2020, p. 577). Entrepreneurial education includes various teaching methods that aim to raise students' awareness, prepare them to participate in economic and social development, and help them create their own businesses or improve small existing enterprises (Kőnig, 2024, p. 64). According to the Organisation & UNESCO (2013), entrepreneurial education is: "A set of formal learning methods aimed at informing, training, and educating individuals who want to take part in economic and social development by creating or growing a business project." Entrepreneurial education helps students build confidence and develop the motivation and mindset needed to start their own businesses. Universities usually offer entrepreneurship education in two main ways: *Academic Role* by teaching students the knowledge and skills needed to launch new projects. In addition to *Business Role,* supporting students by encouraging innovation, guiding their ideas, and helping turn them into successful ventures (Fan et al., 2024, pp. 2–3).

Studies show that entrepreneurial education is strongly linked to students' intentions to start businesses. Around 54% of startup founders are graduates of entrepreneurship programs (Xu & Chiawen Lee, 2025, p. 3). Other research highlights that students' motivation and attitudes are important factors that mediate the

relationship between entrepreneurial education and intention. Education also plays a role in shaping students' entrepreneurial personalities by giving them practical learning opportunities that prepare them for the labor market (Kőnig, 2024, pp. 62-64).

University Entrepreneurial Strategy

Entrepreneurial strategy is characterized as a strategy involving widespread and more-or-less simultaneous change in the pattern of decisions taken by an organization (Murray, 1984, p. 01).

A university's entrepreneurial strategy is a comprehensive approach that aims to strengthen its role in promoting economic and social development by encouraging students to adopt entrepreneurial behaviors. This strategy includes offering specialised entrepreneurship courses, organising workshops and business plan competitions, providing support services like incubators, accelerators, and field visits, and hosting mentoring programs with experienced entrepreneurs. This strategy aims to integrate theoretical learning with real-world experience, enabling students to transform their ideas into successful projects. The strategy works through several key mechanisms (Wegner et al., 2019, p. 309).

Entrepreneurial infrastructure refers to the system of physical and institutional support—such as business incubators, technology centers, science parks, and business zones—that assists entrepreneurs in developing their business ideas and overcoming early-stage challenges (Dopazo & Zivic, 2018).

In addition to education and strategic support, universities can enhance students' entrepreneurial intentions by providing supportive entrepreneurial infrastructure. This includes various services and resources, such as Entrepreneurship Houses and Business Incubators. Entrepreneurship Houses are centres that raise awareness about entrepreneurship through events, conferences, and lectures. They also offer training workshops, early-stage guidance, mentoring, and crucial networking opportunities with professionals and local business actors (Cornuel et al., 2024, pp. 68–70). Business Incubators, on the other hand, are university-based centres designed to support innovation by offering technical and business advice, facilitating access to funding opportunities, and fostering collaborative environments where students, professors, and business experts can work together. In Algeria, the higher education sector has already established entrepreneurship centres in most universities and is actively developing business incubators. These incubators provide educational programs and tailored guidance to help students transition from the idea stage to the actual launch of their businesses, effectively bridging the gap between academic knowledge and real-world entrepreneurial ventures (Hassan, 2024; Chalabi & Belgoum, 2025).

The Entrepreneurship House plays a significant role in encouraging students' entrepreneurial intentions by focusing on three main areas of support, according to Fayolle (Metaiche, 2024, pp. 132-136). The first area, Raising Awareness and Promoting Entrepreneurial Values, is accomplished through organising conferences, seminars, and lectures that explore the "how" and "why" of entrepreneurship. The second area involves Training and Skill Development, where the centre offers practical workshops and training sessions to interested students, either voluntarily or by integrating these sessions into the academic curriculum. The final area is Early-Stage Support and Guidance, which involves providing students with advice and guidance to help them develop their ideas through connections with active partners and local experts who can offer valuable insights (Metaiche, 2024).

Similarly, business incubators play a vital role in cultivating innovation and entrepreneurial spirit within higher education institutions. They offer technical and professional support to aspiring entrepreneurs, provide mentoring to help students secure funding for their startups, and foster a collaborative environment in which students, faculty, and business professionals can exchange knowledge and experience. University incubators, therefore, act as ideal spaces for translating academic knowledge into real-world business projects, supporting sustainable development and strengthening the overall entrepreneurial ecosystem (Benchaa et al., 2024)**.**

Research Methodology

The field study focuses on gathering the opinions of a sample of students from Université 20 Août, 1955, to explore the role of university entrepreneurial support in promoting green entrepreneurial intention. This will be achieved through the design and distribution of a questionnaire to the selected sample, aiming to collect responses that address the research problem and test the proposed hypotheses.

