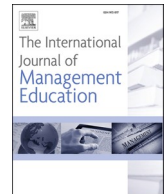




Contents lists available at ScienceDirect

# The International Journal of Management Education

journal homepage: [www.elsevier.com/locate/ijme](http://www.elsevier.com/locate/ijme)



## The relevance of entrepreneurial competences from a faculty and students' perspective: The role of consensus for the achievement of competences

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### ARTICLE INFO

#### Keywords:

Entrepreneurial competences  
University  
Entrepreneurship  
Students  
Faculty

### ABSTRACT

Given the importance of entrepreneurship for the socioeconomic development of territories, understanding the conditions to which universities can contribute to training managers who master entrepreneurial competences is relevant. In this regard, the success of teaching-learning programmes can be conditioned by the importance faculty and students assign to the contents of that education programme, which, in this case, are the entrepreneurial competences addressed. Based on stakeholder theory, principal-agent theory and stewardship theory, this study analyses the importance that faculty and students in undergraduate business programmes assign to ten entrepreneurial competences. A sample of 62 faculty members and 278 students demonstrates that both groups agree that Commitment, Relational and Opportunity competences are important, and that Conceptual and Technical competences are less relevant. While at the same time, they diverge on the importance assigned to the remaining five competences: Organisation, Strategic, Learning, Personal Strength and Social Responsibility. In addition, this research shows a higher competences' achievement by students when a consensus exists between students and faculty on the importance of these entrepreneurial competences, or when students attach a higher importance to these competences.

### 1. Introduction

Entrepreneurial activity is critical to driving the socioeconomic development of territories (Morris, Neumeyer, & Kuratko, 2015; Rathna & Vijaya, 2009; Wennekers, Van Wennekers, Thurik, & Reynolds, 2005). Accordingly, one of the main objectives of the European Commission has been to increase the entrepreneurial capacity of European citizens. To this respect, a "sense of initiative and entrepreneurship" has been stated as one of the 8 key competences (e.g., Learning to learn, Digital competence, Communication in foreign languages) necessary in our current knowledge-based society by the European Parliament and the Council (see Recommendation

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<https://doi.org/10.1016/j.ijme.2023.100774>

Received 12 November 2021; Received in revised form 6 July 2022; Accepted 6 February 2023

Available online 14 February 2023

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2006/962/EC of December 18, 2006, p. L 394/13). In reaching that objective, the role of entrepreneurship education for the sake of developing people's knowledge and skills, as well as to hone entrepreneurial attitude and focus has been outlined by literature (Boldurenou et al., 2020). Furthermore, besides preparing university students to create new firms, entrepreneurial education also creates new jobs and enhances innovation (Cascavilla, Hahn, & Minola, 2022). In this context, universities have paid increasing attention to entrepreneurship education (Boldurenou et al., 2020; Solomon, 2007), and this interest has translated into entrepreneurially based literature (e.g., Kuratko & Morris, 2018; Robinson, Neergaard, Tanggaard, & Krueger, 2016).

Entrepreneurship education can be conceptualized as “a purposeful intervention by an educator in the life of the learner to impact entrepreneurial qualities and skills to enable the learner to survive in the world of business” (Olokundun, Ibidunni, Peter, & Ogbari, 2017, p. 2). Coherently with this definition, the European Commission (Recommendations 2006/962/EC of December 18, 2006 and 2018/C 189/01 of 22 May 2018), as well as many academics highlight that current entrepreneurship education is not only about learning to start a venture (e.g., Alcaraz-Rodríguez, Alvarez, & Villasana, 2014; Olokundun et al., 2017), as it was underscored by earlier focus on such education (Spaeth & Hakanen, 2010).

Because literature does not offer a single approach to entrepreneurship education (Cascavilla et al., 2022; Hoppe, 2016; Nabi, Liñán, Fayolle, Krueger, & Walmsley, 2017; Pittaway & Cope, 2007), authors have widely discussed about “what” and “in which manner” (i.e., how) should be learned in entrepreneurial education (Schelfhout, Bruggeman, & De Maeyer, 2016, p. 29). Concerning the *what*, the content of the programmes and particularly the learning objectives to be pursued have been tried to elucidate (e.g., Hoppe, 2016; Kozlinska, Mets, & Rõigas, 2020; Solomon, 2007; Souitaris, Zerbini, & Al-Laham, 2007; Wong & Chan, 2021). Referring the *how*, issues related to the organisation of the entrepreneurship education – e.g., entrepreneurship courses vs. educational content transversal to all subjects and academic fields, part of curricula vs. extracurricular activities – (Alcaraz-Rodríguez et al., 2014; Solomon, 2007), and to the manner the learning process must be carried out have called the attention of researchers (e.g., Cascavilla et al., 2022; Hoppe, 2016; Nabi et al., 2017; Neck & Greene, 2011; Pittaway & Cope, 2007). Regarding the role of faculty and students as joint stakeholders in educational programmes, Cascavilla et al. (2022) discuss diverse entrepreneurship education teaching models. For example, *supply model* education recognises the teacher as a critical stakeholder in the learning process, as they purposefully dominate the distribution of knowledge required in entrepreneurship education. *Demand model*, in turn, focuses on students' needs and their demands for content and emphasises students as active drivers of the educational process, while the teachers act as a tutors and facilitators.

