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## **Examining Graduating Science and Technology Student's Entrepreneurial Intentions at the University of Biskra**

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**Abstract:** Using Krueger's entrepreneurial event model, this study investigated the factors influencing entrepreneurial intentions among graduating science and technology students at the University of Biskra. A descriptive-analytical approach was adopted in the research in order to examine the direct and indirect effects of perceived desire, perceived feasibility, entrepreneurial opportunities,

and inclinations on entrepreneurial intentions. Data were collected through a questionnaire distributed to a random sample of students, and the hypotheses were tested using structural equation modelling (SEM). The findings revealed that the self-efficacy and perceived opportunities significantly and positively impacted entrepreneurial intentions, whereas perceived feasibility did not have a direct effect. However, both perceived desire and feasibility indirectly influenced intentions by mediating perceived opportunities. Additionally, the study demonstrated that entrepreneurial inclination modified the relationship between perceived opportunities and entrepreneurial intentions, indicating that students with a higher inclination were more likely to translate opportunities into entrepreneurial actions. Moreover, the study highlighted the complex interplay between individual and contextual factors in shaping entrepreneurial intentions. It underscored the need for targeted initiatives that could enhance the self-efficacy and perceived opportunities among students. These initiatives could include entrepreneurship education programs, mentorship schemes, and the creation of a supportive university environment that fosters innovation and risk-taking.

The implications of these findings are significant for policymakers and educational institutions aiming to cultivate an entrepreneurial ecosystem among university students. By comprehending what motivates people to become entrepreneurs, universities can enhance their program and support system designs, motivating students to embark on entrepreneurial paths. Consequently, this contributes to economic growth and the generation of employment opportunities. This is particularly important in contexts where public sector employment opportunities are limited. Future research could expand the scope to include multiple universities and explore the longitudinal impacts of entrepreneurial education and support programs on students' career trajectories. Additionally, addressing the intention-behaviour gap in entrepreneurship remains a critical area for further investigation.

**Keywords:** entrepreneurial intention, perceived feasibility, self-efficacy, entrepreneurial opportunities, entrepreneurial inclination, structural equation modeling.

## Introduction

Intention is the determination to achieve something in a particular way or do something (Beddaa & Bachiri, 2021, p. 196), and it is the best indicator of behaviour (Toraman, 2022, p. 70).

Behaviour impacts both intentions and attitudes (Amofah & Saladrignes, 2022, pp. 5–6). Intention is shaped by individuals' perceptions of their surroundings; they are cognizant of their physical and social environments. They perceive the environment to anticipate the future consequences of their behaviours (attitudes, perceptions, and self-efficacy), and these preferences influence intentions that result from each individual's historical development (Sánchez et al., 2022, p. 2). The planning project requires a clear intention to be established beforehand, acting as an engine for planning. However, in some cases, the intention is formed only a short time before the actual decision, and sometimes, the intention does not lead to an actual behaviour decision. It is assumed that entrepreneurial intentions can predict individuals' behaviour in establishing their projects (Del Brío González et al., 2022, p. 10), and the amount of planned efforts they will invest in performing the behaviour. The strength of intention to achieve any task increases the probability of the individual performing that behaviour. According to Krueger and Carsrud (1993), the intention is the best predictor of behaviour, influencing behaviour through its impact on intentions, as behaviour is dependent on both intentions and a person's attitudes. Individual (personal) or situational (functional) variables also determine a better behaviour prediction. Starting a new project is relatively rare (Lande et al., 2024).

According to Thompson (2009), the state of mind directs the individual's attention. The entrepreneurial intent is a person's self-recognition of the intention to establish a new project and consciously planning to do so at some point in the future (Rudawska et al., 2021, p. 398).

Fishbein and Ajzen (2011) defined it as a state of increased mental awareness that motivates a person to start a new project or create a new value in an existing institution; entrepreneurial intention represents a state of determination and acts as a mediator between thinking and acting. Ajzen (1991) wrote that the intention is the motive for achieving a given behaviour, and the intentions capture the motivating factors that affect behaviour only if the behaviour is under volitional control (Hagger & Hamilton, 2021, p. 4). Hagger et al. state that the intention is the willingness of the person to perform a particular behaviour (2021, p. 4–5).

### ***Research Problem***

The intention-behaviour gap in entrepreneurship has been a persistent challenge in understanding and predicting entrepreneurial success. While the entrepreneurial intention is often considered a strong predictor of behaviour, studies show that the link between intention and action is not always straightforward. This gap raises important questions about the factors that influence the translation of entrepreneurial intention into actual behaviour.

The transition from academia to the workforce presents a unique set of challenges for graduating science and technology students. In the context where public sector jobs are often saturated, entrepreneurship offers a viable alternative for these individuals to leverage their skills and contribute to economic development. However, a significant gap exists between entrepreneurial intention and actual behaviour among university graduates. The understanding of the factors influencing entrepreneurial intention among this cohort is crucial for fostering a successful entrepreneurial ecosystem.

This research focused on the university of Biskra, a key institution in Algeria's science and technology landscape. Exploring the specific drivers of entrepreneurial intentions among graduating students at this institution will provide valuable insights into the challenges and opportunities of aspiring entrepreneurs in the context.

To fill the gap in current research, it was essential to answer the following questions:

1. What factors influence entrepreneurial intention among graduating science and technology students at the University of Biskra?
2. How do personal desire, perceived feasibility, and perceived entrepreneurial opportunities interact to shape these intentions?
3. Does entrepreneurial tendency, or a predisposition towards entrepreneurial activity, moderate the relationship between perceived entrepreneurial opportunities and intention?
4. To what extent do social and institutional factors, such as access to funding, mentorship, and support networks, influence student's perceptions of feasibility and opportunities?
5. What are the implications of these findings for developing effective strategies to prompt entrepreneurship among graduating science and technology students at the University of Biskra and similar institutions in Algeria?

## **Research Focus**

This research investigated the individual and contextual factors influencing the entrepreneurial intention of graduating science and technology students at the University of Biskra.

## **Research Aim and Research Questions**

To identify and analyse the key drivers of entrepreneurial intention among graduating science and technology students at the University of Biskra.

To develop a theoretical model that captures the interplay between personal desire, perceived feasibility, entrepreneurial opportunities, and entrepreneurial tendency in shaping intentions. Test the predictive power of the proposed model and assess its applicability in predicting students' entrepreneurial intention.