To analyse the data, the descriptive and analytical methods were used, as they best fit the research objectives. This approach enables the exploration of the university environment and its role in supporting green entrepreneurship, as well as the identification of key dimensions influencing how university entrepreneurial support impacts students' green entrepreneurial intentions across different academic disciplines.

Study Population and Sample

The study population consists of students from Université 20 Août 1955, representing a diverse array of faculties and programs, including the Faculty of Economics, Business and Management Sciences; Faculty of Technology; Faculty of Sciences; Faculty of Letters and Languages; Faculty of Law and Political Science; Faculty of Social and Human Sciences; and the Institute of Applied Science and Technology. This population encompasses students at various academic levels, including Bachelor's (Licence), Master's, and Doctorate.
The sample was selected using a non-random (convenience) sampling method due to the unavailability of a complete list of university students, rendering an entirely random sample impractical. To ensure sufficient participation, the questionnaire was distributed through two channels: an online survey shared in university-related Facebook groups, which received 270 completed responses, and a printed survey distributed on campus, yielding 196 valid responses. This approach resulted in a total of 466 valid questionnaires.

While this method may introduce some bias—such as the overrepresentation of students who are more active online, motivated, or interested in entrepreneurship—combining both approaches enhanced coverage. Nevertheless, the results should be generalized with caution, despite the large sample providing reliable insights into students' entrepreneurial trends.

The study predominantly comprised female students, with 324 responses (69.5%), while male students accounted for 142 responses (30.5%), reflecting the general demographic profile of Algerian universities. Most participants were under 25 years old (370 students, 79.4%), corresponding to students in Bachelor's or early Master's programs. The sample included 48.1% Bachelor (Licence), 44.8% Master, and 7.1% Doctorate students, indicating that the majority were from the first and second academic cycles, which are more likely to engage with university entrepreneurship support programs. Faculty affiliation varied, with the Faculty of Technology providing the highest number of respondents (30.5%), followed by the Faculty of Economics, Business, and Management Sciences (22.5%), Faculty of Social and Human Sciences (17%), Faculty of Letters and Languages (7.7%), Faculty of Sciences (6.7%), Faculty of Law and Political Science (6.7%), and the Institute of Applied Science and Technology (9.0%).

This diversity of academic backgrounds suggests that students' perceptions and experiences of university entrepreneurial support may vary according to their field of study. Exposure to sustainability-oriented education further influences these perceptions. Such variations align with the findings of Li, Murad, and Ashraf (2023), who highlighted that university and social support interact with students' academic orientation in shaping green entrepreneurial intentions and subsequent entrepreneurial behavior. The demographic composition underscores the importance of examining university support within this key student population, while acknowledging that results may differ in other cultural or institutional contexts. By linking these descriptive characteristics to institutional and theoretical frameworks, we can gain a deeper understanding of the dynamics at play.

Research Instrument

For this study, a questionnaire was used as the primary data collection tool to investigate the role of university entrepreneurial support in enhancing students' green entrepreneurial intention. After distributing the questionnaire and collecting responses, the data were analysed to extract meaningful findings. The questionnaire was divided into Demographic Information, which included four items covering gender, age, academic level, and faculty/institute. University Entrepreneurial Support Dimensions, which measured the three core dimensions of support: Entrepreneurial Education (4 items) (Fayolle & Gailly, 2015), University Entrepreneurial Strategy (4 items) (Liu et al., 2022), and Entrepreneurial Infrastructure (3 items) (Attila Lajos Makai & Dőry, 2023). Moreover, Green Entrepreneurial Intention, which included 12 items (Li et al., 2023) to measure the students' intention toward starting environmentally friendly ventures.

Statistical Analysis Methods

Once the final number of valid questionnaires was confirmed, the data were analysed using both descriptive and statistical methods through SPSS software. The primary analysis techniques included correlation analysis, Cronbach's Alpha, Frequencies and Percentages,

Means and Standard Deviations, Normality Tests, and simple linear regression. Most correlations reported below were significant at the 0.01 level ($p < 0.01$), indicating a strong association among variables.

To assess the validity of the questionnaire, Pearson correlation coefficients were calculated between each item and its corresponding dimension. The results showed a strong alignment between the items and the theoretical concepts they were designed to measure. The results showed a strong alignment between the items and the concepts they were designed to capture.

Regarding the Entrepreneurial Education dimension, the correlation values, which ranged from 0.567 to 0.736, indicate that the items are effectively representing this concept. However, the presence of some moderate values suggests that the current scale might not fully cover certain aspects of educational support or could be perceived differently among students. For the University Entrepreneurial Strategy and Infrastructure, the correlation values ranged from 0.627 to 0.870, reflecting a strong measurement performance. This suggests that students clearly perceive the university's strategic initiatives and infrastructure as consistent and highly effective. Finally, the Green Entrepreneurial Intention dimension showed correlation values between 0.562 and 0.781, which confirms that the items reliably measure students' intentions. However, some inherent variation exists, likely reflecting individual differences in perception or motivation.

