

Education and entrepreneurship. Entrepreneurial training in secondary education and its impact on entrepreneurial interest in the United States and Spain

María Consuelo Digón-Arroba, María-Camino Escolar-Llamazares, Cristina di Giusto-Valle, Tamara de la Torre-Cruz, Isabel Luis-Rico, Carmen Palmero-Cámara & Alfredo Jiménez

To cite this article: María Consuelo Digón-Arroba, María-Camino Escolar-Llamazares, Cristina di Giusto-Valle, Tamara de la Torre-Cruz, Isabel Luis-Rico, Carmen Palmero-Cámara & Alfredo Jiménez (2025) Education and entrepreneurship. Entrepreneurial training in secondary education and its impact on entrepreneurial interest in the United States and Spain, Cogent Social Sciences, 11:1, 2539548, DOI: [10.1080/23311886.2025.2539548](https://doi.org/10.1080/23311886.2025.2539548)

To link to this article: <https://doi.org/10.1080/23311886.2025.2539548>



© 2025 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 10 Aug 2025.



Submit your article to this journal [↗](#)



Article views: 1835



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)

Education and entrepreneurship. Entrepreneurial training in secondary education and its impact on entrepreneurial interest in the United States and Spain

María Consuelo Digón-Arroba^a, María-Camino Escolar-Llamazares^b ,
Cristina di Giusto-Valle^c, Tamara de la Torre-Cruz^c, Isabel Luis-Rico^c,
Carmen Palmero-Cámara^c and Alfredo Jiménez^d

^aDepartment of Romance Languages, University of Michigan, Michigan, USA; ^bDepartamento de Ciencias de la Salud, Universidad de Burgos, Burgos, Spain; ^cDepartamento de Ciencias de la Educación, Universidad de Burgos, Burgos, Spain; ^dDepartment of Management, KEDGE Business School, Talence, France

ABSTRACT

The pivotal role of education and entrepreneurial training in fostering economic growth, recovery and societal advancement is widely recognized. This study examines the influence of entrepreneurial training in secondary education on students' entrepreneurial interest in the United States and Spain, exploring how tailored educational approaches can shape future entrepreneurial ecosystems. Specifically, the objective of this study is to show and to analyze the relation that exists between training in financial knowledge and the didactic methods associated with entrepreneurial interest. An explanatory and transversal type of design is proposed. The entrepreneurial interest of students at Burgos University (Spain), with no formal business education and where actions to promote entrepreneurial spirit are limited, is compared with a sample from Washtenaw in the state of Michigan where entrepreneurship education has achieved a notable degree of maturity. The sample under study amounted to 276 students, between 13 and 17 years of age. The results confirmed the positive influence of entrepreneurship education as a factor that improved the entrepreneurial interest of the students from both Burgos and Michigan. Investigations are needed that follow students who subsequently become entrepreneurs over time to know which subjects taught at school were most useful when starting out as an entrepreneur.

ARTICLE HISTORY

Received 17 May 2023
Revised 17 July 2025
Accepted 20 July 2025

KEYWORDS

American; competences; education; entrepreneurial interest; Spanish; students; entrepreneur

SUBJECTS

Educational Psychology;
Education Policy &
Politics; Educational
Research

1. Introduction

In recent studies, the decisive impact that education and entrepreneurial training have on growth, economic recovery and the progress of society through innovation and job creation has been demonstrated (Doan, 2022; Everett, 2024; Hou et al., 2022; Kirman Bilgin & İnaltekin, 2022; Y. Li et al., 2022; Wiramihardja et al., 2022). Both the most advanced and the most dependent societies need entrepreneurs to approach not only an increasingly interrelated and complex job market, but also to find solutions that can address new social needs undergoing dizzying changes of increasing complexity, more intensely interrelated than before and rapidly evolving every day (Comesaña-Comesaña et al., 2022; Smith et al., 2022; Sousa & Costa, 2022).

It is thought that entrepreneurial education improves entrepreneurship through three different mechanisms (Everett, 2024; Hou et al., 2022; Kirman Bilgin & İnaltekin, 2022; Wiramihardja et al., 2022). In the first place, through the provision of instrumental skills that are needed for the launch and the growth of a new firm (Comesaña-Comesaña et al., 2022; Honig, 2004; Smith et al., 2022; Sousa & Costa, 2022). In second place, through the improvement of the cognitive capability of individuals to understand the variables involved in the recognition and the evaluation of economic opportunities (DeTienne & Chandler,

CONTACT María-Camino Escolar-Llamazares  cescolar@ubu.es  Departamento de Ciencias de la Salud, Universidad de Burgos, 09001 Burgos, Spain

© 2025 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

2004). And, in third place, through the improvement of attitudes toward entrepreneurship (Doan, 2022; Farrokhnia et al., 2022; Peterman & Kennedy, 2003; Qader et al., 2022; Renart Vicens et al., 2022).

The *curricula* of many countries around Spain promote subjects related to financial and entrepreneurship education. Thus, in Spain, Organic Law 8/2013, of 9 December, for the Improvement of Educational Quality boosted the development of entrepreneurial attitudes from early educational stages and specifically incorporated Entrepreneurship Education for the first time at secondary school level. A curricular policy that has been kept alive in Organic Law 3/2020, of December 29, in amendment of Organic Law 2/2006, of May 3, on Education. The current debate is no longer centered on the incorporation of this type of subject but on its content and repercussions. Over the past 30 years or so, rigorous evaluations of entrepreneurial education programs have been carried out, such as the one completed by Gibb (1987) in the United Kingdom and those of Klostén et al. (2021) in Sweden and Klandt (2004) in German-speaking countries. Training programs have also been analyzed outside Europe, in the studies of Jones and English (2004) in Australia, Khan and Almoharby (2007) in Oman and Coduras et al. (2010), J. Li et al. (2003), Hou et al. (2022) and Y. Li et al. (2022) in China.

Based on the existing literature and the need for comparative studies that explore the connection between entrepreneurship education and students' entrepreneurial interest—particularly in different cultural and educational contexts—this study aims to analyze which factors (state, sex, age, school ownership, family entrepreneurial background, knowledge of entrepreneurship networks and the presence of specific methodologies, abilities and knowledge in the curriculum) best predict secondary school students' entrepreneurial interest in Spain and the United States.

Therefore, in this paper we aim to address the following research question:

How do the independence variables as state, sex, age, ownership of centers, family entrepreneurial background, entrepreneurship networks and the presence in the curriculum of the *specific* methodologies, abilities and knowledge influence entrepreneurial interest among young students?

2. Literature review

Entrepreneurship education has gained increasing academic and policy interest over the last decades due to its perceived role in fostering innovation, economic growth and youth employability. The literature in this field encompasses a wide range of dimensions, including its historical evolution, pedagogical approaches, institutional implementation and measurable outcomes on students' attitudes and intentions. In what follows, this section reviews the main strands of research that inform the present study, focusing on the evolution and relevance of entrepreneurship education, its relationship with entrepreneurial interest, the influence of socio-demographic variables and the role of knowledge, abilities and methodologies in shaping entrepreneurial outcomes.

2.1. The evolution and relevance of entrepreneurship education

Entrepreneurship education is rooted in innovation-driven economies, where it was first introduced as a response to the growing need to develop economic resilience, adaptability and self-employment opportunities. The earliest documented efforts can be traced back to Shigeru Fujii at Kobe University in Japan in 1938 and to the Myles Mace at Harvard Business School in 1947 (Katz, 2003; Solomon et al., 2002). Since then, the discipline has evolved from being a niche topic within business schools to becoming a cross-disciplinary area integrated into many national education strategies.

In most innovation-driven economies, entrepreneurship education is considered a strategic axis for promoting innovation and sustainable development (Doan, 2022; Qader et al., 2022; Shane & Venkataraman, 2000; Wei et al., 2024). Various governments have incorporated entrepreneurial education across different levels of the curriculum. For example, Spain included Entrepreneurship Education formally in secondary education through Organic Law 8/2013 and later reinforced it through Organic Law 3/2020 (Ministerio de Educación y Formación Profesional, 2024). Similarly, in the United States, certain states, such as Michigan, have made entrepreneurship education a mandatory part of their secondary education curricula since 1979.

This educational trend reflects a global recognition of the role of entrepreneurship in enhancing youth employability, supporting innovation ecosystems and addressing complex socio-economic challenges (Comesaña-Comesaña et al., 2022; Smith et al., 2022). Consequently, academic literature has increasingly focused on the design, implementation and effectiveness of entrepreneurship education programs in diverse national and institutional contexts (Gibb, 1987; Khan & Almoharby, 2007; Klofsten et al., 2021).

This contrast highlights important structural differences in the role of entrepreneurship education across countries. In Spain, entrepreneurship content is often limited to specific elective courses or pilot programs, whereas in Michigan (USA), it is systematically embedded across subjects and supported by extracurricular programs. These variations may shape students' exposure, perceptions and interest in entrepreneurship, particularly when comparing regions such as Burgos and Washtenaw County.

Such differences suggest the need for a comparative analysis that examines not only policy frameworks but also the extent to which entrepreneurship education is accessible and effective in different socio-educational environments (Jiménez et al., 2015).

Accordingly, the first hypothesis addresses the role of the *State* variable.

Hypothesis 1 (H1). Students in *Michigan* (Washtenaw) will report higher levels of entrepreneurial interest than students in *Burgos* (Spain), due to their earlier and broader exposure to entrepreneurship education in their region.

2.2. Entrepreneurship education and entrepreneurial interest

A growing body of research has explored the impact of entrepreneurship education on students' entrepreneurial interest, attitudes and intentions. Numerous studies suggest that participation in entrepreneurship-related subjects correlates positively with increased interest in launching new ventures or pursuing self-employment (Farrokhnia et al., 2022; Peterman & Kennedy, 2003; Souitaris et al., 2007).

For example, the U.S. Small Business Administration (Submit Consulting, 2009) found that students exposed to entrepreneurship education were more likely to work in small businesses and pursue innovation-based careers. Similarly, in Australia and Germany, research has confirmed that entrepreneurship courses shape students' motivation and their perception of entrepreneurship as a viable professional path (Abdallah & Alkaabi, 2023; Jones & English, 2004).

Several scholars have also emphasized the psychological and cognitive mechanisms behind this relationship. DeTienne and Chandler (2004) argue that entrepreneurship education enhances opportunity recognition skills, while Schultz (1959) and Mincer (1974) highlight the role of education in improving individuals' productivity, adaptability and decision-making. These abilities, in turn, support the development of entrepreneurial intention.

Despite these positive findings, some studies warn that entrepreneurship education alone may not be sufficient. According to Renart Vicens et al. (2022), only voluntary entrepreneurship education, rather than compulsory coursework, showed a significant effect on entrepreneurial interest. This suggests the need to critically examine not only the presence, but also the content and delivery of entrepreneurship education across different settings.

Notably, the comparative dimension is relevant here: in Spain, studies such as Renart Vicens et al. (2022) suggest that the effect of entrepreneurship education on interest is significant only when participation is voluntary, whereas in Michigan, the long-standing integration of entrepreneurship into the curriculum (since 1979) may lead to higher baseline levels of entrepreneurial interest among students. These contrasting patterns call for an empirical comparison across regions with different educational traditions and policy contexts.