A project owners, compassed the responsibilities of risk- bearing, planning, supervision, and overall organisation of the project. The aim was to offer practical recommendations for developing targeted initiatives and policies to foster entrepreneurship among Algeria's graduating science and technology students.

## **Literature Review**

### ***The Self-efficacy***

The definition of an entrepreneur is intricately linked with entrepreneurship, with numerous definitions proposed throughout history. The authors highlighted the entrepreneur as possessing keen foresight, identifying latent demand for goods or services and establishing businesses accordingly. They also characterised the entrepreneur as the "captain of industry," underscoring their adeptness in navigating conditions of both imbalance and stability. Moreover, the entrepreneur is depicted as an innovator, pioneering novel solutions and products (Udukeke & Usoro, 2023, p. 16).

### ***The Realization of Desire***

In social psychology, the subjective identity refers to an individual's salient and enduring aspects (Liñán et al., 2018, p. 4; Taño et al., 2021, p. 65). It is considered the perceived attractiveness of entrepreneurial behaviour, and this concept reveals the individuals' perceptions of what they find personally attractive or unattractive about performing the behaviour. Thus, the individual is the closest to expectation, emphasising the importance of individual perception. According to Lande et al. (2024), the realisation of desires is nothing but entrepreneurial attitudes, and the personal criterion in the Ajzen model is the degree of attraction that a person has towards the behaviour of starting a project. It reflects the attitude adopted by the individual, whether positive or negative, regarding the behaviour of establishing a project, according to Ajzen. This includes the degree of encouragement the person receives from individuals supporting them (such as family, friends,) and the importance of their opinion in decision-making cited by (La Barbera & Ajzen, 2021, p. 36). According to "The theory of planned behavior" (Ajzen, 1991) Krueger et al. (2000) suggests that the perception of desire is determined by the individual's desire and perceived social norms. This evaluation is based on expected outcomes, such as seeking or not seeking independence and self-realisation, recognising opportunities, and having a passion for innovation and creativity. This depends on the individual's inspiration or assistance from parents, friends, and members of the social network (Belhassen et al., 2022, p. 139).

## ***Personal Desire***

Personal desire, according to Krueger et al. (2000), combines the two elements of “attitude towards action” and “personal norms” of attractiveness from the Theory of Planned Behavior. They are usually intertwined. However, for clarity, they are discussed separately. Conceptual issues related to attitude toward predictable behaviour, beliefs, and outcomes of behaviour (Hagger et al., 2022, p. 6). This explains that an individual’s perceptions of what is personally desirable depend on the personality’s attitudes that have an impact on the results of performing the target behaviour, here a distinction must be made between good and bad results. It must be considered that the incentives and motives drive an individual towards entrepreneurial orientation. According to Esfandiar et al. (2019), the attitude toward entrepreneurship and perceived personal desire is a psychological attitude towards a given behaviour, expressed by evaluating a specific situation with a degree of favor or dislike. It is the global scale for measuring entrepreneurial intent and evaluating entrepreneurial behavior by the behaviour adopted around an event that results in an emotional, cognitive, and behavioural interaction (Acuña-Duran et al., 2021, p. 3–4).

The subject of perceived social norms, like most subjects in the social sciences and humanities, goes back to the Greek philosophy, namely Immanuel Kant, who was critical and idealistic. He was interested in studying knowledge and reason and considered the latter essential in developing sensations and translating them into thoughts. It transforms all external events into an organised intellectual unit (Kant, 2022). The process involves organising external events into a structured, coherent mental framework, referring to the relationship between the individual and the social environment as processes of construction and building that characterise this relationship. It is carried out by the individual through perception and thought by integrating an external topic with the topics built from social perceptions’ importance in directing individual behaviour. These perceptions are the product of both the cultural and social environments; it is possible to extract their nature in a set of points, the most important of which are (Su et al., 2021, p. 12):

**Functional.** Social perception is a method of seeing the world’s consciousness, translated into judgments and actions that do not refer to only one individual but to social actions.

**Conceptual.** Perception is a set of knowledge, attitudes, and beliefs related to a specific subject. It contains knowledge and attitudes about specific situations and applications of normative values, judgments etc.

**Procedural.** Social perception has a characteristic that distinguishes it as if it is a group of cognitive elements linked by the relationships of these elements and to the extent of their presence and evidence within a specific and limited group (Boyer, 2021).

The construction of social perceptions takes place according to two important processes; the first is localisation, a very complex process of organising knowledge containing the subject of perception. It is related to mechanisms through which the transition from abstract theoretical elements to realistic images occurs. The second is anchoring or consolidation, which means including the subject knowledge within the pre-existing intellectual apparatus.

## ***The Perceived Feasibility***

This refers to expected or perceived return for perceived self-efficacy and perceived collective effectiveness. The concept of perceived merit closely aligns with the expectation theory, which posits

that individuals are motivated by the perceived relationship between effort and performance, as well as the anticipated reward for achieving successful outcomes.

The strong desire to work in a certain way depends on the strength of the expectation that work will have specific results, and also individual's desire to achieve those results (Mitchell, 2021). Therefore, the individual's prediction of a job and the effort they exert to achieve it depend on their availability to reach that achievement, the extent to which they are likely to adopt a particular behaviour, and the resulting benefits. This is based on individual's self-efficacy and the possibility of their ability to approach that behavior and the perception of effectiveness or social efficiency that helps them achieve the goal through that behaviour.

The perceived societal influence, either encouraging or discouraging entrepreneurial behaviour, is assessed. It refers mainly to the perception that a «reference person “will agree with the decision to become an entrepreneur, making it quite similar to the concept of perceived self-efficacy (Bandura, 2000). It differentiates between it and self-efficacy. It includes not only the sense of ability but also the awareness about controlling the behaviour, meaning the behaviour's performance is not solely due to the individual (Liang & Chen, 2020, p. 599). According to Koubaa (2011) the perceived feasibility consists of the assessment made by the individuals of their abilities in the field of entrepreneurial projects to embody and translate their intention into reality.

### ***Self-efficacy***

In psychology dictionaries, the term “Efficacy” is used in the sense of efficiency, while “Efficiency” is used in the sense of effectiveness (Hatos et al., 2022, p. 3–5). The difference between the two terms is worth mentioning. Efficiency refers to the availability of an individual's capabilities, which allows making efforts to solve problems, overcome obstacles that others cannot, as well as achieve objectives that cannot be achieved. Conversely, effectiveness refers to formative behavior directed towards solving problems and resisting pressures by confronting the source of these problems and pressures, attempting to overcome them, and taking positive approaches.