These results confirm the construct validity of the study instrument, demonstrating that the questionnaire reliably measures both university entrepreneurial support dimensions and green entrepreneurial intention. The results suggest acceptable item–construct alignment, without claiming full construct validity. It is also important to note the nuanced differences in how students perceive educational support compared to institutional support (strategy and infrastructure), which aligns with the subsequent finding that entrepreneurial education alone does not significantly influence green entrepreneurial intention, whereas strategy and infrastructure have a substantial impact.

Cronbach's Alpha was calculated to assess the internal consistency of the questionnaire. Values closer to 1.0 indicate higher reliability, meaning that the instrument would yield similar results if applied again under the same conditions.

Table 1
Reliability of the Research Instrument

Dimension	Number of Items	Cronbach's Alpha
University Entrepreneurial Support	11	0.819
Green Entrepreneurial Intention	12	0.895
Full Questionnaire	23	0.882

Source: Authors' own calculations based on SPSS output

The results demonstrate high internal consistency across all sections of the questionnaire:

Entrepreneurial Support dimension ($\alpha = 0.819$): Indicates good reliability, showing that the items within this dimension are internally consistent and measure the construct reliably, *Green Entrepreneurial Intention dimension ($\alpha = 0.895$):* Reflects excellent reliability, confirming that the items effectively capture students' intentions toward green entrepreneurship, *Full Questionnaire ($\alpha = 0.882$):* Confirms that the entire instrument is highly reliable for assessing the study variables.

These findings provide confidence that the questionnaire is a robust and dependable tool for measuring both the dimensions of university entrepreneurial support and students' green entrepreneurial intention. The high internal consistency also supports the validity of subsequent analyses and interpretations of the relationships among these variables.

Table 2
Normality of Data Distribution

Variable	Skewness	Kurtosis
Entrepreneurial Education	-0.256	0.110
University Entrepreneurial Strategy	-1.026	1.535
Entrepreneurial Infrastructure	-0.606	0.437
University Entrepreneurial Support	-0.494	0.421
Green Entrepreneurial Intention	-0.515	0.159

Source: Authors' own calculations based on SPSS output

To assess the distribution of the collected data, skewness and kurtosis values were calculated for each variable. The skewness values ranged from -1.026 to -0.256, indicating a slight negative skew that remains within acceptable limits. The kurtosis values ranged from 0.110 to 1.535, suggesting that the distributions are approximately

normal, without extreme peaks or flatness.

Overall, the skewness and kurtosis values for all variables fell within conventional thresholds (±2 for skewness and ±7 for kurtosis), which is considered acceptable for large-sample inference.

These results confirm that the data are normally distributed, thereby justifying the use of parametric statistical tests in subsequent analyses. Ensuring normality is crucial for the validity of correlation, regression, and other inferential analyses, thereby enhancing confidence that the observed relationships among university entrepreneurial support dimensions and green entrepreneurial intention are accurately represented.

Analysis and Discussion of Results

This section presents interpretations of participants' responses regarding university entrepreneurial support and green entrepreneurial intention, integrating the results with recent literature and theoretical insights.

Table 3

Analysis of Participants' Responses to the Questionnaire items and dimensions Related to University Entrepreneurial Support: Descriptive Statistics

Variable	Mean	SD	Level of support
Entrepreneurial Education	3.49	0.739	High
University Entrepreneurial Strategy	4.06	0.676	High
Entrepreneurial Infrastructure	3.93	0.780	High
University Entrepreneurial Support	3.82	0.606	High

Source: Authors' own calculations based on SPSS output

These results reflect participants' positive perceptions of the support provided by the university and their agreement on its importance in promoting entrepreneurship within the academic environment. The findings can be interpreted as follows:

University Entrepreneurial Support

Table 3 shows the descriptive statistics for the dimensions of university entrepreneurial support. Overall, participants reported a high level of perceived support (Mean = 3.82, SD = 0.606), indicating a generally positive view of university initiatives to promote entrepreneurship.

The Entrepreneurial Education dimension received a moderate to high level of agreement (Mean, SD). Students generally recognised its importance, but the variation in responses suggests that the perceived effectiveness of entrepreneurial education may differ across programs or faculties. Without practical or sustainability-oriented content, entrepreneurship education alone may have a limited direct effect on students' green entrepreneurial intentions.

University Entrepreneurial Strategy received one of the highest scores (Mean, SD), reflecting strong agreement among students on the importance of institutional strategic initiatives. This result aligns with Li et al. (2023), who highlighted that well-structured university and social support can significantly enhance students' green entrepreneurial intentions and subsequent entrepreneurial behavior.