Ownership of the educational center is another structural factor that shapes access to entrepreneurial learning. In Spain, private and state-assisted schools are almost twice as likely as public schools to offer a stand-alone entrepreneurship course (62% vs. 34%), and they report higher average weekly instructional time devoted to entrepreneurial projects (European Commission, 2019). Similar disparities are observed in the United States: a statewide survey in Michigan showed that 78% of private high schools deliver a dedicated entrepreneurship pathway compared with 52% of public high schools (Daswati et al., 2022; Scott & Hills, 2021).

Qualitative evidence indicates that private institutions tend to have greater curricular flexibility, partnerships with local businesses and access to external funding for extracurricular programs (Nafukho & Falebita, 2020; Organisation for Economic Co-operation and Development, 2020). These advantages translate into more frequent use of experiential methodologies—business plan competitions, student-run enterprises and mentorship schemes—which the literature links to stronger entrepreneurial attitudes (Fayolle & Gailly, 2015).

Given the documented differences in program availability, intensity and pedagogy between public and private schools in both Spain and the United States, ownership of center is expected to influence students' entrepreneurial interest independently of regional context.

Accordingly, the second hypothesis addresses the role of the *Ownership of Centers* variable.

Hypothesis 2 (H2). Students enrolled in *private* institutions will report higher entrepreneurial interest than those in *public* schools, as private schools may offer more opportunities for entrepreneurship-related learning and extracurricular activities.

2.3. Influence of socio-demographic factors on entrepreneurial interest

Beyond the effects of formal education, socio-demographic factors play a significant role in shaping young people's entrepreneurial interest and intention. The most studied variables are sex, age, family entrepreneurial background and exposure to entrepreneurial networks.

Sex differences in entrepreneurship have been widely documented. While some studies indicate a gender gap in entrepreneurial intention favoring male students, others point to more nuanced dynamics. For instance, Somià et al. (2024) found that although men tend to identify business opportunities more confidently, women excel in communication, leadership and team-building—competencies equally essential for entrepreneurship. Such differences highlight the importance of analyzing how sex may interact with educational and contextual variables to influence entrepreneurial outcomes.

These gender dynamics may vary across contexts: in Spain, traditional gender roles and limited female entrepreneurial role models may contribute to lower entrepreneurial interest among young women, whereas in the U.S., especially in Michigan, initiatives aimed at promoting gender equity in entrepreneurship education may help reduce such gaps (Michigan Department of Education [Michigan DoE], 2023; Souitaris et al., 2007).

Age also appears to be a relevant factor. Entrepreneurial interest tends to increase during adolescence, peaking between the ages of 16 and 17, as students begin to seriously consider future career paths. However, empirical evidence suggests this relationship is not always linear or statistically significant (Liu et al., 2024; Schunk, 1995).

Recent cross-national surveys confirm the pattern but reveal regional nuances: the 2023 Global Entrepreneurship Monitor (GEM) youth report shows that in Spain entrepreneurial interest rises sharply at age 16 (33%) and peaks at 17 (38%), then plateaus (Global Entrepreneurship Monitor Spain [GEM Spain], 2023). In the United States, the 2022 Kauffman Youth Entrepreneurship Survey reports a steadier climb from age 15 (27%) to age 18 (42%), suggesting a more prolonged developmental window (Fairlie, 2022). These findings imply that the age-interest curve may be steeper but shorter in Spain than in the U.S., possibly reflecting differences in curricular exposure and extracurricular opportunities available in each context.

Family background, particularly the presence of entrepreneurs in the immediate family, has been associated with greater entrepreneurial interest. Students exposed to family members who own or run businesses tend to have a more realistic and positive perception of entrepreneurship (Luis-Rico et al., 2020; Pablo-Lerchundi et al., 2014; Zhao et al., 2020).

Comparative data underline the magnitude of this effect: GEM Spain (2023) estimates that 18% of Spanish secondary students have at least one close relative who is an entrepreneur, whereas the figure rises to 34% in the United States (GEM U.S. Team, 2024). In both countries, but especially in the U.S., family entrepreneurial background strongly predicts opportunity recognition and start-up self-efficacy (Díaz-García & Brush, 2022; Eesley, 2023). These disparities suggest that family social capital may play a larger quantitative role in Michigan than in Burgos, reinforcing the need to include this variable in cross-regional models of entrepreneurial interest.

Access to entrepreneurship networks is another relevant factor. In Michigan, students often benefit from a stronger ecosystem of incubators, mentorships and community programs, while in Spain, such networks are less prevalent and less integrated into the educational experience (Luis-Rico et al., 2020; Submit Consulting, 2009). This differential access may influence the development of entrepreneurial identity in each context.

Together, these variables provide a sociocultural lens through which entrepreneurial interest is formed and nurtured. These are especially relevant in comparative analyses, where different countries or regions may exhibit distinct patterns in terms of gender roles, family structures, or exposure to entrepreneurship ecosystems.

In light of the reviewed evidence, we propose the following specific hypotheses relating to the dependent variables of *Sex*, *Age*, *Family entrepreneurial background* and *Entrepreneurial networks*.

Hypothesis 3 (H3). *Male* students will report higher levels of entrepreneurial interest than *female* students, consistent with documented gender gaps in entrepreneurial intention.

Hypothesis 4 (H4). *Older* students will report higher levels of entrepreneurial interest, as entrepreneurial aspirations tend to increase during late adolescence.

Hypothesis 5 (H5). Students with a *family entrepreneurial background* will report higher levels of entrepreneurial interest compared to those without such background, as family exposure to entrepreneurship provides role models and experiential learning opportunities.

Hypothesis 6 (H6). Students who are aware of *entrepreneurship networks* will report higher entrepreneurial interest than those who are not, due to access to resources, mentorship and exposure to entrepreneurial ecosystems.

2.4. Impact of financial knowledge on entrepreneurial interest

Financial literacy has been identified as a key factor in fostering entrepreneurial motivation and interest, especially among the youth. A solid understanding of personal finance, budgeting, business planning and economic systems not only enhances confidence in managing a potential enterprise but also reduces the perception of risk associated with entrepreneurship (Johnson & Sherraden, 2007; Lusardi et al., 2010).

Various studies have emphasized the importance of specific entrepreneurial-knowledge domains in shaping students' entrepreneurial behavior. Recent meta-analyses show that mastery of business-plan design and marketing concepts explains up to 12% of the variance in start-up intention among European adolescents (Fayolle & Gailly, 2015), while familiarity with legal aspects of creating a firm accounts for an additional 4% (Liñán & Chen, 2022). Information-technology skills and access-to-resources knowledge have also been linked to higher digital-entrepreneurship intent in U.S. high-school samples (Stewart & Carpenter, 2023).

In the Spanish context, the incorporation of these knowledge components into the curriculum is relatively recent and uneven. Only 28% of Burgos schools teach *Business Plan* and *Marketing* as assessed subjects, 16% cover *Legal Aspects* and fewer than 10% include *Administration Management* (Ministerio de Educación y Formación Profesional, 2024). In contrast, Michigan's Career & Technical Education (CTE) standards mandate instructional units in *Business Plan*, *Marketing*, *IT for Entrepreneurship* and *Legal Environment* for all public high-school students. A 2023 audit shows that 85% of Washtenaw schools deliver at least six of the eight knowledge areas (Michigan DOE, 2023).

Nevertheless, research also points out that the mere presence of financial education is not enough; it must be relevant, applicable and tailored to students' interests. McCormick (2009) argues that financial education should go beyond theoretical content and include interactive and practical components to genuinely impact students' entrepreneurial mindset.

Accordingly, the seventh hypothesis focuses on the role of financial *Knowledge*.

Hypothesis 7 (H7). Students who acquire financial knowledge (i.e., Business Plan, Marketing, Languages, Information Technology, Planning Organization, Access to Resources, Legal Aspects and Administration Management) in formal education will be more likely to express interest in entrepreneurship.

2.5. Entrepreneurial abilities and their role in entrepreneurship education

Entrepreneurial abilities, such as leadership, creativity, communication skills, decision-making and problem-solving, are widely acknowledged as core competencies in entrepreneurship education. These abilities not only support the entrepreneurial process but also strengthen students' self-perception as potential entrepreneurs (Somià et al., 2024; Westad Brandshaug, 2024).

Educational programs that explicitly target the development of such competencies have shown a positive influence on entrepreneurial interest. For instance, Farrokhnia et al. (2022) argue that enhancing students' capacity for opportunity recognition, strategic thinking and innovation significantly increases their motivation to engage in entrepreneurial activities. Similarly, Davidsson and Honig (2003) highlight how entrepreneurs with better-developed soft skills are more capable of successfully navigating uncertainty and exploiting opportunities.

In cross-national contexts, the way these abilities are integrated into the curriculum varies. In Washtenaw (Michigan), students frequently report high exposure to these skills through various subjects and extracurricular programs, while in Burgos (Spain), their development appears to be more concentrated in optional subjects directly related to entrepreneurship.

According to Renart Vicens et al. (2022), the effect of entrepreneurship education on ability development is more significant when the training is voluntary rather than mandatory. These findings align with the idea that entrepreneurial abilities are best cultivated through personalized and contextually meaningful learning experiences that go beyond formal instruction and permeate multiple areas of education.

Consequently, we propose the following hypothesis on the role of presence of *Abilities* related to entrepreneurship:

Hypothesis 8 (H8). A higher perceived presence of abilities (i.e., Leadership, Commitment & Motivation, Creativity/Innovation, Conflict Management & Tolerance of Pressure, Communication Skills, Negotiation & Decision-Making, Time-Management, Ability to Find Resources) related to entrepreneurship in the curriculum will be positively associated with students' entrepreneurial interest.

2.6. Educational methodologies that foster entrepreneurial interest

The methodologies used in entrepreneurship education play a decisive role in shaping students' interest and engagement. Research consistently shows that active, student-centered teaching strategies, such as project-based learning, simulations, teamwork and real-world case studies, are more effective in stimulating entrepreneurial motivation than traditional, lecture-based methods (Y. Li et al., 2022; Sousa & Costa, 2022).

In particular, Comesaña-Comesaña et al. (2022) emphasize the importance of integrating social media and digital tools to make learning experiences more relevant and collaborative. Similarly, Westad Brandshaug (2024) highlights the transformative potential of practical experiences such as business project design and student-run companies, which allow students to operate in a 'liminal space' between being learners and becoming entrepreneurs.

Comparative evidence reveals that American schools, particularly in Michigan, tend to adopt these active methodologies more consistently within both curricular and extracurricular contexts. In contrast, in many parts of Spain, such approaches are either underused or inconsistently applied due to curricular rigidity, lack of teacher training, or limited institutional support (Comisión Europea [European Commission], 2009).

The literature recommends moving beyond isolated initiatives and instead embedding these methodologies across the entire educational structure. Programs such as 'Bank-at-School' or 'The Shadow of an Entrepreneur' demonstrate how real-life engagement can turn abstract knowledge into entrepreneurial competence (Johnson & Sherraden, 2007). These methods not only enhance skill acquisition but also foster resilience, adaptability and a proactive mindset—traits essential for entrepreneurship in uncertain and dynamic environments.