Bandura coined the concept of self-efficacy. When he presented the Social Learning Theory and the expectations of self-efficacy, which refers to the psychological state of individuals in having self-confidence during a particular performance (Kosge et al., 2022, p. 1811–1812), this means that an individual performs a specific behaviour, they attribute to themselves the ability to achieve this behaviour, which constitutes the self-efficacy. The more the individual believes they have the consensual behaviour capabilities to solve a problem practically, the more motivated they are to convert these convictions into effective behaviour. The self-awareness is the effectiveness of self-behaviour or the perception of the self-efficacy (Sánchez et al., 2011, p. 434).

Bandura (2023) coined the concept of self-efficacy when he presented the Social Learning Theory, in which he identified the dimensions and sources of self-efficacy. Some researchers have addressed the self-efficacy, translated as the self-efficiency (Bandura, 2023), as a useful construct in explaining the dynamic evaluation process and the development of entrepreneurial intentions. Then, the decision to engage in entrepreneurial behaviour follows. The self-efficacy is the personal ability to organise and implement a set of actions to achieve the desired goal. It focuses specifically on tasks or activities, i.e., the individual's conviction to implement the behaviour successfully (Bandura, 2023). Bandura (2023) indicates that the self-efficacy is one of the important psychological variables affecting individual's behaviour when they strive to achieve their personal goals. Individual's belief in their abilities and capabilities helps them achieve those goals and control the surrounding circumstances. The beliefs about one's ability help exercise and control the level of performance and the events that affect lives.

Chapman and Tunmer (2003) consider these are significant factors that play a major role in reducing an individual's anxiety and stress. The self-efficacy has a positive relationship with achievement in various fields. It is considered an important stimulus for motivating individuals to confront problems and pressures, contributing to achieving assigned goals. The self-efficacy is a firm belief in a better ability to organise and manage special capabilities, personal talents, and situational opportunities and to establish one's feeling of satisfaction with one's work and the achievement of the practice, which aims at promoting well-being and wellness (Bandura, 2023).

The self-efficacy is what one can achieve while working in certain situations. It gives individuals increased efficiency, enhanced independence, and confidence. The self-efficacy is based on personal competence and control of behaviour in a specific situation and is linked theoretically and empirically with the theory of attribution, which has witnessed an increasing interest in entrepreneurship research (Krueger & Brazeal, 1994, p. 94). The self-efficacy is an essential construct in behaviour, the confidence level in performing a specific task. It is the motivating cognitive axis for predicting behaviour, as it is a strong personal belief in skills and abilities to start a particular task with higher self-efficacy (Rui et al., 2019, p. 5).

It involves managing work control and self-regulating cognitive processes, motivation, and emotional and physiological states (Bandura, 1999). Entrepreneurs must also realise they are capable and psychologically equipped to work (Bakkar et al., 2021, p. 3–4). The self-efficacy is vital in this discipline, and teaching entrepreneurial competencies affects project feasibility perceptions (Le et al., 2023, p. 4–6). Lopez and Snyder (2018) defined it as the individual's belief that the skill and capabilities are sufficient to achieve the desired goals in a specific situation. Accordingly, the individual's knowledge of the sufficiency of the capabilities acts as a motivator and an activator of behaviour and its continuity towards achieving the goals.

### ***Realizing Self-efficacy***

The perceived subjective efficacy is a person's perceived ability to carry out the target the behaviour. Subjective actions have been theoretically and empirically linked with the phenomena related to managerial behaviour and cognition. They are linked to initiating and continuing behaviour under uncertainty to set higher goals and enhance new projects' perceived feasibility. Formal models are supported by theories focusing on perceived self-efficacy to understand intentions towards planned and intentional behaviors such as creating private projects.

On the other hand, intention models assume that the target behaviour is clear enough in the decision-maker's mind (Powers et al., 2020). Even if there is an excellent potential for the behaviour to be performed, the intent to do it is not necessarily present. Thus, perceptions of the self-efficacy are like the other components that build intention models, which are not static and evolve throughout the individual's experiences. This prompted researchers to use this variable as an indicator to measure the individuals' intentions (Servane, 2015, p. 51).

### ***Social Efficacy***

The social effectiveness is a personality trait, one of social psychology's most critical issues. It is a manifestation of the social strength of the individual and the extent of their connection to the surrounding community. Furthermore, social effectiveness is a criterion for the mental health of individuals. It is also one of the essential factors leading to social success and psychological compatibility. It is a social necessity to influence the group, as it reflects the interaction within the group (Kumcu & Çetinel, 2023, pp. 577–578).

The social effectiveness is an individual's ability to interact effectively with people around them. its defined as taking advantage of environmental and personal resources to achieve a desired social outcome.

Mulder et al. (2009) states three main areas that contribute to developing social competence: personal characteristics, family environment, and school environment (Aroussi, 2021, pp. 9–13).

Griggs and Fleet (2021) also concluded that knowledge of an individual's temperamental traits enables us to understand the development of their social skills.

It is defined as the individual's ability to deal successfully with the various surrounding environmental stimuli, meet work requirements, and the extent to which they can achieve these requirements. It qualifies them to be effective, productive, and efficient in dealing with others in various social situations. This implies a high sense of social responsibility and independence and an appropriate degree of self-satisfaction with life (Kumar et al., 2022).

### ***Inclination to Work***

The entrepreneurial tendency can transform the entrepreneurship into an entrepreneurial orientation, and some researchers differentiate between the two stages by the presence of an idea or a personal project the individual is developing while creating their project. This is evident through the individual's search for information that can help them improving and form their idea (Hillarion & Yeo, 2017). It also means sensitivity to the entrepreneurial profession, a combination of personal and interpersonal traits, a personal and professional social network, and the potential entrepreneur's past experiences. The work ethic is often seen as a defining characteristic of business (Kumar et al., 2022).

The individual has to decide about it, and thus the will-intentions aspects reflect 'I will achieve it, it is difficult' to perceive well-founded intentions without any inclination to act theoretically, the propensity to act depends on the opportunity of perceptions of control, i.e., the desire to control decision-making. Empirically, a closely related procedure should challenge the initiation and continuation of goal-directed behaviour under uncertainty an internal locus of control and another well-established concept of this phenomenon (acquired optimism).