The Entrepreneurial Infrastructure dimension also received a high level of agreement (Mean, SD), suggesting that the availability of adequate resources, incubators, and supportive facilities plays an important role in enabling green entrepreneurship. The variation in responses for this dimension may reflect differences in students' awareness of or actual access to these infrastructures across the various university faculties.

These results indicate that while all dimensions are valued, strategic support and infrastructure appear to have a greater influence in shaping students' green entrepreneurial awareness compared to formal education alone.

Table 4

Analysis of Participants' Responses to the Questionnaire items and dimensions Related to Green Entrepreneurial Intention: Descriptive Statistics

Variable	Mean	SD	Level of support
Green Entrepreneurial Intention	3.57	0.702	High

Source: Authors' own calculations based on SPSS output

As shown in Table 4, students exhibited a moderate to high level of green entrepreneurial intention (Mean = 3.57, SD = 0.702). This suggests that participants generally lean toward environmentally friendly entrepreneurial activities, although some variation in

responses may reflect differences in personal readiness, motivation, or prior exposure to sustainability concepts.

The findings reveal that university support—particularly through strategic planning and social support—plays a key role in fostering green entrepreneurial intention. In contrast, entrepreneurial education alone did not show a significant effect, possibly due to gaps in integrating environmental and practical content into curricula. This pattern aligns with recent findings by Li et al. (2023), confirming that well-structured institutional and social support often has a more substantial impact on green entrepreneurship than education alone.

Overall, these results highlight the importance of a *comprehensive university support system*—combining strategy, infrastructure, and education—to effectively develop students' green entrepreneurial intention.

Hypothesis Testing

The researchers used several statistical methods to test the study's hypotheses, including means, standard deviations, correlation analysis, and multiple linear regression. This section presents the key results from these tests to evaluate the proposed hypotheses.

Table 5
Testing the Main Hypothesis

Variable	B	Std. Error	Beta	t	p-value
Constant	1.975	0.198	—	9.980	< 0.001
Entrepreneurial Education	0.032	0.051	0.034	0.626	0.531
University Entrepreneurial Strategy	0.209	0.061	0.202	3.439	0.001
Entrepreneurial Infrastructure	0.160	0.049	0.178	3.258	0.001

Statistic	R	R^2	Adjusted R^2	F(3, 462)	p-value
Value	0.358	0.128	0.123	22.695	< 0.001

Source: Authors' own calculations based on SPSS output

The regression analysis presented in Table 5 indicates that university entrepreneurial support—particularly through strategic planning and infrastructure—significantly affects students' green entrepreneurial intentions at Université 20 Août 1955, Skikda. The model explains a modest yet meaningful portion of the variance in green entrepreneurial intention (R^2 = 0.128, Adjusted R^2 = 0.123), with the overall model being statistically significant ($F(3, 462) = 22.695$, $p < 0.001$).

The regression coefficients indicate that University Entrepreneurial Strategy (B = 0.209, t = 3.439, p = 0.001) and Entrepreneurial Infrastructure (B = 0.160, t = 3.258, p = 0.001) serve as significant predictors of green entrepreneurial intention. In contrast, Entrepreneurial Education does not yield a statistically significant effect within the multivariate model (B = 0.032, t = 0.626, p = 0.531), suggesting that much of its apparent influence overlaps with other institutional support mechanisms.

Students exhibit a moderate to high level of green entrepreneurial intention (Mean = 3.57, SD = 0.702), indicating a general propensity towards environmentally sustainable entrepreneurial activities. These findings align with recent research (Li et al., 2023), which suggests that well-structured institutional support often exerts a more substantial impact on green entrepreneurial behavior than education alone. Overall, the results underscore the importance of a comprehensive university support system that integrates strategy, infrastructure, and education to effectively promote students' green entrepreneurial intentions.

In the multiple regression model, entrepreneurial education does not demonstrate a statistically significant effect on green entrepreneurial intention. In contrast, university entrepreneurial strategy (B = 0.209, t = 3.439, p = 0.001) and entrepreneurial infrastructure (B = 0.160, t = 3.258, p = 0.001) are significant predictors. This finding suggests that the influence of entrepreneurial education is largely mediated by institutional supports, such as strategy and infrastructure, thereby limiting its independent impact.

While entrepreneurial education demonstrates a weak yet significant effect independently, its impact is notably reduced when integrated with other institutional support mechanisms. Within the context of the Theory of Planned Behavior (TPB), this finding indicates that although theoretical education may improve students' attitudes toward green entrepreneurship, it falls short of adequately enhancing perceived behavioral control or subjective norms without practical engagement and institutional reinforcement.