Consequently, we propose the following hypothesis on the role of presence of *Methodologies* related to entrepreneurship:

Hypothesis 9 (H9). A higher perceived presence of methodologies related to entrepreneurship (i.e., Practical Exercises, Case Studies, Project Design, Teamwork, Problem Solving and Presentation & Defence of Works) in the curriculum will be positively associated with students' entrepreneurial interest.

In summary, the literature confirms that entrepreneurship education is a multidimensional construct influenced by contextual, cognitive and methodological factors. However, there is still a lack of studies that examine how these dimensions interact within different educational systems and sociocultural settings. Building on the reviewed research, this study aims to explore the role of demographic variables, educational content and pedagogical approaches in shaping students' entrepreneurial interest across two distinct educational contexts: Burgos (Spain) and Washtenaw County (USA).

3. Methodology

3.1. Methods setting

We conducted a transversal study with a descriptive-interpretative design of populations through surveys with probabilistic samples. Our aim was to compare the entrepreneurship interest of students from Burgos (Spain), who had no formal entrepreneurship education and where actions to promote entrepreneurial attitudes had been limited, with students at Washtenaw (Michigan, USA) where this educational discipline has already achieved a notable degree of maturity and has been an obligatory subject since 1979.

3.2. Participants

This study was conducted in two geographical and educationally distinct regions: the province of Burgos (Spain) and the county of Washtenaw (Michigan, USA). The data were collected during the academic year 2019, prior to the COVID-19 pandemic, ensuring a context unaffected by the health crisis. The sample under study was formed of 267 students, 86 from Burgos (32.21%) and 181 from the county of Washtenaw (67.79%). Random sampling was used, taking into account the proportion of the population as a function of sex, affiliation with the educational center and rural representation (Leeuw et al., 2008). In both groups, the obtained proportions resemble approximately those foreseen. For example, Sector: Public = 65%–75% approx., Private = 35%–25% approx.; sex balance at around 50%. Representation of a center within a 'rural' habitat. Differences based on course of study were not considered.

In the case of Burgos, the student participants were from educational centers in the provincial capital of Burgos (urban) and Villarcayo (rural), in the county of Washtenaw they were from Ann Arbor (urban) and Saline (rural). The age range of the young people from the sample fluctuated between 13 and 17 years. The most frequent age band was between 16 and 17 years old with 146 young people (54.68%).

The frequencies and percentages in relation to both the locality and the age are shown below in Table 1.

In Table 2, the descriptive data of the sample as a function of age and sex can be seen and, in Table 3, as a function of the sector (public or private) of the educational center at which the participants are enrolled.

3.3. Measures

The main instrument used was the 'Education for Entrepreneurship' questionnaire (see Appendices A and B) developed within the 'RESORTES' project of the National R&D+i Plan of the Government of Spain

Table 1. Frequencies and percentages as a function of the locality and the age of the participants.

Province/Country	Locality	Age in years					Total <i>n</i> (%)
		13	14	15	16	17	
Burgos	Burgos	8	13	13	10	12	56 (20.97)
	Villarcayo			1	24	5	30 (11.23)
Washtenaw	Ann Arbor	46	18	10	31	57	162 (60.67)
	Saline	8	3	1	7		19 (7.11)
	Total <i>n</i> (%)	62 (23.22)	34 (12.73)	25 (9.36)	72 (26.96)	74 (27.71)	267 (100)

Table 2. Frequencies and percentages as a function of the sex and the age of participants.

Province/Country	Sex	Age in years					Total <i>n</i> (%)
		13	14	15	16	17	
Burgos	Women	4	6	7	16	7	40 (14.98)
	Men	4	7	7	18	10	46 (17.22)
Washtenaw	Women	29	14	5	19	25	92 (34.45)
	Men	25	7	6	19	32	89 (33.33)
Total <i>n</i> (%)		62 (23.22)	34 (12.73)	25 (9.36)	72 (26.96)	74 (27.71)	267 (100)

Table 3. Frequencies and percentages as a function of province/state and the sector (public or private) of the educational center.

Province/county	Total <i>n</i> (%)	Sector of the educational center	
		Public <i>n</i> (%)	Private / state-assisted <i>n</i> (%)
Burgos	86 (32.20)	57 (66.3)	29 (33.7)
Washtenaw	181 (67.79)	138 (76.2)	43 (23.8)
Total	267 (100)	195 (73.0)	72 (27.0)

(EDU 2012-39080-C07-00 a 07) coordinated by the universities of Barcelona, Burgos, Deusto, La Rioja, Santiago de Compostela and the Universidad Nacional de Educación a Distancia (UNED).

The questionnaire used in this study was originally developed and validated by Luis-Rico et al. (2020) through a pilot test conducted in eight autonomous regions in Spain, following the guidelines of Shepherd et al. (2009) for the development of a valid scale. The original pilot test established the stratification of the final sample and its proportionality as criteria. The questionnaire was then reviewed and approved by fourteen experts from seven Spanish universities, who rated it as highly reliable. No changes were made to the version approved by the experts, which is the same version used in the present study.

For the current study, the Spanish version of the questionnaire was translated into English in Michigan (USA) by a professional translator, following the International Test Commission (2017) guidelines for test translation and adaptation, as well as the recommendations of Hernández et al. (2020). To ensure the accuracy and clarity of the English version, a preliminary administration was conducted with a small group of 18 students (approximately 10% of the Washtenaw sample). Participants reported no difficulties in understanding the items, the response options, or the coding system, and they found the instrument relevant and easy to complete. As no comprehension issues were detected, no modifications were made to the questionnaire.

The final version of the questionnaire was therefore administered without changes to both the Burgos and Washtenaw samples. The validity of the instrument showed adequate values in both regions (CMIN/DF < 2.64, CFI > 0.950, GFI > 0.918, SRMR < 0.066).

The reliability of the questionnaire has been tested in previous studies published by various authors (Escolar-Llamazares et al., 2019; Luis-Rico et al., 2020, 2020; Valdemoros-San-Emeterio et al., 2016, 2017). As in these studies, the reliability of the questionnaire was adequate, with a Cronbach's alpha of 0.812 in Burgos and 0.781 in Washtenaw (an adequate value according to authors such as Cronbach, 1951, 2021).

The questionnaire is divided into various thematic blocks: Students; Life at the education center; Free time; Family life; Health and quality of life; Studies and job market in the future; and Entrepreneurship. The questionnaire items referring to entrepreneurship were selected for this investigation.

In consequence, the questionnaire in use has two parts, a first part with general information that helped to prepare the profile of the respondents and a second with information on entrepreneurship. In Table 4, the different questions that constitute the questionnaire used in the present investigation can be seen and the scores.

3.4. Procedure

With regard to the data-collection process at each education center, the questionnaire was administered in a single session both in Spain and in the USA. Before the instruments were applied, permission was requested from the directors of the education centers. They were likewise informed of the details of the investigation and ethical considerations.

Table 4. Questions/variables in the questionnaire ‘education for entrepreneurship’.

N° question	Block	Data	Measure
P. 1 to P. 7	General data	Sex; age; average grade on the course; weekly spending money available for personal expenditure; center where studying; type of studies; business background in close family	Different forms of collecting data as a function of the question.
P. 8	Entrepreneurship	Important aspects on entrepreneurship: Detect a business opportunity; Improve professional development; Generate new job positions; Self-employment; Assuming some risk; Manage resources; Socio-economic development; Other relevant aspects	1–5 Likert type scale for each of the aspects. Open response for the aspect ‘other relevant aspects’
P. 9	Entrepreneurship	Indicate three subjects on the course that you think have helped entrepreneurship	Open response
P. 10	Entrepreneurship	Degree of entrepreneurial interest (IE).	1–5 Likert–type scale.
P. 11	Entrepreneurship	Indicate whether you know some entrepreneurship network.	Dichotomic yes/no response. Open response if answering yes.
P. 12	Entrepreneurship	Importance of different motives to create your firm: Family tradition; Generate work for others; Earn money; Economic independence; Gain work; Put my ideas into practice; Social recognition; Direct a group of people; Contribute to economic and social growth; Others, indicate which.	1–5 Likert–type scale for each of the motives. Open response under ‘other, indicate which’.
P.13.	Entrepreneurship	Difficulties that you perceive in society to create your own firm: assume risks; Working too many hours; Lack of money to start up the activity; Weak institutional support; Fear of failure; Insufficient training received for entrepreneurship; Excessive bureaucracy; Lack of ideas to set up the firm; Little family support; Others, indicate which.	1–5 Likert–type scale for each of the difficulties. Open response for the difficulty ‘others, indicate which’.
P.14.	Entrepreneurship	Importance (IMP) that you give to the following aspects for entrepreneurship and the presence (PRE) that they have had in your training: METHODOLOGIES (Theoretical classes; Practical exercises; Case studies; Project design; Team work, Problem resolution; Presentation and defense of works). ABILITIES (Leadership; Commitment and motivation; Creativity/Innovation; Conflict/crisis management; Communicative capacity; Capacity for negotiation and decision-making. Time management for own work and team work; Capability for searching for resources; Others-indicate). KNOWLEDGE (Company plan; Marketing; Languages; Computing; Planning of organizations; Obtaining resources; Legal aspects of creating firms; Administrative Management; Others-indicate).	1–5 Likert-type scale for IMP and for PRE of the different aspects. Open response for the aspects ‘Others, indicate which’.

Informed consent was also secured from the parents or legal guardians of all underage participants in accordance with the General Data Protection Regulation (GDPR) and ethical research standards involving minors (APA, 2017; European Parliament, 2016/679). Participation was entirely voluntary, and anonymity was guaranteed. The potential bias of relying on school director permissions is acknowledged; while this approach ensured access to participants, it may have introduced a selection effect favoring institutions with more favorable views on entrepreneurship education.

One or two researchers visited each center for the administration of the survey following a standardized protocol.

The principal content of the curricular subjects that were offered as part of the formal education of both *curricula* (Washtenaw and Burgos) coincided (see Table 5). The main difference was that part of the curricular content, although not the part related to entrepreneurship (also an optional subject at Washtenaw), was of an obligatory nature at Washtenaw for all students, while it was obligatory for those students at Burgos who selected the *Bachillerato* (pre-university exams) modality, and it was optional for the others.

3.5. Analysis strategy

To answer the research question on ‘How do state, sex, age, ownership of centers, family entrepreneurial background, entrepreneurship networks and the presence in the curriculum of specific methodologies, abilities

Table 5. Comparative financial content Burgos/Washtenaw 2013.

Contents	Washtenaw	Burgos
	Obligatory optional	Obligatory optional
Job-seeking procedures	X	X
Personal finances	X	X
Profile of the entrepreneur. Social role of the firm	X	X
Types of firms: legal status	X	X
Business plan	X	X
Marketing	X	X
On-line marketing	X	
Tax	X	X
Accounting	X	X
Human resources management and planning	X	X
State economy and income	X	X
The role of the state in the economy	X	X
Social security. Systems of social protection	X	X
Socio-economic systems	X	X
Offer and demand	X	X
Macroeconomic indicators	X	X
Monetary policy	X	X
International economy	X	X

and knowledge influence entrepreneurial interest among young students?’ an automatic multiple linear regression test was carried out in forward steps in order to know which independent variables are the most predictive of entrepreneurial interest.