This procedure predicts highly reliable adherence to goal-directed behaviour in many places (Krueger et al., 2000, p. 419). The concept of tendency to act in their model considers the individual's behaviour based on their decisions. The tendency to act is seen as a mediator of other variables that shape the law of entrepreneurship. It is not easy to imagine an individual's earnest intention without a strong propensity for action, meaning that the inclination to act should not be seen as a direct antecedent of the entrepreneurial act but rather as a moderating effect (Lukman et al., 2021 p. 2–3).

### ***The Perceived Opportunity***

The entrepreneurship contingent on opportunity since the entrepreneurial opportunity is the situation in which a new organisational mechanism can take a new form that provides an opportunity for profit. The opportunity is related to profit. Some researchers have used the term "reasonable opportunity", characterised as achievable and representing a desirable future situation for the individual (Azam et al., 2021, p. 92).

The perceived opportunity is the future situation linked to the decision-maker personality. From their point of view, it is desirable and economically feasible, i.e., within the limits of capabilities and efficiency (Yoruk et al., 2022, p. 25). The opportunity is linked to the cognition and creativity, arguing

that new ideas about opportunities follow from existing knowledge transferred through cognitive processes (Kamuri, 2021). Entrepreneurship opportunities can come from three primary sources, namely (Villanueva-Flores et al., 2021, p. 411–413):

- The entrepreneur's experience and their previous professional life, a skilled mechanic opens a car repair shop, the baker opens a bakery etc.
- Circumstantial cases include meeting a future partner, exploiting a license, or an exploitation concession. The systematic search for a business opportunity through some techniques, such as brainstorming or problem sensitivity, requires effort until exploited by the entrepreneur.

Based on the afore-mentioned ideas, the following hypotheses are proposed:

H1: The desire perception has a positive effect on perceived entrepreneurial opportunities.

H2: There is a positive effect of perceived feasibility on perceived entrepreneurial opportunities.

H3: There is a positive effect of entrepreneurial opportunities on entrepreneurial intention.

H4: The desire perception has a positive effect on the entrepreneurial intent.

H5: There is a positive effect of the perceived feasibility on the perceived entrepreneurial intention.

H6: The entrepreneurial opportunities mediate the relationship between the (perceived desire and perceived feasibility) and the entrepreneurial intent.

H7: The entrepreneurial tendency modifies the relationship between the perceived entrepreneurial opportunities and the entrepreneurial intent.

## **Materials and Methods**

### ***Data Collection and Sample***

The study targeted all students enrolled at Mohamed Khider University of Biskra during the 2022/2023 academic years. The total student population for this academic year was 31,124, with 19,463 students in the first phase and 11,661 in the second. International students were distributed across six colleges and institutes across both phases (147 in the first phase and 57 students in the second).

A total of 159 Bachelor's and Master's degree programs were eligible for inclusion. However, there were 67 specialties in the Bachelor's degree, 10 of which were not registered, and 92 in the Master's Degree, 8 of which were not registered. The actual number of specialisations reached 57 in the Bachelor's Degree and 84 in the Master's Degree, so 141 specialisations. The statistical operations of the under-graduating class indicated that the number of students in the batch understudy for the year 2022/2023 in the College of Science and Technology was 1519, including 791 in the Bachelor and 728 in the Master's.

Data collection was conducted through a questionnaire divided into two parts. The first part gathered demographic information. The second part comprised 23 items related to the study's focus, divided into two axes.

The first axis explored personal desires coded as (Des -per) and collective efficacy coded as (Effic-col) using five sub-items each. Perceived social norms were coded as (N- soc- pre), and for self-efficacy, it was coded as (Effic-pre). Each items were measured through four. In comparison, the second axis focused on the independent variable, entrepreneurial intention, encoded as (Int) and employed 05

items. A seven-point Likert scale was used for all measurements, and these items were determined for the independent variable (entrepreneurial intention).

The items of the dependent variables dimensions (subjective standards, perceived social standards, self-efficacy, and group effectiveness). Questionnaires were distributed from November 2022 to January 2023 at Mohamed Khider University, Biskra. They were ensuring respondent anonymity. Electronic questionnaires were utilised for some students due to their irregular attendance. These questionnaires were disseminated through the university website and social media.

Several challenges were encountered during data collection, including the absence of familiarity and culture with a questionnaire within the university community, the lack of understanding of some students of the study's subject matter, and time constraints faced by students due to demanding academic schedules and extracurricular commitments.

Student reluctance towards paper questionnaires, extended distribution periods, and response times were observed. Initially, a questionnaire was administered to 30 students, prompting adjustments. Subsequently, 300 finalised questionnaires were distributed, resulting in the retrieval of 260 responses. Of these, 230 were valid for analysis (217 paper-based and 176 electronic), yielding a response rate of 72.3%.

Demographic data indicated a near-equal gender distribution (62% female, 38% male), suggesting a predominantly female population. The majority of respondents (58.5%) were under 25 years, followed by (28%) aged 25 - 35, and (13.5%) over 35. Regarding students (67%), (25%) were students and employees, and (8%) were students and self-employed.

### **Data Analysis**

To analyse the causal relationships between the variables and process the obtained data, two stages were implemented: first, an exploratory analysis was conducted using (SPSS V24) second, a confirmatory factor analysis was performed using structural equations modeling with "AMOS V24".

**Table 1**

*Results of the Exploratory Analysis*

<b>Variables</b>	<b>Cronbach-<math>\alpha</math></b>	<b>KMO</b>	<b>Global number of items</b>	<b>N of valid items</b>
Personal Desirability	0.930	0,858	05	4
Perceived Social Norms	0.781	0,792	05	4
Perceived Self-Efficacy	0.907	0,832	05	4
Perceived Collective Efficacy	0.871	0,840	05	4
Opportunity	0.934	0,874	05	5
Propensity to Act	0.896	0,849	05	5
Intention	0.826	0,974	03	3
Total	0.951	/	33	29

*Source:* Prepared by the authors.

Principal Component Analysis (PCA), and exploratory analysis were conducted using IBM SPSS 24 software. All PCA results were satisfactory. Data for all scales were suitable for factorisation, with KMOs and Cronbach's alpha exceeding 0.6 and significant Bartlett's sphericity, indicating good internal consistency. Structural equation modelling was employed for more accurate results, enabling robust

measurement and structural model estimation, especially when the independent variable is included. This method's ability to handle underlying factors on multiple statements has led to its widespread adoption among researchers. Confirmatory factor analysis was used to examine the measurement and structural model.