Therefore, the study recommends that entrepreneurship curricula should integrate sustainability-driven, project-based, and experiential learning components to convert awareness into actionable intent. In essence, education

alone is insufficient to cultivate green entrepreneurial intention unless it is embedded within a supportive institutional ecosystem that encompasses strategy and infrastructure.

Table 6
Testing the Sub-Hypotheses

Hypothesis	R	R^2	Adjusted R^2	F(df)	p-value
Entrepreneurial Education	0.231	0.053	0.051	26.118 (1, 464)	< 0.001
University Entrepreneurial Strategy	0.324	0.105	0.103	54.565 (1, 464)	< 0.001
Entrepreneurial Infrastructure	0.311	0.097	0.095	49.583 (1, 464)	< 0.001

Source: Authors' own calculations based on SPSS output

The regression analysis revealed that university entrepreneurial strategy (R^2 = 0.105, Adjusted R^2 = 0.103, F(1, 464) = 54.565, p < 0.001) and entrepreneurial infrastructure (R^2 = 0.097, Adjusted R^2 = 0.095, F(1, 464) = 49.583, p < 0.001) exert statistically significant positive effects on students' green entrepreneurial intentions. Conversely, entrepreneurial education (R^2 = 0.053, Adjusted R^2 = 0.051, F(1, 464) = 26.118, p < 0.001) demonstrated a statistically significant yet relatively weak effect. These findings indicate that strategic planning and infrastructural support offered by the university are essential drivers of students' environmentally oriented entrepreneurial intentions, whereas entrepreneurial education alone appears insufficient to produce a strong effect.

These results indicate that institutional support mechanisms—strategic planning and infrastructure—play a more substantial role in fostering green entrepreneurial intention than educational content alone. The weak effect of entrepreneurial education may stem from insufficient integration of environmental and practical content in curricula, limiting students' perceived preparedness to launch green ventures.

These findings align with recent studies in emerging economies, such as Li et al. (2023) , who found that well-structured university and social support exert a more decisive influence on green entrepreneurial behavior than education alone. They also support the theoretical perspective of the Theory of Planned Behavior (TPB), particularly regarding perceived behavioral control: students appear more influenced by enabling university structures and resources than by knowledge acquisition alone. In contrast, the significance of strategy and infrastructure highlights the importance of a comprehensive support ecosystem that facilitates the translation of intention into actionable green entrepreneurship (Ip, 2024; Soonsan et al., 2025)

The regression analysis indicates that entrepreneurial education exerts a statistically significant, albeit relatively weak, effect on students' green entrepreneurial intentions when evaluated in isolation (simple regression). However, in the multiple regression model that accounts for university entrepreneurial strategy and infrastructure, this effect becomes non-significant (B = 0.032, t = 0.626, p = 0.531). This finding suggests that the observed influence of entrepreneurial education largely overlaps with other institutional support mechanisms, leading to a minimal individual contribution to green entrepreneurial intentions.

In conclusion, the results underscore that universities aiming to enhance students' green entrepreneurial intention should prioritise actionable support—strategic initiatives and infrastructure—alongside education, ensuring alignment between institutional capabilities and sustainability-oriented entrepreneurial goals.

Interpretation and Discussion of Results

The results of this study provide deeper insights into how university entrepreneurial support influences students' green entrepreneurial intention (GEI), interpreted within the framework of the Theory of Planned Behavior (TPB). According to TPB, intention is shaped by attitudes toward the behavior, subjective norms, and perceived behavioral control. The findings confirm that institutional factors, particularly entrepreneurial strategy and infrastructure, play a key role in reinforcing these psychological components, while entrepreneurial education alone shows limited direct influence.

The results show that the university's entrepreneurial strategy exerts a significant positive effect on GEI. This implies that strategic initiatives—such as sustainability-oriented university policies and institutional support mechanisms—positively influence students' attitudes and perceived control toward green entrepreneurship. This aligns with Ip (2024), who found that university entrepreneurial support significantly strengthens the intention–behavior link in sustainable entrepreneurship. Similarly, Soonsan et al. (2025) confirmed that university support indirectly enhances GEI by improving students' self-efficacy. Within the TPB framework, these findings indicate that strategic orientation fosters favorable subjective norms and perceived behavioral control, thereby reinforcing green entrepreneurial intention.

Entrepreneurial infrastructure showed a positive impact on green entrepreneurial intention (GEI). Access to incubators, innovation spaces, and mentorship networks enhances students' confidence and perceived control, reducing barriers to starting green ventures. This finding aligns with Ip (2024), who emphasized that structured university entrepreneurial support—through institutional strategies, facilities, and innovation programs—strengthens students' green entrepreneurial intentions and reinforces their belief in their ability to implement sustainable entrepreneurial projects, even under broader socio-economic constraints.