The independent variables were:

- *State*: Data collected by the research group according to the place of origin of the participants (Washtenaw or Burgos).
- *Sex*: Participants were asked to indicate their gender by selecting one of two predefined options: male or female (Question 1 of the questionnaire).
- *Age*: Students indicated their age in years by writing it in an open-response format (Question 2 of the questionnaire).
- *Ownership of centers*: Students specified whether the school they attended was a public or a private/ state-assisted institution (Question 5 of the questionnaire).
- *Family entrepreneurial background*: Participants were asked whether any of their immediate family members (parents, siblings, or grandparents) had experience running or owning a business (Question 7 of the questionnaire).
- *Entrepreneurship networks*: Students were asked whether they were aware of any entrepreneurship networks or organizations (Question 11 of the questionnaire).
- *Presence in the curriculum of abilities*: Participants rated the presence of key entrepreneurial competencies in their curriculum, such as leadership, motivation, creativity, conflict management, communication, negotiation and decision-making, time management and resource-seeking. Each competency was assessed using a 5-point Likert scale (1 = not present at all; 5 = very present) (Question 14 of the questionnaire).
- *Presence in the curriculum of knowledge*: Students also rated the extent to which specific areas of entrepreneurial knowledge were covered in their academic curriculum. These areas included business planning, marketing, languages, information technology, organizational planning, access to resources, legal aspects of starting a business and administrative management. As with previous variables, responses were collected on a 5-point Likert scale reflecting perceived presence (Question 14 of the questionnaire).
- *Presence in the curriculum of methodologies*: Students evaluated how frequently different teaching methodologies related to entrepreneurship had been present in their formal education. These included theoretical classes, practical exercises, case studies, project design, teamwork, problem solving and oral presentation/defense of projects. Each item was rated on a Likert scale ranging from 1 (not present at all) to 5 (very frequently present) (Question 14 of the questionnaire).

The dependent variable was:

- *Entrepreneurial interest*: Students indicated their personal level of interest in becoming entrepreneurs by rating it on a 5-point Likert scale (1 = no interest at all; 5 = very strong interest) (Question 10 of the questionnaire).

The regression equation that was tested was as follows:

Entrepreneurial Interest = $\beta_0 + \beta_1(\text{State}) + \beta_2(\text{Sex}) + \beta_3(\text{Age}) + \beta_4(\text{Ownership of centers}) + \beta_5(\text{Family entrepreneurial background}) + \beta_6(\text{Entrepreneurship networks}) + \beta_7(\text{Presence in the curriculum of methodologies (theoretical classes)}) + \beta_8(\text{Presence in the curriculum of methodologies (practical exercises)}) + \beta_9(\text{Presence in the curriculum of methodologies (case studies)}) + \beta_{10}(\text{Presence in the curriculum of methodologies (project design)}) + \beta_{11}(\text{Presence in the curriculum of methodologies (Teamwork)}) + \beta_{12}(\text{Presence in the curriculum of methodologies (problem solving)}) + \beta_{13}(\text{Presence in the curriculum of methodologies (presentation and defense of works)}) + \beta_{14}(\text{Presence in the curriculum of abilities (Leadership)}) + \beta_{15}(\text{Presence in the curriculum of abilities (Commitment and motivation)}) + \beta_{16}(\text{Presence in the curriculum of abilities (Creativity/innovation)}) + \beta_{17}(\text{Presence in the curriculum of abilities (Conflict management, Tolerance of pressure)}) + \beta_{18}(\text{Presence in the curriculum of abilities (Communication skills)}) + \beta_{19}(\text{Presence in the curriculum of abilities (Negotiation and decision making skills)}) + \beta_{20}(\text{Presence in the curriculum of abilities (Time management for own work and that of the team)}) + \beta_{21}(\text{Presence in the curriculum of abilities (Ability to find resources)}) + \beta_{22}(\text{Presence in the curriculum of knowledge (Business plan)}) + \beta_{23}(\text{Presence in the curriculum of knowledge (Marketing)}) + \beta_{24}(\text{Presence in the curriculum of knowledge (Languages)}) + \beta_{25}(\text{Presence in the curriculum of knowledge (Information technology)}) + \beta_{26}(\text{Presence in the curriculum of knowledge (Planning organization)}) + \beta_{27}(\text{Presence in the curriculum of knowledge (Access to resources)}) + \beta_{28}(\text{Presence in the curriculum of knowledge (Legal aspects)}) + \beta_{29}(\text{Presence in the curriculum of knowledge (Administration management)}) + \epsilon.$

We employed $p < 0.05$ as threshold for statistical significance in all the analyses.

The analysis was conducted with the statistical software package SPSS v25 (Field, 2024).¹

4. Results

Before answering the research question (How do the Independence variables state, sex, age, ownership of centers, family entrepreneurial background, entrepreneurship networks and the presence in the curriculum of the specific methodologies, abilities and knowledge influence entrepreneurial interest among young students?) and the hypotheses raised, the assumptions for the linear regression were tested. The assumptions of linearity were tested (the sample showed low correlations between entrepreneurial interest and all the independent variables ($r < 0.250$), independence (Durbin Watson statistic = 1.013) and some acceptable indices of low collinearity in the Variance Inflation Factor (VIF) < 1.120 and eigenvalues of < 4.751 , all acceptable according to the scientific literature (Montgomery et al., 2001).

The results indicated that 20.5% of entrepreneurial interest was predicted by the Family entrepreneurial background, Knowledge (Marketing and Administration management), Abilities (Communication skills) and Methodology (Team work). In other words, the multiple regression model revealed that 20.5% of the variance in entrepreneurial interest was explained by a combination of predictors. Among these, Family entrepreneurial background ($\beta = -0.425$, $p = 0.004$), Knowledge in marketing ($\beta = -0.475$, $p = 0.009$), Abilities in communication skills ($\beta = -0.413$, $p = 0.017$) and exposure to Teamwork Methodologies ($\beta = -0.505$, $p = 0.033$) showed **negative associations** with entrepreneurial interest. Whereas Knowledge in administration management ($\beta = +0.469$, $p = 0.010$) showed a **positive association**. These results suggest a complex relationship where some aspects of entrepreneurship education and family background may not always align with higher entrepreneurial interest among students.

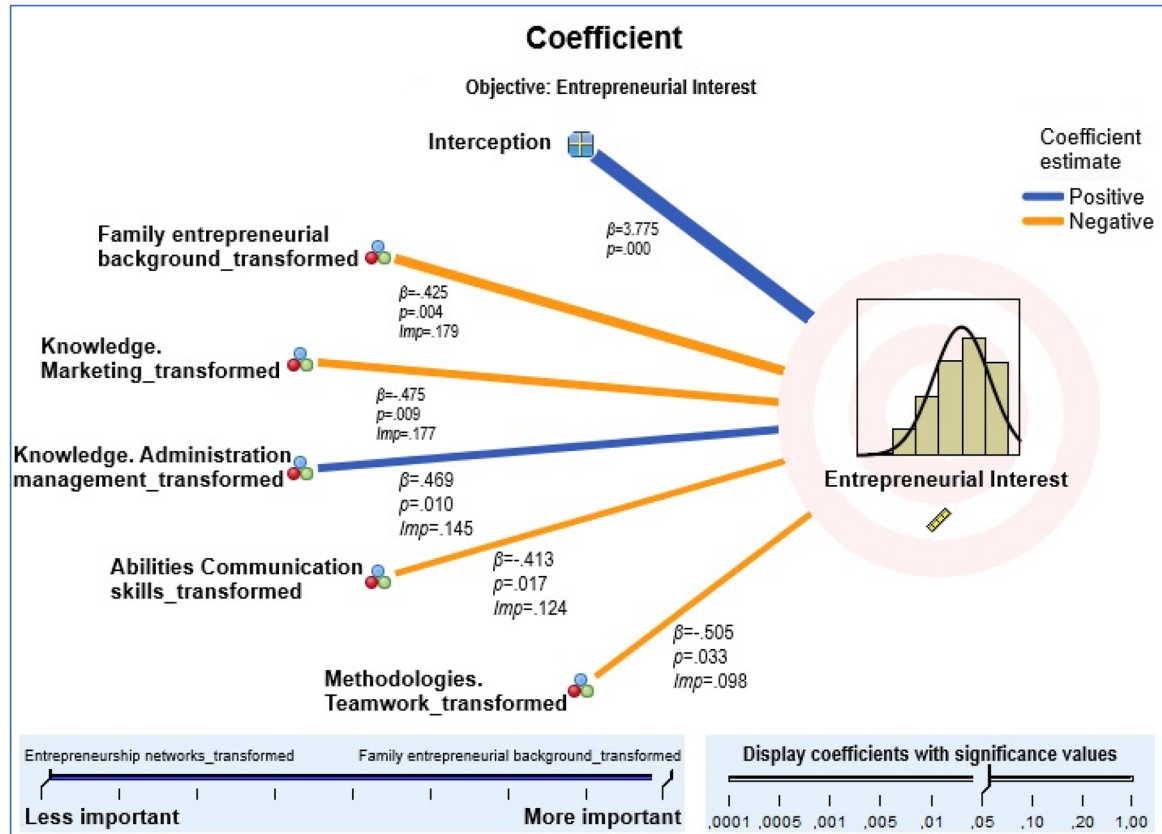
Following Guerrero Sánchez et al. (2024), we present coefficient' table in Table 6 and the results in Figure 1.

Hypothesis 1 proposed that *Students in Michigan (Washtenaw) will report higher levels of entrepreneurial interest than students in Burgos (Spain), due to their earlier and broader exposure to entrepreneurship education in their region*. This hypothesis was not supported. The variable state (Burgos vs. Washtenaw) did not emerge as a significant predictor of entrepreneurial interest in the regression model ($p > 0.05$). This

Table 6. Regression results.

	β	Standard error	t	Sig.	95% Confidence interval		Importance
					Lower	Upper	
Interception	3.775	0.164	22.972	0.000*	3.451	4.098	
Family entrepreneurial background	−0.425	0.147	−2.890	0.004*	−0.714	−0.135	0.179
Knowledge: marketing	−0.475	0.179	−2.652	0.009*	−0.828	−0.122	0.177
Knowledge: administration management	0.469	0.181	2.698	0.010*	0.113	0.825	0.145
Abilities: communication skills	−0.413	0.172	−2.405	0.017*	−0.751	−0.075	0.124
Methodology: team work	−0.505	0.236	−2.141	0.033*	−0.970	−0.040	0.098

*Sig< 0.05.

**Figure 1.** Effects of objective: entrepreneurial interest. Notes: β = coefficient (or beta); p = statistical significance (p value); imp=importance (or relative weight). The results based on the hypotheses raised in this study are shown below.

suggests that, after controlling for other variables, the regional differences in entrepreneurship education did not significantly influence students' entrepreneurial interest in this sample.