### **Testing Hypotheses Using AMOS Software**

The results of the fit indicators demonstrated the following values: the root mean square error convergence index (RMSEA) is 0.057, within the acceptable range (0.05 and 0.08), the validity of the GIF is 0.92, for the normal fit index (NFI) it is 0.92 and the CFI is 0.94. The Lewis TLI is 0.93, which is all greater than 0.90, and the SRMR is 0.0422, less than 0.05. The measurement model involved constructing latent variables based on observed variables. Our model describes the observed variables' standard characteristics (validity and stability).

For this purpose, the focus was on Cronbach's alpha coefficient, used to calculate the scale's internal consistency, and confirmatory factor CFA, used to calculate convergent validity through two-parameter composite reliability (CR). Moreover, the average variance extracted AVE. (CR) should be greater than 0.50, and AVE for each factor should be smaller than (CR). The value of (CR) represents internal consistency reliability. Stability, internal consistency, and factor loading are assessed through (CR) and (AVE). In contrast, convergent validity is assessed through the coefficient of saturation (CS). Hair Jr et al. (2014, p. 112) and the following Table shows the results of validity and reliability.

**Table 2**

*Measurement Model Quality Standards*

	<b>CR</b>	<b>AVE</b>	<b>POR</b>	<b>EFIPER</b>	<b>EFICOL</b>	<b>SOPER</b>	<b>DEPER</b>	<b>TEN</b>
<b>POR</b>	0,869	0,666	0,865					
<b>EFIPER</b>	0,808	0,505	0,729	0,824				
<b>EFICOL</b>	0,810	0,517	0,584	0,528	0,729			
<b>SOPER</b>	0,800	0,500	0,736	0,822	0,647	0,842		
<b>DEPER</b>	0,886	0,661	0,735	0,676	0,625	0,727	0,746	
<b>TEN</b>	0,617	0,498	0,708	0,757	0,507	0,729	0,673	

Source: Prepared by the authors.

As shown in Table 2, Cronbach's alpha values therange between (0.714 and 0.868), exceeding the minimum limit of (0.7), and this indicates that the questionnaire possessed a high degree of stability, ensuring its validity for analysing and interpreting the study's results and testing its hypotheses. We could utilise it in the practical implementation of the study, as per the Nanley Scale (Nunnally Reference), which was established with a minimum threshold of 0.70 (Nunnally and Bernstein, 1994, pp. 264–265).

The internal consistency coefficient ranged from (0.731 to 0.872), and the composite reliability ranged from (0.810 to 0.905), both exceeding the 0.7threshold. This suggests strong internet consistency among the questionnaire items, implying good stability and reliability of the model. All variables demonstrated asymptotic validity with saturation coefficients exceeding (0.4). The average

variance explained (AVE) for all variables exceeded (0.5), further supporting the quality of the measurement model.

Discriminant validity was assessed on the Fornell and Larcker (1981), which states that the square of the (AVE) for each latent variable should be greater than the correlations between that variable and other variables in the matrix (Fornell & Larcker, 1981, p. 376). The results presented in Table 2 show that the square root of the (AVE) (diagonal values) is indeed greater than the correlations between the latent variables (off-diagonal value). This indicates the existence of differentiation between the latent variables.

The model is suitable for measuring steady variables based on internal consistency, convergent validity, and discriminate validity assessments. The significance of path coefficients between external and internal latent variables was examined to test the proposed hypotheses using the bootstrapping technique. A value exceeding (1.96) indicates a significant path (Hair et al., 2014).

All measured variables are presented in Table No. (03), demonstrating positive values for all study variables. Regression values were ( $r = 0.69$ ) for an entrepreneurial opportunity and ( $r = 0.80$ ) for the entrepreneurial mechanism, with significance of ( $p < 0.05$ ). This confirms the acceptance of the scalar model. However, before proceeding the second-order scalar (emphatic) model, the potential presence of standard latent variables should be considered.

**Table 3.**

*Estimates of Direct Effects*

	<b>Result</b>	<b>P</b>	<b>C.R</b>	<b>S.E</b>	<b>Estimate</b>
POR<PEDE	,079	,147	,589	,589	Not significant
POR< PEDE	,844	,119	7,079	***	Statically significant
INT < POR	,174	,030	5,807	***	Statically significant
INT< PEFE	,272	,051	5,343	***	Statically significant
INT<PEDE	,019	,060	,313	,754	Not significant
POR<PDE	,844	,119	7,079	***	Statically significant
INT < POR	,174	,030	5,807	***	Statically significant
INT<PEDE	,019	,060	,313	,754	Not significant

*Source:* Prepared by the authors.

The results presented in the Table purify the outputs of Amos for all the direct relationships in this study, as shown by the model in Figure (2). The hypothesis test is determined in Table (3) based on the probability value (P-value). The hypothesis is proven and statistically significant if the obtained P-value is less than or equal to 0.05. The standardised estimate of the “high tendency group” is 0.85, while the exact estimate for the “low tendency group” is (-0.05); it can be concluded that the effect of the perceived entrepreneurial opportunities on entrepreneurial intention is more pronounced in the high tendency group compared to the “low tendency” group. The results show that the type of moderation is complete moderation, and the standardised estimate of the high slope group is statistically significant. In contrast, the standardised estimate of the low slope group is not statistically significant.

## Discussion

In light of most of the theories used to predict behaviour, this study sought to discover the factors that provoked the entrepreneurial intention of the university student (subjective and collective factors). After conducting an analytical questionnaire study on a sample of Biskra University students, the results showed the following:

Discussing the results of the main hypothesis, which stated that there was a “positive effect of the perception of desire on the perceived entrepreneurial opportunities,” and based on the obtained results, the structural regression path of estimating the perceived desire on the perceived opportunities was positive and not significant ( $p = .589$ ;  $\beta = 0.06$ ); therefore, it can be concluded that the first hypothesis was not confirmed, and this did not agree with the previous studies that the researcher relied on, namely the study (Krueger et al., 2000) and the study of (Esfandiar et al., 2019). The perception of opportunities had a positive relationship with the personal situation through individual factors and personality traits.

It enables the individual to discover opportunities and the ability to analyse, evaluate, and then exploit them. A person who possesses these individual factors can transform market opportunities into personal opportunities. A study confirmed this as perceived collective norms that explain the strength of perception of structural support, whether financial support or by family, relatives, or support structures, do not positively affect perceived entrepreneurial opportunities. The second main hypothesis stated that “there was a positive effect of the perceived feasibility on the perceived entrepreneurial opportunities”.