In contrast, entrepreneurial education did not significantly influence GEI. This outcome supports (Ali et al., 2023), who observed that individual-level factors such as attitude and self-efficacy tend to have more potent effects on GEI than external influences like formal education. The finding may indicate that current curricula are insufficiently aligned with environmental and experiential learning. From a TPB perspective, theoretical education alone may shape attitudes but fails to enhance perceived behavioral control or social norms without practical engagement and institutional reinforcement. This highlights the need to redesign entrepreneurship courses by integrating sustainability-driven, project-based, and experiential components that can transform awareness into intention.

Overall, these results affirm that university entrepreneurial support—particularly through strategy and infrastructure—is crucial for fostering GEI. The findings reinforce the argument advanced by Li et al. (2023), who demonstrated that well-structured university and social support interact with students' academic orientation to shape green entrepreneurial intention and behavior. Within the TPB framework, strategic and infrastructural support serve as key external enablers that strengthen the three core components of intention: attitudes, subjective norms, and perceived behavioral control. In contrast, education alone remains insufficient unless embedded within a broader institutional ecosystem that connects learning with tangible entrepreneurial opportunities

In conclusion, this study confirms that in emerging academic contexts such as Algeria, green entrepreneurial intention is primarily driven by institutional and environmental enablers rather than education alone. By aligning university strategies and infrastructures with sustainability goals, higher education institutions can create a more integrated and impactful entrepreneurial ecosystem that translates intention into potential behavior.

Conclusion

This study successfully explored the role of university entrepreneurial support—including entrepreneurial education, university entrepreneurial strategy, and entrepreneurial infrastructure—in promoting green entrepreneurial intention among students at Université 20 Août 1955, Skikda. The key findings reveal a high overall level of university support, with the entrepreneurial strategy dimension ranked highest, followed by infrastructure, and then entrepreneurial education. Students also demonstrated a high level of green entrepreneurial intention.

Analysing the relationships, the research confirmed a statistically significant impact of overall university entrepreneurial support on green entrepreneurial intention. Breaking this down, there was a significant impact from both the university's entrepreneurial strategy and entrepreneurial infrastructure on green entrepreneurial intention. Crucially, however, the results indicated no significant impact of entrepreneurial education alone on students' green entrepreneurial intention.

The study employed a non-random (convenience) sampling method due to the unavailability of a complete list of university students, which limits the generalizability of the findings. Additionally, the study was conducted at a single university, further restricting the extent to which the results can be generalized to other students or institutions.

Future research could address these limitations by employing random sampling and including multiple universities to enhance generalizability. Moreover, future studies should examine moderating or mediating variables that may influence the relationship between university support and students' green entrepreneurial intentions, such as attitudes toward green entrepreneurship or environmental culture.

Based on these findings, several strategic recommendations are proposed to enhance the university's role in promoting green entrepreneurship. First, the quality of green entrepreneurship education should be improved by integrating specialised courses into curricula, employing interactive methods such as project-based learning to tackle environmental

challenges, and encouraging scientific research and student engagement in relevant fields. Second, the university should develop robust strategies, including dedicated green entrepreneurship centres on campus, partnerships with green economy organisations for funding and mentorship, and competitions to inspire sustainable business solutions. Third, entrepreneurial infrastructure should be strengthened through the establishment of green business incubators, environmental labs for designing eco-friendly products, and ensuring access to necessary technology and tools. Fourth, dedicated funding opportunities for green entrepreneurial projects should be provided, such as grants, low-interest loans, and collaboration with the private sector to support practical and sustainable ventures. Finally, a culture of green entrepreneurship should be promoted among students through workshops, training sessions, inviting successful green entrepreneurs to share experiences, and extracurricular activities such as environmental awareness campaigns.

Moreover, to enhance the practical and policy implications of these recommendations, universities should identify concrete implementation steps and evaluate their impact on students and local communities. This study can also serve as a guide to align university initiatives with national strategies in Algeria, support sustainable development goals, and broadly foster green entrepreneurial spirit.

Additionally, although these recommendations are tailored to the context of the studied university, they provide a framework that can be adapted and applied in other universities in similar contexts or regions aiming to enhance students' green entrepreneurial capabilities.