Hypothesis 2 proposed that *Students enrolled in private institutions will report higher entrepreneurial interest than those in public schools, as private schools may offer more opportunities for entrepreneurship-related learning and extracurricular activities.* H2 was not supported. The variable ownership of centers (public vs. private) did not show a statistically significant association with entrepreneurial interest ($p>0.05$). Thus, school ownership did not significantly predict differences in entrepreneurial interest within the study sample.

Hypothesis 3 proposed that *Male students will report higher levels of entrepreneurial interest than female students, consistent with documented gender gaps in entrepreneurial intention.* The analysis did not support H3. The variable sex was not a significant predictor of entrepreneurial interest ($p>0.05$), indicating no statistically significant gender differences in the current study.

Hypothesis 4 proposed that *Older students will report higher levels of entrepreneurial interest, as entrepreneurial aspirations tend to increase during late adolescence.* H4 was not supported. The variable age did

not significantly predict entrepreneurial interest ($p > 0.05$), suggesting that within the studied age range (13-17 years), age was not a significant factor in determining entrepreneurial interest.

Hypothesis 5 proposed that *Students with a family entrepreneurial background will report higher levels of entrepreneurial interest compared to those without such background, as family exposure to entrepreneurship provides role models and experiential learning opportunities*. Contrary to expectations, H5 was not supported. The analysis revealed a significant negative association between family entrepreneurial background and entrepreneurial interest ($\beta = -0.425$, $p = 0.004$). This indicates that, after controlling for other factors, students with family members involved in entrepreneurship reported **lower** levels of entrepreneurial interest. This unexpected finding may reflect the complex perceptions of entrepreneurship within families, where exposure to its challenges and risks might dampen interest.

Hypothesis 6 proposed that *Students who are aware of entrepreneurship networks will report higher entrepreneurial interest than those who are not, due to access to resources, mentorship and exposure to entrepreneurial ecosystems*. H6 was not supported. The variable entrepreneurship networks did not significantly predict entrepreneurial interest ($p > 0.05$).

Hypothesis 7 proposed that *Students who acquire financial knowledge (i.e., Business Plan, Marketing, Languages, Information Technology, Planning Organization, Access to Resources, Legal Aspects and Administration Management) in formal education will be more likely to express interest in entrepreneurship*. H7 was partially supported. Among the knowledge components analyzed, only Administration Management was positively and significantly associated with entrepreneurial interest ($\beta = +0.469$, $p = 0.010$), while Marketing showed a significant but negative relationship ($\beta = -0.475$, $p = 0.009$). The other knowledge areas did not significantly predict entrepreneurial interest.

Hypothesis 8 proposed that *A higher perceived presence of abilities (i.e., Leadership, Commitment & Motivation, Creativity/Innovation, Conflict Management & Tolerance of Pressure, Communication Skills, Negotiation & Decision-Making, Time-Management, Ability to Find Resources) related to entrepreneurship in the curriculum will be positively associated with students' entrepreneurial interest*. H8 was not supported. Only Communication Skills emerged as a significant predictor ($\beta = -0.413$, $p = 0.017$), but with a negative relationship, suggesting that students who reported greater exposure to communication skills in their curriculum showed lower entrepreneurial interest. The other abilities were not statistically significant.

Hypothesis 9 proposed that *A higher perceived presence of methodologies related to entrepreneurship (i.e., Practical Exercises, Case Studies, Project Design, Teamwork, Problem Solving and Presentation & Defence of Works) in the curriculum will be positively associated with students' entrepreneurial interest*. H9 was not supported. Among the methodologies, only Teamwork was a significant predictor ($\beta = -0.505$, $p = 0.033$), and, contrary to expectations, the relationship was negative. This suggests that greater exposure to teamwork methodologies was associated with lower entrepreneurial interest.

5. Discussion and conclusion

This study set out to examine the factors that influence entrepreneurial interest among students in Burgos (Spain) and Washtenaw (USA), with a focus on individual characteristics (state, sex, age, family entrepreneurial background, school ownership), as well as students' perceived exposure to entrepreneurship-related knowledge, abilities and methodologies in their formal education. The multiple regression analysis accounted for 20.5% of the variance in entrepreneurial interest, revealing a nuanced and, at times, unexpected pattern of associations.

Contrary to initial expectations, no significant differences in entrepreneurial interest were found based on state (H1), school ownership (H2), gender (H3), or age (H4). These findings challenge assumptions that regional differences in entrepreneurship education, access to private school resources, gendered attitudes, or age differences significantly shape entrepreneurial interest. The absence of a significant effect of awareness of entrepreneurship networks (H6) further suggests that, in this sample, external exposure to entrepreneurial ecosystems may not play a decisive role in shaping students' interest in entrepreneurship.

One of the most surprising findings was the significant negative association between family entrepreneurial background and entrepreneurial interest (H5) ($\beta = -0.425$, $p = 0.004$). While previous literature

often highlights the positive role of family role models in shaping entrepreneurial aspirations (Luis-Rico et al., 2020; Pablo-Lerchundi et al., 2014; Zhao et al., 2020), the results of this study suggest a more complex dynamic. It is possible that students with family members engaged in entrepreneurship develop a more critical or cautious perspective on entrepreneurship, perhaps due to exposure to the challenges, risks and uncertainties inherent in starting and running a business.

Regarding the impact of entrepreneurship-related knowledge (H7), the results were mixed. Among the knowledge areas, administration management emerged as a positive and significant predictor of entrepreneurial interest ($\beta=0.469$, $p=0.010$), aligning with the findings of Coduras et al. (2010) and Hou et al. (2022), who emphasize the value of managerial literacy in enhancing entrepreneurial confidence and preparedness. In contrast, marketing knowledge showed a significant but negative relationship ($\beta = -0.475$, $p=0.009$), suggesting that exposure to marketing concepts may lead students to develop a more cautious view of entrepreneurship, possibly due to heightened awareness of market challenges and competition.

For the abilities dimension (H8), only communication skills were significant, but unexpectedly, the relationship was negative ($\beta = -0.413$, $p=0.017$). While prior research has often emphasized the importance of communication, leadership and networking skills in fostering entrepreneurial success (Somià et al., 2024), the negative association found in this study suggests a need to further explore how communication skills are taught and perceived within the context of entrepreneurship education. It is possible that communication skills, as delivered in these curricula, are not sufficiently aligned with entrepreneurial competencies, or that students perceive these skills as generic rather than specifically entrepreneurial.

Similarly, for the methodologies dimension (H9), only teamwork was a significant predictor, but with a negative association ($\beta = -0.505$, $p=0.033$). These findings challenge previous studies (Y. Li et al., 2022; Sousa & Costa, 2022) that highlight the benefits of teamwork in fostering entrepreneurial engagement. It may be that teamwork activities in these educational contexts are perceived as routine academic exercises rather than as opportunities for leadership, problem-solving, or entrepreneurial simulation. This underscores the importance of not just including active methodologies in the curriculum, but ensuring they are purposefully designed to foster entrepreneurial thinking.

Taken together, these results emphasize that the mere presence of entrepreneurship-related knowledge, abilities, or methodologies in the curriculum is not sufficient to enhance students' entrepreneurial interest. Rather, the quality, relevance and delivery of these components appear to play a crucial role. The findings align with the view that effective entrepreneurship education must go beyond content inclusion and focus on contextualization, relevance to students' experiences and opportunities for authentic, experiential learning (McCormick, 2009; Westad Brandshaug, 2024).

In contrast to some previous studies, no significant differences were found in entrepreneurial interest based on gender, age, country of origin, or type of school. This may reflect the relatively homogeneous age range of participants or similarities in the curricular structures of the participating institutions.

Overall, this study contributes to a growing body of evidence suggesting that the effectiveness of entrepreneurship education depends not merely on what is taught, but how it is taught, perceived and integrated into students' broader learning experiences. A synergistic combination of relevant knowledge, well-developed soft skills, and thoughtfully implemented active learning methodologies is essential to nurture entrepreneurial interest among young learners.

These findings also point to several avenues for future research. It will be important to explore qualitative dimensions of how students experience entrepreneurship education, how they perceive specific components like marketing, communication and teamwork, and how family narratives around entrepreneurship shape attitudes. Additionally, longitudinal studies could help clarify how educational experiences and family background interact over time to influence actual entrepreneurial behavior.

5.1. Limitations and avenues for future research

Despite offering novel insights into the predictors of entrepreneurial interest among secondary school students, this study is not without limitations.

First, although random sampling was employed, data collection was limited to four specific geographical locations—two in Spain and two in the United States. As a result, the generalizability of findings to other regions or educational systems should be approached with caution. Future research should aim to

expand the sample to include more diverse cultural, socioeconomic and educational contexts in both countries and beyond.

Second, the cross-sectional nature of the study prevents causal inferences. While the regression model identifies significant predictors of entrepreneurial interest—namely family entrepreneurial background, knowledge in marketing and administrative management, communication skills and exposure to teamwork-oriented methodologies—longitudinal or experimental designs would allow for a more robust analysis of the causal mechanisms underlying these relationships. In this sense, future studies could adopt pre-post intervention models to evaluate the impact of specific educational programs or teaching strategies on entrepreneurial motivation over time.

Third, although the predictive power of the model (20.5%) is statistically significant, it suggests the presence of additional unexplored variables that may further explain students' entrepreneurial interest. Future research could explore the role of psychological traits (eg self-efficacy, resilience, creativity), contextual factors (eg school climate, teacher attitudes), or institutional resources (eg access to mentoring, incubators, or competitions).

Additionally, given the identified importance of communication skills and teamwork-based methodologies, it would be relevant to conduct qualitative or mixed-methods research to explore how students experience these dimensions in real classroom settings. Such approaches could shed light on the pedagogical dynamics that most effectively nurture entrepreneurial thinking.

Future endeavors should also focus on designing and evaluating educational interventions that intentionally develop these key predictors. For instance, pilot programs could prioritize active methodologies across subject areas and integrate transversal skill-building (eg communication, collaboration) in both formal and informal learning environments. These initiatives could be developed in collaboration with educators, policymakers and practitioners to ensure contextual relevance and practical impact.

Finally, it is essential to investigate not only the factors that influence entrepreneurial interest but also the degree to which this interest translates into actual entrepreneurial behavior. Longitudinal studies following students into adulthood would be particularly valuable in identifying the long-term effectiveness of entrepreneurship education, especially in relation to when and how business-related knowledge and skills are best introduced throughout a student's academic trajectory.

Note

1. Data and SPSS scripts are available upon request.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

The authors acknowledge that this publication is part of the I+D + i project PID2019-104408GB-I00, funded by MCIN/ AEI/10.13039/ 501100011033/.

About the authors

María Consuelo Digón-Arroba, Affiliation: Department of Romance Languages and Literatures, University of Michigan, USA; Degree: PhD in Education (University of Burgos); Research interests: bilingualism, educational entrepreneurship, cross-border cooperation, and cultural policies.