Based on the obtained results, the structural regression path to estimate the perceived desire for perceived opportunities was positive and not significant ( $p = .000$ ;  $\beta = 0.77$ ); therefore, the second main hypothesis was confirmed, as the findings of the present study confirmed a significant positive correlation. There was also a statistically significant effect of the perceived feasibility on the perceived opportunities from the student's point of view. This indicated that the university training and development offered the student tangible skills and competencies, which raised the student's self-efficacy; the effectiveness in shaping social relationships with various structures, whether financial, material, or even psychological support, had a positive relationship to exploiting entrepreneurial opportunities in the market.

This was confirmed by previous studies (Esfandiar et al., 2019) and Krueger et al.'s (2000) study. The third main hypothesis stated that “there was a positive effect of entrepreneurial opportunities on entrepreneurial intention,” based on the obtained results, the structural regression path to estimate the perceived desire for perceived opportunities was positive and insignificant ( $p = .000$ ;  $\beta = 0.37$ ).

Therefore, the second main hypothesis was achieved; the statistical results confirmed an impact relationship for entrepreneurial opportunities in the entrepreneurial intention while acquiring the skills of transforming market opportunities into self-opportunities and evaluating them positively, and then the ability to exploit these opportunities to establish projects in particular. This was confirmed by previous studies by Liang et al. (2022) and Esfandiar et al. (2019).

The sixth main hypothesis stated that “Entrepreneurial opportunities mediated the relationship between (perceived desire and perceived feasibility) and entrepreneurial intention, which had a direct more significant effect than an indirect effect in mediating between each of the two relationships, and this was in agreement with the study by Krueger et al. (2000), and the study of (Esfandiar et al., 2019). The current study confirmed that entrepreneurial opportunities contributed to interpreting the intention to realise the perceived desire and feasibility. The median variable explained a greater

variance than the interpreted variance before the independent variable, and the second is that the statistical significance of the indirect effect is greater than the statistical significance of the direct effect.

This means that the influence of the two variables of perceived feasibility, i.e., self-efficacy and collective effectiveness, is explained more by perceived entrepreneurial opportunities. Some studies, including the study of (Abuzhuri & Hashim, 2017), have confirmed that entrepreneurial opportunities mediate the relationship between the role of having relatives who work in entrepreneurship (collective effectiveness) and entrepreneurial intention, yet do not play the role of a mediator between professional good (self-efficacy) and entrepreneurial intentions.

The seventh central hypothesis stated that “the entrepreneurial tendency modified the relationship between the perceived entrepreneurial opportunities and the entrepreneurial intention” the study by (Esfandiar et al., 2019) and the study by Krueger et al. (2000), the results showed that the entrepreneurial tendency role plays the moderated and moderated variable as complete moderation since the standardised estimate of the high slope group is statistically significant. At the same time, the standardised estimate of the low slope group is not statistically significant.

This explains that the students with a greater entrepreneurial tendency have a more entrepreneurial intention to seize entrepreneurial opportunities. The entrepreneurial tendency contributes to the interpretation of self-abilities in discovering and exploiting opportunities and the ability to evaluate them positively. This would enhance entrepreneurial intentions. The study by confirmed this (Esfandiar et al., 2019).

## **Conclusion and Implications**

The interpretation of entrepreneurial intentions among university students has garnered substantial attention from researchers across diverse disciplines due to its significance in predicting post-graduation behaviour and the propensity for self-employment.

In this research, an attempt was made to find out the factors affecting the determination of behaviour between the influence of what is subjective or internal related to the student’s self-efficacy, and the external influence related to influences from society and visualise the result of these social relations.

The results indicated that the effectiveness or the self-efficacy as well as the development of capabilities and personal desire impact future entrepreneurial intentions, similar to collective effectiveness, and the perceptions of university criteria for students do not enhance their entrepreneurial orientation.

## **Study Limitation**

It is worth noting that this study was limited only to a sample of university students; therefore, the subsequent study can study the entrepreneurial intention of a sample of university graduates. This study was also conducted on a sample of one university, the University of Biskra, to study a group of universities later on and compare different students from different universities. For the questionnaire, the researchers encountered difficulty in comprehending certain paragraphs written by the students, leading to the rejection of several items. In its distribution, it was found difficult because of the lockdown and absentees, which imposed the use of the electronic questionnaire with the paper questionnaire.

## **Suggestions for Future Research**

Based on the results above, we suggest the following set of suggestions:

Expanding the scope: the study could include a broader range of universities and graduates, enrolling comparisons across diverse student populations.

Addressing comprehension issues: Refine the questionnaire to ensure greater clarity and address comprehension difficulties encountered by some respondents, enhancing future research's validity.

Exploring the role of mentorship: examining the influence of mentorship programs on entrepreneurial intention among university students would yield valuable insights.

Longitudinal study: conducting a longitudinal study to track the entrepreneurial journey of graduates from the University of Biskra would provide valuable insights into the factors influencing their career paths.

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### **References**

- Abuzhuri, N. M., & Hashim, N. B. (2017). The role of entrepreneurial opportunity recognition on relationship among entrepreneurship education and entrepreneurial career option. *European Journal of Business and Management*, 9(30), 99–106.
- Acuña-Duran, E., Pradenas-Wilson, D., Oyanedel, J. C., & Jalon-Gardella, R. (2021). Entrepreneurial intention and perceived social support from academics-scientists at Chilean universities. *Frontiers in Psychology*, 12, Article 682632. <https://doi.org/10.3389/fpsyg.2021.682632>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-t](https://doi.org/10.1016/0749-5978(91)90020-t)
- Amofah, K., & Saladrighes, R. (2022). Impact of attitude towards entrepreneurship education and role models on entrepreneurial intention. *Journal of Innovation and Entrepreneurship*, 11(1), Article 36. <https://doi.org/10.1186/s13731-022-00197-5>
- Aroussi, M. (2021). L'intention entrepreneuriale des étudiants en Algérie. *Revue de l'Entrepreneuriat et de l'Innovation*, 3(12), 1–25. <https://doi.org/10.34874/IMIST.PRSM/reinnova-v3i11.31687>
- Azam, S., Hussain, S., & Azam, H. (2021). A brief review of opportunity recognition in entrepreneurship research. *Asian Social Studies and Applied Research (ASSAR)*, 2(3), 91–112.