Because teaching methods (the *how*) are a function of the relevance of the content and objectives to be achieved (the *what*) (e.g., Cascavilla et al., 2022; Nabi et al., 2017), the key to the success of a programme is to assess the appropriateness of *what* is intended to be achieved. Towards this end, an important line of research has focused on entrepreneurial competence (the *what*) as a main learning objective in the process of entrepreneurship education (e.g., Lindner, 2018; RezaeiZadeh, Hogan, O'Reilly, Cunningham, & Murphy, 2017; Schelfhout et al., 2016; Tittel & Terzidis, 2020), as well as the basis upon which the learning process should be designed (the *how*) – e.g., learning of entrepreneurial competences through experience (Alcaraz-Rodríguez et al., 2014; Bauman & Lucy, 2021); evaluation methods based on the acquisition of entrepreneurial competences (Schelfhout et al., 2016).

According to Tuning (2003), competences refer to a set of attributes (i.e., knowledge and its application, attitudes, skills and responsibilities) that report on degree to which an individual is able to perform them. That said, there is no consensus on the competences that define entrepreneurs (e.g., Kyndt & Baert, 2015; RezaeiZadeh et al., 2017; Schelfhout et al., 2016; Tittel & Terzidis, 2020) or on the most valuable competences that must be learned by future entrepreneurs (Solomon, 2007). To this respect, in 2016, The European Commission developed a European Entrepreneurship Competence Framework (EntreComp) as a reference framework to explain the knowledge, abilities, and attitudes people need to become entrepreneurs (Bacigalupo, Kampylis, Punie, & Van Den Brande, 2016). EntreComp currently coexists alongside other approaches that also state what students must learn to become entrepreneurs (e.g., Kyndt & Baert, 2015; Man, Lau, & Chan, 2002; Morris, Webb, Fu, & Singhal, 2013; RezaeiZadeh et al., 2017; Schelfhout et al., 2016). These approaches are relevant as they condition the contents chosen in the design of education programmes (the *what*) (Robinson et al., 2016), as well as contribute to reduce the dissensus in the literature on the conditions (the *how*) under which universities train students on entrepreneurial competences (Kuratko & Morris, 2018). To this respect, Hoppe (2016, p. 16) goes beyond and claims: “[...] it is hard to find a common denominator of what makes entrepreneurship education successful”. This study adopts a new approach to contribute to this gap in the literature.

Specifically, we propose that the success of education programmes at the university level may be conditioned by the convergence or divergence of perspectives between faculty and students (Abidin, 2015) concerning the importance assigned to the contents (the *what*) included in those programmes. The literature has revealed the interest in analysing the convergence and divergence between faculty' and students' views of the learning process (the *how*) in higher education in order to detect areas for improvement (e.g., Almahasees, Mohsen, & Amin, 2021; Niemi & Kousa, 2020; Uwimana, Mukamana, Babenko-Mould, & Adejumo, 2022). However, the convergence and divergence between these stakeholders on the importance of competences in an educational programme (the *what*) is, to the best of our knowledge, an area that is still largely unexplored, which also affects entrepreneurship education. This gap is relevant due to the importance placed upon the content of educational programmes as it influences the motivation of students (Knoster & Goodboy, 2021; Vallade, Kaufmann, & Frey, 2020) and faculty (Kalyar, Ahmad & Kalyar, 2018; Shikalepo, 2020) to achieve the learning objectives.

Based upon the above, the present research paper analyses the consensus/dissensus between faculty and students concerning the importance given to different entrepreneurial competences in business undergraduate programmes and explores whether such consensus/dissensus is a factor that may condition the success of educational processes aimed at developing entrepreneurial competences. To ground the approach of the study, a combination of three theories is used, which encompasses stakeholder theory, principal-agent theory and stewardship theory. In particular, students and faculty are considered key *stakeholders* (Bauman & Lucy, 2021), and the relationship between them could resemble an agency relationship (Jensen & Meckling, 1976). This relationship could

be based on control or on trust depending on the divergence or convergence of interests between them as the agency theory states (Jensen & Meckling, 1976); specifically: (1) there may be a divergence of interests between the student (principal) and the faculty member (agent); or (2) they may share the same interests, being the agent (faculty) motivated to act in the interest of the principal (Van Puyvelde, Caers, Du Bois, & Jegers, 2012). In addition, a higher convergence of interests between them would resemble their relationship a stewardship one (Sundaramurthy & Lewis, 2003), where trust play a more important role than control.