María-Camino Escolar-Llamazares (Corresponding author), Affiliation: Department of Health Sciences, University of Burgos, Burgos, Spain; Academic degree: PhD from the University of Salamanca; Research interests: academic anxiety, emotional well-being in the educational environment, entrepreneurship education. ORCID: 0000-0003-2448-0267

Cristina di Giusto-Valle, Affiliation: Department of Educational Sciences, University of Burgos, Burgos, Spain; Academic degree: PhD from the University of Oviedo; Research interests: effective personality, entrepreneurship education, teaching innovation. ORCID: 0000-0003-0440-489X

Tamara de la Torre-Cruz, Affiliation: Department of Educational Sciences, University of Burgos, Burgos, Spain; Academic Degree: PhD in Educational Sciences from the University of Burgos; Research interests: lifelong learning, entrepreneurship training, teaching innovation. ORCID: 0000-0003-4484-8110

Isabel Luis-Rico, Affiliation: Department of Educational Sciences, University of Burgos, Burgos, Spain; Academic Degree: PhD in Educational Sciences (University of Burgos); Research interests: teaching performance, entrepreneurship education, educational policies, and adult university training. ORCID: 0000-0001-5857-9404

Carmen Palmero-Cámara, Affiliation: Department of Educational Sciences, University of Burgos, Burgos, Spain; Academic Degree: PhD in Philosophy and Educational Sciences. Full Professor in the Area of Theory and History of Education; Research interests: history of education, entrepreneurial culture, education of older adults, socio-educational policies. ORCID: 0000-0002-8828-1307

Alfredo Jiménez, Affiliation: Department of Management, KEDGE Business School, Talence (Bordeaux), France; Academic Degree: PhD in Business Management; Full Professor at Kedge Business School; Research interests: business internationalization, entrepreneurship, institutional political risk. ORCID: <https://orcid.org/0000-0001-7811-5113>

ORCID

María-Camino Escolar-Llamazares  <http://orcid.org/0000-0003-2448-0267>

References

- Abdallah, A., & Alkaabi, A. M. (2023). Role of teachers in reinforcing students cultural and heritage awareness at Abu Dhabi schools to meet global challenge. *Cogent Social Sciences*, 9(1), 1–12. <https://doi.org/10.1080/23311886.2023.2194734>
- American Psychological Association. (2017). *Ethical principles of psychologists and code of conduct*. <https://www.apa.org/ethics/code/>
- Coduras, A., Levie, J., Kelley, D., Saemundsson, R., & Schott, T. (2010). *Global entrepreneurship monitor special report: A global perspective on entrepreneurship education and training*. GERA.
- Comesaña-Comesaña, P., Amorós-Pons, A., & Alexeeva-Alexeev, I. (2022). Technocreativity, social networks and entrepreneurship: Diagnostics of skills in university students. *International Journal of Emerging Technologies in Learning (IJET)*, 17(05), 180–195. <https://doi.org/10.3991/ijet.v17i05.28183>
- Comisión Europea [European Commission]. (2009). *Proyecto de Procedimiento BEST. El espíritu empresarial en la Educación y Formación Profesional*. Dirección General de Empresa e Industria. [BEST Procedure Project. Entrepreneurship in Vocational Education and Training. Directorate-General for Enterprise and Industry]
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297–334. <https://doi.org/10.1007/BF02310555>
- Cronbach, L. J. (2021). *My current thoughts on coefficient alpha and successor procedures* [Internet]. http://www.stanford.edu/dept/SUSE/SEAL/Reports_Papers/My%20Current%20ThoughtsSubmit.do
- Daswati, D., Wirawan, H., Hattab, S., Salam, R., & Iskandar, A. S. (2022). The effect of psychological capital on performance through the role of career engagement: Evidence from Indonesian public organizations. *Cogent Social Sciences*, 8(1), 1–19. <https://doi.org/10.1080/23311886.2021.2012971>
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331. [https://doi.org/10.1016/S0883-9026\(02\)00097-6](https://doi.org/10.1016/S0883-9026(02)00097-6)
- DeTienne, D., & Chandler, G. (2004). Opportunity identification and its role in the entrepreneurial classroom: A pedagogical approach and empirical test. *Academy of Management Learning & Education*, 3(3), 242–257. <https://doi.org/10.5465/amle.2004.14242103>
- Díaz-García, C., & Brush, C. G. (2022). Family social capital and youth entrepreneurial self-efficacy: A comparative study of Spain and the United States. *Journal of Small Business Management*, 60(4), 845–870. <https://doi.org/10.1080/00472778.2021.1879493>
- Doan, K. H. (2022). The differences in the impact of entrepreneurship education on entrepreneurial knowledge: A cross-country analysis. *Management & Marketing. Challenges for the Knowledge Society*, 17(1), 73–97. <https://doi.org/10.2478/mmcks-2022-0005>
- Eesley, C. E. (2023). Entrepreneurial role models and the intergenerational transmission of start-up intention. *Entrepreneurship & Regional Development*, 35(1-2), 1–25. <https://doi.org/10.1080/08985626.2022.2084540>
- Escolar-Llamazares, M. C., Luis-Rico, I., de la Torre-Cruz, T., Herrero, Á., Jiménez, A., Palmero-Cámara, C., & Jiménez-Eguizabal, A. (2019). The socio-educational, psychological and family-related antecedents of entrepreneurial intentions among Spanish Youth. *Pedagogia Social. Revista Interuniversitaria*, 11(5), 1–21. <https://doi.org/10.3390/su11051252>
- European Commission. (2019). *Entrepreneurship education at school in Europe*. Publications Office of the European Union. <https://op.europa.eu/en/publication-detail/-/publication/74a7d356-dc53-11e5-8fea-01aa75ed71a1>

- European Parliament. (2016). *Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation)*. Official Journal of the European Union, L119, 1–88. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32016R0679>
- Everett, C. R. (2024). Does more education lead to better startup funding outcomes? *Cogent Economics & Finance*, 12(1), 1–9. <https://doi.org/10.1080/23322039.2024.2354281>
- Fairlie, R. W. (2022). *National report on early-stage entrepreneurship in the United States: 2021*. Ewing Marion Kauffman Foundation. <https://indicators.kauffman.org/reports/early-stage-entrepreneurship-national-2021/>
- Farrokhnia, M., Baggen, Y., Biemans, H., & Noroozi, O. (2022). Bridging the fields of entrepreneurship and education: The role of philosophical perspectives in fostering opportunity identification. *The International Journal of Management Education*, 20(2), 100632. <https://doi.org/10.1016/j.ijme.2022.100632>
- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- Field, A. (2024). *Discovering statistics using IBM SPSS statistics* (6th ed.). Sage.
- GEM U.S. Team. (2024). *Global entrepreneurship monitor United States 2023/2024 report*. Babson College. <https://www.gemconsortium.org/report/51493>
- Global Entrepreneurship Monitor Spain. (2023). *Informe GEM 2023: Juventud y emprendimiento en España*. GEM Consortium. <https://observatoriodelemprendimiento.es/gem-spain/wp-content/uploads/Informes-Nacionales/Informe-GEM-Espana-2023-2024.pdf>
- Guerrero Sánchez, P., Hernández Jaimes, B. G., Bonilla Sánchez, F. D. J., Sánchez Guevara, I., & Guerrero Grajeda, J. (2024). Las estrategias de sobrevivencia de las microempresas en México durante la pandemia [The survival strategies of microenterprises in Mexico during the pandemic]. *Revista Universidad y Empresa*, 26(46), 1–30. <https://doi.org/10.12804/revistas.urosario.edu.co/empresa/a.13581>
- Gibb, A. (1987). Designing effective programmes for encouraging the business start-up process: Lessons from UK experience. *Journal of European Industrial Training*, 11(4), 24–32. <https://doi.org/10.1108/eb002229>
- Hernández, A., Hidalgo, M. D., Hambleton, R. K., & Gómez-Benito, J. (2020). International test commission guidelines for test adaptation: A criterion checklist. *Psicothema*, 32(3), 390–398. <https://doi.org/10.7334/psicothema2019.306>
- Honig, B. (2004). Entrepreneurship education: Toward a model of contingency-based business planning. *Academy of Management Learning & Education*, 3(3), 258–273. <https://doi.org/10.5465/amle.2004.14242112>
- Hou, F., Su, Y., Qi, M., Chen, J., & Tang, J. (2022). A multilevel model of entrepreneurship education and entrepreneurial intention: Opportunity recognition as a mediator and entrepreneurial learning as a moderator. *Frontiers in Psychology*, 13, 837388. <https://doi.org/10.3389/fpsyg.2022.837388>
- International Test Commission. (2017). *The ITC guidelines for translating and adapting test* (2nd ed.). <https://doi.org/10.1111/j.1464-0597.1975.tb00322.x>
- Jiménez, A., Palmero-Cámara, C., González-Santos, M. J., González-Bernal, J., & Jiménez-Eguizábal, J. A. (2015). The impact of educational levels on formal and informal entrepreneurship. *BRQ Business Research Quarterly*, 18(3), 204–212. <https://doi.org/10.1016/j.brq.2015.02.002>
- Johnson, E., & Sherraden, M. S. (2007). From financial literacy to financial capability among youth. *The Journal of Sociology & Social Welfare*, 34(3), 119–145. <https://scholarworks.wmich.edu/jssw/vol34/iss3/7/> <https://doi.org/10.15453/0191-5096.3276>
- Jones, C., & English, J. (2004). A contemporary approach to entrepreneurship education. *Education + Training*, 46(8/9), 416–423. <https://doi.org/10.1108/00400910410569533>
- Katz, J. (2003). The chronology and intellectual trajectory of american entrepreneurship education: 1876–1999. *Journal of Business Venturing*, 18(2), 283–300. [https://doi.org/10.1016/S0883-9026\(02\)00098-8](https://doi.org/10.1016/S0883-9026(02)00098-8)
- Khan, G. M., & Almoaharby, D. (2007). Towards enhancing entrepreneurship development in Oman. *Journal of Enterprising Culture*, 15(04), 371–392. <https://doi.org/10.1142/S0218495807000198>
- Kirman Bilgin, A., & İnaltekin, T. (2022). Investigating the effectiveness of integrated entrepreneurship education. *Education and Science*, 47(210), 139–160. <https://doi.org/10.15390/EB.2022.10888>
- Klandt, K. (2004). Entrepreneurship education and research in German-speaking Europe. *Academy of Management Learning & Education*, 3(3), 293–301. <https://doi.org/10.5465/amle.2004.14242226>
- Klofsten, M., Urbano, D., & Heaton, S. (2021). Managing intrapreneurial capabilities: An overview. *Technovation*, 99(July 2020), 102177. <https://doi.org/10.1016/j.technovation.2020.102177>
- Leeuw, E. D., Hox, J. J., & Dillman, D. A. (2008). *International handbook of survey methodology*. Lawrence Erlbaum Associates.
- Li, J., Zhang, Y., & Matlay, H. (2003). Entrepreneurship education in China. *Education + Training*, 45(8/9), 495–505. <https://doi.org/10.1108/00400910310508883>
- Li, Y., Sha, Y., Lv, Y., Wu, Y. J., & Liu, H. (2022). Moderated mediating mechanism effects of Chinese university entrepreneurship education on independent student entrepreneurship. *Frontiers in Psychology*, 13, 782386. <https://doi.org/10.3389/fpsyg.2022.782386>
- Lián, F., & Chen, Y. W. (2022). The influence of entrepreneurial education on entrepreneurial intention. *Entrepreneurship Research Journal*, 12(2), 1–24. <https://doi.org/10.1515/erj-2021-0226>