- Bakkar, B. S., Mohammad, A. L., Shayeb, M. A., Suhail, A. Z., & Shendi, Y. A. A. (2021). The psychometric characteristics of the Omani entrepreneurial self-efficacy scale. *Journal of Entrepreneurship Education, 24*(S1), 1–12.
- Bandura, A. (1999). A social cognitive theory of personality. In L. Pervin & O. John (Eds.), *Handbook of personality* (2nd ed., pp. 154–196). New York: Guilford Publications.
- Bandura, A. A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science, 9*(6), 139–143. <https://doi.org/10.1111/1467-8721.00064>
- Bandura, A. (2023). *Social cognitive theory: An agentic perspective on human nature*. Wiley.
- Beddaa, M., & Bachiri, M. (2021). L'impact du potentiel touristique sur les intentions entrepreneuriales dans le tourisme durable: cas de la ville de Merzouga. *Revue marocaine de recherche en management et marketing, 13*(1), 189–213. <https://doi.org/10.48376/IMIST.PRSM/remarem-v13i1.26695>
- Belhassen, L., Koubaa, S., Wali, M., & Dammak, F. (2022). Experimental and numerical investigation of hole-flanging process with rubber punch. In T. Bouraoui, T. Benameur, S. Mezlini, C. Bouraoui, A. Znaidi, N. Masmoudi, & N. Ben Moussa (Eds.), *Advances in mechanical engineering and mechanics II* (pp. 262–268). Cham: Springer. [https://doi.org/10.1007/978-3-030-86446-0\\_34](https://doi.org/10.1007/978-3-030-86446-0_34)
- Boyer, H. (2021). Représentation. In *Langage et société* (pp. 301–304). Éditions de la Maison des sciences de l'homme. <https://doi.org/10.3917/lhs.01.0302>
- Chapman, J. W., & Tunmer, W. E. (2003). Reading difficulties, reading-related self-perceptions, and strategies for overcoming negative self-beliefs. *Reading & Writing Quarterly, 19*(1), 5–24. <https://doi.org/10.1080/10573560308205>
- Del Brío González, J. Á., Mitre Aranda, M., & Barba-Sánchez, V. (2022). Environmental awareness and the entrepreneurial intention in university students: Direct and mediating effects. *The International Journal of Management Education, 20*(3), Article 100719. <https://doi.org/10.1016/j.ijme.2022.100719>
- Esfandiar, K., Sharifi-Tehrani, M., Pratt, S., & Altinay, L. (2019). Understanding entrepreneurial intentions: A developed integrated structural model approach. *Journal of Business Research, 94*, 172–182. <https://doi.org/10.1016/j.jbusres.2017.10.045>
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review, 26*(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Fishbein, M., & Ajzen, I. (2011). *Predicting and changing behavior: The reasoned action approach*. New York : Taylor And Francis E-Library. <https://doi.org/10.4324/9780203838020>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. <https://doi.org/10.1177/002224378101800104>
- Griggs, G., & Fleet, M. (2021). Most people hate physical education and most drop out of physical activity: In search of credible curriculum alternatives. *Education Sciences, 11*(11), Article 701. <https://doi.org/10.3390/educsci11110701>

- Hagger, M. S., & Hamilton, K. (2021). Effects of socio-structural variables in the theory of planned behavior: A mediation model in multiple samples and behaviors. *Psychology & Health, 36*(3), 307–333. <https://doi.org/10.31234/osf.io/rfx9d>
- Hagger, M. S., Cheung, M. W., Ajzen, I., & Hamilton, K. (2022). Perceived behavioral control moderating effects in the theory of planned behavior: A meta-analysis. *Health Psychology, 41*(2), 155–167. <https://doi.org/10.1037/hea0001153>
- Hatos, R., Cioban, S., Bea, G., Dodescu, A., & Hatos, A. (2022). Assessing the impact of entrepreneurial education on entrepreneurial intentions among Romanian doctoral students and postdoctoral researchers. *Sustainability, 14*(14), Article 8369. <https://doi.org/10.3390/su14148369>
- Hillarion, B., & Yeo, S. (2017). Education À L'entrepreneuriat et propension À Entreprendre en Contexte de formation Professionnelle en Cote d'Ivoire. *European Scientific Journal, 13*(28), 335–357. <https://doi.org/10.19044/esj.2017.v13n28p335>
- Kamuri, S. (2021). *Understanding pursuing as an entrepreneurial competence and the relationship with performance of value-system actors in Kenya's leather industry*. Machakos University Press. <http://ir.mksu.ac.ke/handle/123456780/8092>
- Kant, I. (2022). *Three critiques: Critique of pure reason, critique of practical reason, critique of judgment*. DigiCat.
- Kosge, C. N., Michael, K., & Ernest, S. (2022). Effects of human behavior on entrepreneurial intention of fourth year University students in Kenya. *Journal of Economics, Finance And Management Studies, 5*(6), 1809–1820. <https://doi.org/10.47191/jefms/v5-i6-32>
- Koubaa, S. (2011). L'intention entrepreneuriale des étudiants au Maroc une analyse par l'approche PLS. In *7ème Congrès de l'Académie de L'Entrepreneuriat et de l'Innovation*. [https://www.researchgate.net/publication/305850859\\_L'INTENTION\\_ENTREPRENEURIALE\\_DES\\_ETUDIANTS\\_AU\\_MAROC\\_UNE\\_ANALYSE\\_PAR\\_L'APPROCHE\\_PLS](https://www.researchgate.net/publication/305850859_L'INTENTION_ENTREPRENEURIALE_DES_ETUDIANTS_AU_MAROC_UNE_ANALYSE_PAR_L'APPROCHE_PLS)
- Krueger, N. F., & Brazeal, D. V. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice, 18*(3), 91–104. <https://doi.org/10.1177/104225879401800307>
- Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development, 5*(4), 315–330. <https://doi.org/10.1080/08985629300000020>
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing, 15*(5–6), 411–432. [https://doi.org/10.1016/s0883-9026\(98\)00033-0](https://doi.org/10.1016/s0883-9026(98)00033-0)
- Kumar, S., Bhatt, R., & Ganguly, D. G. (2022). *Organizational behaviour*. Academic Guru Publishing House.
- Kumcu, E. H., & Çetinel, M. (2023). The relationship between five-factor personality traits and future expectations: The case of University students. *Alanya Akademik Bakış, 18*(2), 572–594. <https://doi.org/10.17130/ijmeh.861974>