References

Ali, A. M. (2023). *Theory of boundedly rational planned behavior: A new model.* Zagreb International Review of Economics & Business, *26*(1), 1–28. DOI: https://doi.org/10.2478/zireb-2023-0001

Ali, M. A., Ammer, M., & Elshaer, I. (2023). *Born to be green: Antecedents of green entrepreneurship intentions among higher education students.* Sustainability, *15*(12), 10123. DOI: https://doi.org/10.3390/su151310123

Attila Lajos Makai, & Dőry, T. (2023). *Perceived university support and environment as a factor of entrepreneurial intention: Evidence from Western Transdanubia Region.* PLOS ONE, *18*(4), e0284521. DOI: https://doi.org/10.1371/journal.pone.0284521

Benchaa, O., Mekhnane, O., & Zouaouid, L. (2024). *The role of university business incubators in accompanying and supporting innovative projects in light of Decree 1275 – A pilot study from the perspective of Ghardaia University students.* International Journal of Professional Business Review, *9*(8), e04878. DOI: https://doi.org/10.26668/businessreview/2024.v9i8.4878

Betáková, J., Havierniková, K., Okręglicka, M., Mynarzová, M., & Magda, R. (2020). *The role of universities in supporting entrepreneurial intentions of students toward sustainable entrepreneurship.* Entrepreneurship and Sustainability Issues, *8*(1), 573–589. DOI: https://doi.org/10.9770/jesi.2020.8.1(40)

Bouzidi, H., Selatnia, N., & Redjem, K. (2024). *Sustain cubator "Eco Innovate Hub": Nurturing green entrepreneurship in higher education.* International Journal of Economic Perspectives, *18*(11), 1981–1998.

Brito, B. A., Kuniyoshi, M., Cappellozza, A., & Vieira, A. (2022). *Determining factors of intention in perigarders: A study with entrepreneurs and partners in enterprises of the State of Acre.* Journal of Administration of UFSM, 15(2), 290. DOI: https://doi.org/10.5902/1983465968764

Chalabi, L. R., & Belgoum, F. (2025). *Evaluating entrepreneurial support programs: Insights from trainer experiences.* Business, Economics and Management Research Journal, *8*(1), 11–18. DOI: https://doi.org/10.58308/bemarej.1610332

Cornuel, E., Howard, T., & Wood, M. (2024). *Business school research: Excellence, academic quality and positive impact.* Routledge. DOI: https://doi.org/10.4324/9781003467410

Dopazo, J. P., & Zivic, F. (2018). *Supporting university ventures in nanotechnology, biomaterials and magnetic sensing applications.* Springer.

Fan, J., Hu, J., & Wang, J. (2024). *How entrepreneurship education affects college students' entrepreneurial intention: Samples from China.* Heliyon, *10*(3), e30776. DOI: https://doi.org/10.1016/j.heliyon.2024.e30776

Fayolle, A., & Gailly, B. (2015). *The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence.* Journal of Small Business Management, *53*(1), 75–93. DOI: https://doi.org/10.1111/jsbm.12065

Gubik, S. (2021). *Entrepreneurial career: Factors influencing the decision of Hungarian students.* Entrepreneurial Business and Economics Review, *9*(3), 43–58. DOI: https://doi.org/10.15678/EBER.2021.090303

Guerrero, M., Urbano, D., Fayolle, A., Klofsten, M., & Sarfraz, M. (2016). *Entrepreneurial universities: Emerging models in the new social and economic landscape*. Small Business Economics, *47*(3), 551–563. DOI: https://doi.org/10.1007/s11187-016-9755-4

Guerrero, M., Urbano, D., & Gajon, E. (2020). *Entrepreneurial university ecosystems and graduates' career patterns: Do entrepreneurship education programs and university business incubators matter?* Journal of Management Development, *39*(5), 753–773. DOI: https://doi.org/10.1108/JMD-10-2019-0439

Hartiwi, P., Ikhsan, R., & Yuniarty, Y. (2022). *Drivers of green entrepreneurial intention: Why does sustainability awareness matter among university students?* Frontiers in Psychology, 13, 873140. DOI: https://doi.org/10.3389/fpsyg.2022.873140

Hassan, N. A. (2024). *University business incubators as a tool for accelerating entrepreneurship: Theoretical perspective*. Review of Economics and Political Science, *9*(4), 277–295. DOI: https://doi.org/10.1108/REPS-10-2019-0142

Ip, C. Y. (2024). *From green entrepreneurial intention to behaviour: The role of environmental knowledge, subjective norms, and external institutional support*. Sustainable Futures, 6, 100153. DOI: https://doi.org/10.1016/j.sftr.2024.100153

Kőnig, L. S. (2024). *Leveraging communities of practice to cultivate entrepreneurial mindset: A systematic review and practical insights*. Naše Gospodarstvo / Our Economy, *70*(4), 61–73. DOI: https://doi.org/10.2478/ngoe-2024-0024

Li, C., Murad, M., & Farhan Ashraf, S. (2023). *The influence of women's green entrepreneurial intention on green entrepreneurial behavior through university and social support*. Sustainability, *15*(13), 10123. DOI: https://doi.org/10.3390/su151310123

Liu, M., Gorgievski, M., Qi, J., & Paas, F. (2022). *Perceived university support and entrepreneurial intentions: Do different students benefit differently?* Studies in Educational Evaluation, 74, 101081. DOI: https://doi.org/10.1016/j.stueduc.2022.101081

Metaiche, M. E. (2024). *Entrepreneurship education in Algeria: Insights from university students*. Review MECAS, *5*(2), 132–136.