- Liu, F., Yang, G., & Singhdong, P. (2024). A moderated mediation model of entrepreneurship education, competence, and environmental dynamics on entrepreneurial performance. *Sustainability*, 16(19), 8502. <https://doi.org/10.3390/su16198502>
- Luis-Rico, I., Escolar-Llamazares, M. C., de la Torre-Cruz, T., Herrero, Á., Jiménez, A., Val, P. A., Palmero-Cámara, C., & Jiménez-Eguizábal, A. (2020). The association of parental interest in entrepreneurship with the entrepreneurial interest of Spanish youth. *International Journal of Environmental Research and Public Health*, 17(13), 4744. <https://doi.org/10.3390/ijerph17134744>
- Luis-Rico, I., Escolar-Llamazares, M. C., de la Torre-Cruz, T., Jiménez, A., Herrero, Á., Palmero-Cámara, C., & Jiménez-Eguizábal, A. (2020). Entrepreneurial interest and entrepreneurial competence among Spanish youth: An analysis with artificial neural networks. *Sustainability*, 12(4), 1351. <https://doi.org/10.3390/su12041351>
- Lusardi, A., Mitchell, O. S., & Curto, V. (2010). *Financial literacy among the young: Evidence and implications for consumer policy*. Recuperado el 6 de mayo del 2015 http://www.dartmouth.edu/~alusardi/Papers/Financial_literacy_young.pdf
- McCormick, M. H. (2009). The effectiveness of youth financial education: A review of the literature. *Journal of Financial Counseling and Planning*, 20(1), 71.
- Michigan Department of Education. (2023). *CTE content standards*. https://www.michigan.gov/mde/-/media/Project/Websites/mde/CTE/cte_cluster/CTE_Content_Standards.pdf
- Mincer, J. (1974). *Schooling, experience and earnings*. Columbia University Press.
- Ministerio de Educación y Formación Profesional. (2024). *Estadística de la enseñanza de la educación financiera en ESO*. Ministerio de Educación, Formación Profesional y Deportes
- Montgomery, D. C., Peck, E. A., & Vining, G. G. (2001). *Introduction to linear regression analysis* (3rd ed.). Wiley.
- Nafukho, F. M., & Falebita, A. (2020). Funding models and sustainability of entrepreneurship programmes in secondary education. *International Journal of Educational Development*, 76, 102233. <https://doi.org/10.1016/j.ijedudev.2020.102233>
- Organisation for Economic Co-operation and Development. (2020). *Policy brief on recent developments in youth entrepreneurship*. https://www.oecd.org/content/dam/oecd/en/publications/reports/2020/03/policy-brief-on-recent-developments-in-youth-entrepreneurship_bf53d760/5f5c9b4e-en.pdf
- Pablo-Lerchundi, I., Morales-Alonso, G., & Vargas-P, A. M. (2014). Does family matter? A study of parents' influence on the entrepreneurial intention of technical degrees students in Spain. In D. Carlucci, J. C. Spender, & G. Schiuma (Eds.), *Knowledge and management models for sustainable growth* (pp. 1753–U158). Inst Knowledge Asset Management.
- Peterman, N., & Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship Theory and Practice*, 28(2), 129–144. <https://doi.org/10.1046/j.1540-6520.2003.00035.x>
- Qader, A. A., Zhang, J., Ashraf, S. F., Syed, N., Omhand, K., & Nazir, M. (2022). Capabilities and opportunities: Linking knowledge management practices of textile-based SMEs on sustainable entrepreneurship and organizational performance in China. *Sustainability*, 14(4), 2219. <https://doi.org/10.3390/su14042219>
- Renart Vicens, G., Vall-Llosera Casanovas, L., Saurina Canals, C., & Serra, L. (2022). Entrepreneurship analysis in Spanish universities. *Higher Education, Skills and Work-Based Learning*, 12(1), 178–190. <https://doi.org/10.1108/HESWBL-11-2020-0248>
- Schultz, T. W. (1959). Investment in man: An economist's view. *Social Service Review*, 33(2), 109–117. <https://doi.org/10.1086/640656>
- Schunk, D. M. (1995). Self-efficacy and education and instruction. In E. J. E. Maddux (Ed.) *Self-efficacy, adaptation, and adjustment: Theory, research, and application* (pp. 281–303). Plenum Press.
- Scott, N., & Hills, G. (2021). Entrepreneurship curricula in Michigan high schools: A statewide audit. *Journal of Entrepreneurship Education*, 24(4), 1–17.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226. <https://doi.org/10.5465/amr.2000.2791611>
- Shepherd, D. A., Kuskova, V., & Patzelt, H. (2009). Measuring the values that underlie sustainable development: The development of a valid scale. *Journal of Economic Psychology*, 30(2), 246–256. <https://doi.org/10.1016/j.joep.2008.08.003>
- Smith, K., Rogers-Draycott, M. C., & Bozward, D. (2022). Full curriculum-based venture creation programmes: Current knowledge and research challenges. *International Journal of Entrepreneurial Behaviour and Research*, 28(4), 1106–1127. <https://doi.org/10.1108/IJEBR-09-2020-0644>
- Solomon, G., Duffy, S., & Tarabishy, A. (2002). The state of entrepreneurship education in the United States: A nationwide survey and analysis. *International Journal of Entrepreneurship Education*, 1(1), 1–22.
- Somià, T., Pittaway, L., & Benedict, P. (2024). Rethinking entrepreneurial competencies: A gender-focused analysis of students' perceived competencies. *The International Journal of Management Education*, 22(3), 101038. <https://doi.org/10.1016/j.ijme.2024.101038>
- Souitaris, V., Zerbini, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566–591. <https://doi.org/10.1016/j.jbusvent.2006.05.002>
- Sousa, M. J., & Costa, J. M. (2022). Discovering entrepreneurship competencies through problem-based learning in higher education students. *Education Sciences*, 12(3), 185. <https://doi.org/10.3390/educsci12030185>
- Stewart, W., & Carpenter, K. (2023). IT skills and digital start-up intentions among U.S. high-school seniors. *Journal of Entrepreneurship Education*, 26(1), 1–18. <https://doi.org/10.5465/jee.2023.261>

- Submit Consulting. (2009). *Toward effective education of innovative entrepreneurs in small business*. Initial Results from a Survey of College Students and Graduates.
- Valdemoros-San-Emeterio, M. A., Ponce de León, A., & Gradaille, R. (2016). Actividad Física de Ocio Juvenil y Desarrollo Humano. *Revista Psicología Del Deporte*, 25, 39–44.
- Valdemoros-San-Emeterio, M. A., Sanz-Arazuri, E., & Ponce-de-León-Elizondo, A. (2017). Digital leisure and perceived family functioning in youth of upper secondary education/Ocio digital y ambiente familiar en estudiantes de Educación Postobligatoria. *Comunicar*, 25(50), 99–108. <https://doi.org/10.3916/C50-2017-09>
- Wei, H., Ding, A., & Gao, Z. (2024). The application of project management methodology in the training of college students' innovation and entrepreneurship ability under sustainable education. *Systems and Soft Computing*, 6(January), 200073. <https://doi.org/10.1016/j.sasc.2024.200073>
- Westad Brandshaug, S. (2024). Transformation in the liminal space 'in between' student and entrepreneur. *The International Journal of Management Education*, 22(2), 100962. <https://doi.org/10.1016/j.ijme.2024.100962>
- Wiramihardja, K., N'dary, V., Al Mamun, A., Munikrishnan, U. T., Yang, Q., Salamah, A. A., & Hayat, N. (2022). Sustainable economic development through entrepreneurship: A study on attitude, opportunity recognition, and entrepreneurial intention among university students in Malaysia. *Frontiers in Psychology*, 13(April), 866753. <https://doi.org/10.3389/fpsyg.2022.866753>
- Zhao, W. G. W., Liu, X., & Zhang, H. (2020). Family embeddedness and medical students' interest for entrepreneurship as an alternative career choice: Evidence from China. *Frontiers in Psychology*, 11, 593235. <https://doi.org/10.3389/fpsyg.2020.593235>

Appendix A. RESORTES project questionnaire (in Spanish)

EDUCACIÓN PARA EL EMPRENDIMIENTO												
Necesitamos detectar las necesidades educativas en la enseñanza no universitaria que faciliten el emprendimiento. Este cuestionario, anónimo y confidencial, forma parte, además, de un proyecto financiado por el Ministerio de Economía y Competitividad y fondos FEDER Código: EDU2012-39080-C07-01 y pretende conocer tu opinión sobre algunos aspectos relacionados con el EMPRENDIMIENTO. Tu colaboración es imprescindible para desarrollar este trabajo, por lo que solicitamos que nos dediques unos minutos y respondas con sinceridad a todas las preguntas; teniendo en cuenta que 1 corresponde con los valores mínimos (interés / importancia...) y 5 máximos (interés / importancia...)												
DATOS GENERALES												
1.- Sexo: ☐ Mujer ☐ Hombre 2.- Edad:..... 3.- Nota media en el curso 12/13:..... 4.- ¿De cuánto dinero dispones semanalmente para tus gastos personales?.....€ 5.- Centro/Institución donde estudias ☐ Público ☐ Privado ☐ UBU	6.- Estudios ☐ Secundaria. Curso: ☐ Bachillerato. Curso: Especialidad: ☐ Ciclo Formativo. Curso: Especialidad: ☐ Grado en 7.-Existen antecedentes empresariales en tu familia próxima (madre, padre, hermano/a y abuelos) ☐ SI ☐ NO 7.1. Profesión del padre..... 7.2. Profesión de la madre.....											
EMPRENDIMIENTO												
<i>El emprendimiento se entiende como crear tu propia empresa o autoemplearte, es decir, detectar una oportunidad de negocio, gestionar los recursos necesarios y asumir riesgos para contribuir a tu desarrollo profesional y socioeconómico.</i>												
8.- De la definición anterior, valora de 1 a 5 la importancia de los siguientes aspectos en el emprendimiento <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Detectar una oportunidad de negocio</td> <td style="width: 33%;">Autoemplearte</td> <td style="width: 33%;">Gestionar recursos (humanos, económicos...)</td> </tr> <tr> <td>Mejorar tu desarrollo profesional</td> <td>Asumir algún riesgo</td> <td>Desarrollo socioeconómico</td> </tr> <tr> <td>Generar nuevos puestos de trabajo</td> <td colspan="2">Otros aspectos relevantes. Indicar cuales</td> </tr> </table>				Detectar una oportunidad de negocio	Autoemplearte	Gestionar recursos (humanos, económicos...)	Mejorar tu desarrollo profesional	Asumir algún riesgo	Desarrollo socioeconómico	Generar nuevos puestos de trabajo	Otros aspectos relevantes. Indicar cuales	
Detectar una oportunidad de negocio	Autoemplearte	Gestionar recursos (humanos, económicos...)										
Mejorar tu desarrollo profesional	Asumir algún riesgo	Desarrollo socioeconómico										
Generar nuevos puestos de trabajo	Otros aspectos relevantes. Indicar cuales											
9.- De las asignaturas que cursas o has cursado ¿cuáles crees que favorecen más el emprendimiento? Indica 3 <table border="1" style="width: 100%; height: 40px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>												
10.- Valora de 1 a 5 tu grado de interés personal por el emprendimiento ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5												
11.- ¿Conoces alguna red de emprendimiento? ☐ Sí, ¿cuál o cuáles? (indícalas abajo) ☐ No <table border="1" style="width: 100%; height: 40px; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>												
12.- Valora de 1 a 5 la importancia de cada uno de los siguientes motivos para crear tu empresa <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Tradición familiar</td> <td style="width: 33%;">Generar trabajo para otros</td> <td style="width: 33%;">Ganar dinero</td> </tr> <tr> <td>Independencia económica</td> <td>Conseguir trabajo</td> <td>Poner en práctica mis ideas</td> </tr> <tr> <td>Reconocimiento social</td> <td>Dirigir un grupo humano</td> <td>Contribuir al crecimiento económico y social</td> </tr> </table>				Tradición familiar	Generar trabajo para otros	Ganar dinero	Independencia económica	Conseguir trabajo	Poner en práctica mis ideas	Reconocimiento social	Dirigir un grupo humano	Contribuir al crecimiento económico y social
Tradición familiar	Generar trabajo para otros	Ganar dinero										
Independencia económica	Conseguir trabajo	Poner en práctica mis ideas										
Reconocimiento social	Dirigir un grupo humano	Contribuir al crecimiento económico y social										