- La Barbera, F., & Ajzen, I. (2021). Moderating role of perceived behavioral control in the theory of planned behavior: A preregistered study. *Journal of Theoretical Social Psychology*, 5(1), 35–45. <https://doi.org/10.1002/jts5.83>
- Lande, E., Rasolonjatovo, H. R. J., & Rakoto, H. O. (2024). *Rôle des dispositifs académiques et para-académiques dans l'intention entrepreneuriale et dans le passage à l'acte des étudiants-entrepreneurs*. HAL. <https://ideas.repec.org/s/hal/journal.html>
- Le, T. M., Hoang, H., & Nguyen, S. (2023). Does entrepreneurial training change minds? A case study among Southeast Asian business students. *Irish Educational Studies*. <https://doi.org/10.1080/03323315.2023.2194667>
- Liang, C., & Chen, C. (2020). Empowering entrepreneurial intention through entrepreneurial self-efficacy: Comparison of farmers with and without entrepreneurial experience in Taiwan. *Asia Pacific Business Review*, 27(4), 595–611. <https://doi.org/10.1080/13602381.2020.1857069>
- Liang, C., Liang, C. T., & Lp, C. Y. (2022). Tenacity in design entrepreneurship: how to stimulate entrepreneurial intention. *International Journal of Technology and Design Education*, 32, 717–737. <https://doi.org/10.1007/s10798-020-09617-7>
- Liñán, F., Ceresia, F., & Bernal, A. (2018). Who intends to enroll in entrepreneurship education? Entrepreneurial self-identity as a precursor. *Entrepreneurship Education and Pedagogy*, 1(3), 222–242. <https://doi.org/10.1177/2515127418780491>
- Lopez, S. J., & Snyder, C. R. (2018). *The Oxford handbook of positive psychology* (2nd ed.). Oxford University Press.
- Lukman, S., Bao, P. X., Kweku-Lugu, B., Arkorful, V. E., Latif, A., Gadabu, A., Charmaine-Kwade, P., Basiru, I., & Sadiq, M. A. (2021). Diasporan students social entrepreneurship intention: The moderating role of institutional support. *Journal of Public Affairs*, 21(1), e2108. <https://doi.org/10.1002/pa.2108>
- Mitchell, T. R. (2021). Expectancy-value models in organizational psychology. In N. T. Feather (Ed.), *Expectations and Actions* (pp. 293–312). Routledge. <https://doi.org/10.4324/9781003150879-16>
- Mulder, M., Gulikers, J., Biemans, H., & Wesselink, R. (2009). The new competence concept in higher education: Error or enrichment?. *Journal of European Industrial Training*, 33(8/9), 755–770. <https://doi.org/10.1108/03090590910993616>
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill Company.
- Powers, B., Le Loarne-Lemaire, S., Maalaoui, A., & Kraus, S. (2020). “When I get older, I wanna be an entrepreneur”: The impact of disability and dyslexia on entrepreneurial self-efficacy perception. *International Journal of Entrepreneurial Behavior & Research*, 27(2), 434–451. <https://doi.org/10.1108/ijebr-06-2020-0400>
- Rudawska, J., Pavlov, D., & Boneva, M. (2021). Individual entrepreneurial orientation and entrepreneurial intention. Comparative research on Polish and Bulgarian students. *Scientific Papers of Silesian University of Technology. Organization and Management Series*, (153), 397–407. <https://doi.org/10.29119/1641-3466.2021.153.28>

- Rui, F., Weimar, R.-J., & António, X. (2019). Determinant factors of entrepreneurial intention among university students in Brazil and Portugal. *Journal of Small Business & Entrepreneurship*, 32(1), 33–57. <https://doi.org/10.1080/08276331.2018.1551459>
- Sánchez, B. V., Aranda, M., & Brío-González, J. D. (2022). The entrepreneurial intention of university students: An environmental perspective. *European Research on Management and Business Economics*, 28(2), Article 100184. <https://doi.org/10.1016/j.iedeen.2021.100184>
- Sánchez, J. C., Carballo, T., & Gutiérrez, A. (2011). The entrepreneur from a cognitive approach. *Psicothema*, 23(3), 433–438. <https://www.redalyc.org/pdf/727/72718925015.pdf>
- Servane, D. G. (2015). Aide a la creation d'entreprise et auto-efficacité ntrepreneuriale. *Revue de l'Entrepreneuriat*, 14(4), 47–71. <https://doi.org/10.3917/entre.144.0047>
- Su, Y., Zhu, Z., Chen, J., Jin, Y., Wang, T., Lin, C., & Xu, D. (2021). Factors influencing entrepreneurial intention of University students in China: Integrating the perceived University support and theory of planned behavior. *Sustainability*, 13(8), Article 4519. <https://doi.org/10.3390/su13084519>
- Taño, D. G., De La Rosa, I. R., Rodríguez, F. J. G., & Soto, E. G. (2021). *Identidad y emprendimiento en el alumnado universitario*. In *El emprendimiento ante las crisis* (pp. 63–68). Fundación General de la Universidad de La Laguna. [https://www.acede.org/intranet/uploads/Libro\\_Abstracts\\_WS\\_ACEDE\\_GEM\\_092021.pdf#page=63](https://www.acede.org/intranet/uploads/Libro_Abstracts_WS_ACEDE_GEM_092021.pdf#page=63)
- Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice*, 33(3), 669–694. <https://doi.org/10.1111/j.1540-6520.2009.00321.x>
- Toraman, Y. (2022). User acceptance of Metaverse: Insights from technology acceptance model (TAM) and planned behavior theory (PBT). *EMAJ: Emerging Markets Journal*, 12(1), 67–75. <https://doi.org/10.5195/emaj.2022.258>
- Udukeke, F. O., & Usoro, E. B. (2023). *Entrepreneurship and innovation*. Dorand Publisher.
- Villanueva-Flores, M., Diaz-Fernandez, M., Hernandez-Roque, D., & Van Engen, M. (2021). Psychological capital and entrepreneurship: Gender differences. *Gender in Management: An International Journal*, 36(3), 410–429. <https://doi.org/10.1108/gm-07-2020-0231>
- Yoruk, E., Johnston, A., & Maas, G. (2022). Conceptualising the transformational power of entrepreneurship from an entrepreneurial ecosystems perspective focusing on environmentally and socially inclusive economic growth. *International Journal of Technological Learning, Innovation and Development*, 14(1–2), 192–220. <https://doi.org/10.1504/IJTLID.2022.121476>