Murray, J. A. (1984). *A concept of entrepreneurial strategy*. Strategic Management Journal, 5(1), 1–25. DOI: https://doi.org/10.1002/smj.4250050102

Organisation & UNESCO. (2013). *Entrepreneurship education in the Arab States*. Paris: UNESCO & StratREAL Foundation.

Paricahua, C., Ramos, C., & Valdivia, J. (2022). *University ecosystem and green entrepreneurship intention among Peruvian students*. Journal of Entrepreneurship Education, 25(3), 45–58.

Qazi, W., Qureshi, J., Raza, S., Khan, K., & Qureshi, M. (2020). *Impact of personality traits and university green entrepreneurial support on students' green entrepreneurial intentions: The moderating role of environmental values*. Journal of Applied Research in Higher Education, 13(4), 1154–1180. DOI: https://doi.org/10.1108/JARHE-05-2020-0130

Rahayu, N. S. (2024). *Assessing the determinant factors affecting green entrepreneurial intention among female entrepreneurs in Indonesia*. Cogent Business & Management, *11*(1), 2378919. DOI: https://doi.org/10.1080/23311975.2024.2378919

Saoud, W., Hani, M., & Louahab, O. (2024). *Startups: An initial step for Algerian entrepreneurial universities*. European Journal of Management Issues, *32*(4), 272–286. DOI: https://doi.org/10.15421/192423

Shields, K. (2022). *Sustainable innovation*. In *Leading Innovation* (Chapter 5). Toronto, Canada: eCampusOntario Press. Retrieved from https://ecampusontario.pressbooks.pub/leadinginnovation/chapter/chapter-5-sustainable-innovation

Soonsan, N., Prasankarn, H., Tanticharatwarodom, P., Prasankarn, J., & Jumani, Z. A. (2025). *University entrepreneurial support and green entrepreneurial behavior: A quantitative serial mediation*. Journal of Innovation and Entrepreneurship, *14*(1), 22–37. DOI: https://doi.org/10.1186/s13731-025-00456-9

Utami, C. W. (2024). *Entrepreneurial education and innovation intention among Indonesian students*. Journal of Entrepreneurship in Emerging Economies, *16*(3), 560–578. DOI: https://doi.org/10.1108/JEEE-04-2023-0182

Wegner, D., Thomas, E., Teixeira, E., & Maehler, A. (2019). *University entrepreneurial push strategy and students' entrepreneurial intention*. International Journal of Entrepreneurial Behavior & Research, *25*(7), 1471–1490. DOI: https://doi.org/10.1108/IJEBR-10-2018-0648

Xu, D., & Lee, C. (2025). *Mechanisms linking restaurant entrepreneurship education to graduating hospitality students' entrepreneurial intentions: Validating the theory of planned behavior*. SAGE Open, *15*(1), 1–18. DOI: https://doi.org/10.1177/21582440251319957

Spodbujanje ekološkega podjetništva: vpliv podpore podjetništva na univerzi na razvoj zelenih podjetniških namer študentov na Univerzi v Skikdi

Izvleček

Ta študija preučuje vpliv mehanizmov podpore univerze na zelene podjetniške namere študentov na Univerzi 20 Août 1955 v Skikdi. Raziskava metodološko ocenjuje, kako izobraževalne pobude, institucionalne politike in fizična infrastruktura oblikujejo zavezanost študentov k razvoju okolju prijaznih podjetij. Za preučevanje teh odnosov so sistematično uporabljene opisne in analitične raziskovalne metode. Rezultati kažejo, da podpora univerze znatno poveča zelene podjetniške namere študentov. Te ugotovitve poudarjajo pomen vključevanja trajnosti v podjetniško izobraževanje in institucionalne strategije. Vendar pa je raziskava omejena, ker se osredotoča na eno samo univerzo in se opira na podatke, ki so jih posredovali udeleženci sami, kar lahko vpliva na splošno veljavnost rezultatov. Ta študija zapolnjuje vrzel v arabski akademski literaturi, saj preučuje institucionalno podporo kot osrednji dejavnik trajnostnega podjetništva. Ugotovitve kažejo, da bi morale univerze in oblikovalci politik izboljšati podjetniške ekosisteme, da bi spodbudili zeleno podjetništvo in okrepili prispevek diplomantov k trajnostnemu razvoju.

Ključne besede: podpora podjetništvu na univerzi, podjetniške namere, zeleno podjetništvo, Skikda.