Otros. Indica cuáles								
13.- Valora de 1 a 5 las dificultades que percibes en la sociedad para crear tu propia empresa <i>siendo 1 "dificultad nula" y 5 "máxima dificultad"</i>								
Asumir riesgos		Trabajar demasiadas horas	Falta de dinero para iniciar la actividad					
Escaso apoyo institucional		Temor a fracasar	Deficiente formación recibida para emprender					
Imagen negativa del empresario		Excesiva burocracia(<i>papeleo</i>)	Carencia de ideas para iniciar la empresa					
Poco apoyo familiar		Otros. Indica cuáles.....						
14.- Valora la importancia (IMP) que tú das a los siguientes aspectos para el emprendimiento y la presencia (PRE) que han tenido en tu formación siendo 1 "mínima/ninguna" y 5 "máxima". IMP: Importancia en el emprendimiento / PRE: Presencia en tu formación								
METODOLOGÍAS	MP	RE	CAPACIDADES	MP	RE	CONOCIMIENTOS	MP	RE
Clases teóricas			Liderazgo			Plan de empresa		
Ejercicios prácticos			Compromiso y motivación			Marketing		
Estudios de caso			Creatividad/Innovación			Idiomas		
Diseño de Proyectos			Gestión de conflictos/ crisis (tolerancia a la presión)			Informática		
Trabajo en equipo			Capacidad comunicativa			Planificación de organizaciones		
Resolución de problemas			Capacidad de negociación y toma de decisiones			Obtención de recursos		
Exposición y defensa de trabajos			Gestión del tiempo para el trabajo propio y del equipo			Aspectos legales de creación de empresas		
			Capacidad de búsqueda de recursos			Gestión administrativa		
			Otras. Indicar			Otros. Indicar		
MUCHAS GRACIAS POR TU COLABORACIÓN								

Appendix B. RESORTES project questionnaire (in English)

EDUCACIÓN PARA EL EMPRENDIMIENTO												
Necesitamos detectar las necesidades educativas en la enseñanza no universitaria que faciliten el emprendimiento. Este cuestionario, anónimo y confidencial, forma parte, además, de un proyecto financiado por el Ministerio de Economía y Competitividad y fondos FEDER Código: EDU2012-39080-C07-01 y pretende conocer tu opinión sobre algunos aspectos relacionados con el EMPRENDIMIENTO. Tu colaboración es imprescindible para desarrollar este trabajo, por lo que solicitamos que nos dediques unos minutos y respondas con sinceridad a todas las preguntas; teniendo en cuenta que 1 corresponde con los valores mínimos (interés / importancia...) y 5 máximos (interés / importancia...)												
DATOS GENERALES												
1.- Sexo: ☐ Mujer ☐ Hombre 2.- Edad:..... 3.- Nota media en el curso 12/13:..... 4.- ¿De cuánto dinero dispones semanalmente para tus gastos personales?.....€ 5.- Centro/Institución donde estudias ☐ Público ☐ Privado ☐ UBU	6.- Estudios ☐ Secundaria. Curso: ☐ Bachillerato. Curso: Especialidad: ☐ Ciclo Formativo. Curso: Especialidad: ☐ Grado en 7.-Existen antecedentes empresariales en tu familia próxima (madre, padre, hermano/a y abuelos) ☐ SI ☐ NO 7.1. Profesión del padre..... 7.2. Profesión de la madre.....											
EMPRENDIMIENTO												
<i>El emprendimiento se entiende como crear tu propia empresa o autoemplearte, es decir, detectar una oportunidad de negocio, gestionar los recursos necesarios y asumir riesgos para contribuir a tu desarrollo profesional y socioeconómico.</i>												
8.- De la definición anterior, valora de 1 a 5 la importancia de los siguientes aspectos en el emprendimiento <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Detectar una oportunidad de negocio</td> <td style="width: 33%;">Autoemplearte</td> <td style="width: 33%;">Gestionar recursos (humanos, económicos...)</td> </tr> <tr> <td>Mejorar tu desarrollo profesional</td> <td>Asumir algún riesgo</td> <td>Desarrollo socioeconómico</td> </tr> <tr> <td>Generar nuevos puestos de trabajo</td> <td colspan="2">Otros aspectos relevantes. Indicar cuales</td> </tr> </table>				Detectar una oportunidad de negocio	Autoemplearte	Gestionar recursos (humanos, económicos...)	Mejorar tu desarrollo profesional	Asumir algún riesgo	Desarrollo socioeconómico	Generar nuevos puestos de trabajo	Otros aspectos relevantes. Indicar cuales	
Detectar una oportunidad de negocio	Autoemplearte	Gestionar recursos (humanos, económicos...)										
Mejorar tu desarrollo profesional	Asumir algún riesgo	Desarrollo socioeconómico										
Generar nuevos puestos de trabajo	Otros aspectos relevantes. Indicar cuales											
9.- De las asignaturas que cursas o has cursado ¿cuáles crees que favorecen más el emprendimiento? Indica 3 <table border="1" style="width: 100%; border-collapse: collapse; height: 40px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>												
10.- Valora de 1 a 5 tu grado de interés personal por el emprendimiento ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5												
11.- ¿Conoces alguna red de emprendimiento? ☐ Sí, ¿cuál o cuáles? (indícalas abajo) ☐ No <table border="1" style="width: 100%; border-collapse: collapse; height: 40px;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;"></td> <td style="width: 33%;"></td> </tr> </table>												
12.- Valora de 1 a 5 la importancia de cada uno de los siguientes motivos para crear tu empresa <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Tradición familiar</td> <td style="width: 33%;">Generar trabajo para otros</td> <td style="width: 33%;">Ganar dinero</td> </tr> <tr> <td>Independencia económica</td> <td>Conseguir trabajo</td> <td>Poner en práctica mis ideas</td> </tr> <tr> <td>Reconocimiento social</td> <td>Dirigir un grupo humano</td> <td>Contribuir al crecimiento económico y social</td> </tr> </table>				Tradición familiar	Generar trabajo para otros	Ganar dinero	Independencia económica	Conseguir trabajo	Poner en práctica mis ideas	Reconocimiento social	Dirigir un grupo humano	Contribuir al crecimiento económico y social
Tradición familiar	Generar trabajo para otros	Ganar dinero										
Independencia económica	Conseguir trabajo	Poner en práctica mis ideas										
Reconocimiento social	Dirigir un grupo humano	Contribuir al crecimiento económico y social										

EDUCACIÓN PARA EL EMPRENDIMIENTO

Necesitamos detectar las necesidades educativas en la enseñanza no universitaria que faciliten el emprendimiento.

Este cuestionario, anónimo y confidencial, forma parte, además, de un proyecto financiado por el Ministerio de Economía y Competitividad y fondos FEDER Código: EDU2012-39080-C07-01 y pretende conocer tu opinión sobre algunos aspectos relacionados con el EMPRENDIMIENTO.

Tu colaboración es imprescindible para desarrollar este trabajo, por lo que solicitamos que nos dediques unos minutos y respondas con sinceridad a todas las preguntas; **teniendo en cuenta que 1 corresponde con los valores mínimos (interés / importancia...) y 5 máximos (interés /**

DATOS GENERALES

1.- Sexo: ☐ Mujer ☐ Hombre 2.- Edad:..... 3.- Nota media en el curso 12/13:..... 4.- ¿De cuánto dinero dispones semanalmente para tus gastos personales?.....€ 5.- Centro/Institución donde estudias ☐ Público ☐ Privado ☐ UBU	6.- Estudios ☐ Secundaria. Curso: ☐ Bachillerato. Curso: Especialidad: ☐ Ciclo Formativo. Curso: Especialidad: ☐ Grado en 7.-Existen antecedentes empresariales en tu familia próxima (madre, padre, hermano/a y abuelos) ☐ SI ☐ NO 7.1. Profesión del padre..... 7.2. Profesión de la madre.....
---	---

importancia...)

EMPRENDIMIENTO

El emprendimiento se entiende como crear tu propia empresa o autoemplearte, es decir, detectar una oportunidad de negocio, gestionar los recursos necesarios y asumir riesgos para contribuir a tu desarrollo profesional y socioeconómico.

8.- De la definición anterior, valora de 1 a 5 la importancia de los siguientes aspectos en el emprendimiento

Detectar una oportunidad de negocio	Autoemplearte	Gestionar recursos (humanos, económicos...)
Mejorar tu desarrollo profesional	Asumir algún riesgo	Desarrollo socioeconómico
Generar nuevos puestos de trabajo	Otros aspectos relevantes. Indicar cuales	

9.- De las asignaturas que cursas o has cursado ¿cuáles crees que favorecen más el emprendimiento?
Indica 3

--	--	--

10.- Valora de 1 a 5 tu grado de interés personal por el emprendimiento ☐ 1 ☐ 2 ☐ 3 ☐ 4
☐ 5

11.- ¿Conoces alguna red de emprendimiento? ☐ Sí, ¿cuál o cuáles? (indícalas abajo) ☐ No

--	--	--

12.- Valora de 1 a 5 la importancia de cada uno de los siguientes motivos para crear tu empresa

Tradición familiar	Generar trabajo para otros	Ganar dinero
Independencia económica	Conseguir trabajo	Poner en práctica mis ideas
Reconocimiento social	Dirigir un grupo humano	Contribuir al crecimiento económico y social