The results of this research will contribute to the literature from a theoretical, methodological and practical perspective. Firstly, a catalogue of ten entrepreneurial competences is provided made up of 73 specific abilities that students, who have developed the above-mentioned competences, will possess. Furthermore, new evidence is offered that demonstrates the most important entrepreneurial competences to be taught in undergraduate programmes related to business and, therefore, this evidence is useful to guide the content included in education programmes. Lastly, a possible new condition is provided for the success or failure of teaching-learning processes aimed at developing these competences: the consensus or dissensus on the importance assigned to these competences by students and faculty.

This manuscript is structured as follows. First, Theoretical framework of the work is presented. Specifically, a description of the role of faculty and students as key stakeholders in the teaching-learning process is offered, as well as a revision of key concepts and models concerning entrepreneurial competences. Second, the Methodology of the empirical study carried out is provided. Third, findings are reported in three subsections: (1) Importance of entrepreneurial competences by students and faculty, (2) Students' perception of achievement of the abilities associated with entrepreneurial competences, and (3) Students' consensus with faculty on the importance of competence and its relation with students' perception of achievement. Fourth, the manuscript finishes with a discussion of results and a Conclusions section.

## 2. Theoretical framework

The programmes and the learning objectives to be achieved in entrepreneurial education constitutes an important research avenue that in recent years has been academically explored by experts in this field. Iwu et al. (2021:10) outline that "A much careful design of the curriculum and course content towards ensuring that all the features that are critical to galvanising entrepreneurship awareness and drive are taken into consideration" is pertinent. Among the other academic contributions along these lines, and regarding the desired learning objectives to be achieved, Kozlinska et al. (2020) propose a novel tripartite framework for measuring learning outcomes of entrepreneurship education, namely cognitive outcomes, skill-based outcomes, and affective outcomes. Souitaris et al. (2007) present an entrepreneurial learning scale, which describes the entrepreneurial knowledge, attitudes and skills which need to be achieved through university programs. Furthermore, Souitaris et al. (2007) assert that students need to become entrepreneurs, first, by starting and managing a business, followed by identifying opportunities and developing networks. Wong and Chan (2021), who also provide a systematic review on the learning outcomes in entrepreneurship education in higher education, describe three levels of entrepreneurship education learning outcomes in higher education: those that affect persons, institutions, and societies.

Since what is intended to be achieved is key to the success of the study programme, some researchers have outlined the need of define students' appropriate needs, specify the type(s) of content and learning outcomes that are suitable for the different target audiences and which learning strategies are the most appropriate (e.g., Ndou, Secundo, Schiuma, & Passiante, 2018). Therefore, it is not surprising that the role of competencies (or learning outcomes) towards the success of entrepreneurship education is widely recognised in the literature. For instance, Lv et al. (2021) state that entrepreneurial competence mediates the relationship of entrepreneurship education in universities and entrepreneurial intention. Minai, Raza, bin Hashim, Zain, and Tariq (2018) propose that entrepreneurial education is an antecedent of entrepreneurial competences, which would positively influence start-up firm performance, and therefore entrepreneurship competence is a connector between university studies and business.

However, the choice of the appropriate competences is a complex process, and there is no consensus on what objectives should be included in entrepreneurship education (Wong & Chan, 2021). For this research, we consider that learning outcomes in entrepreneurial education in terms of what students should know and should be capable of doing at the end of the course should coincide with what faculty aims to teach. This can be explained from three theoretical approaches: stakeholder theory, principal-agent theory and stewardship theory. This combined framework would contribute in explaining the relationship between faculty and students as key actors in the entrepreneurial education process, as we discuss below.

### 2.1. Faculty and students: key stakeholders in the teaching-learning process

In university organisations, students are a key *stakeholder* with certain educational interests and whose satisfaction with the teaching-learning process depends on, among other aspects, the quality of curricula at universities (Abidin, 2015). The faculty in charge of teaching those subjects usually designs the pertinent education programmes. They condition both the contents to teach (the what) as well as the pedagogies to develop (the how), which turns faculty into another relevant *stakeholder* (Robinson et al., 2016; Solomon, 2007). This relationship between faculty and students can be understood as an unusual agency relationship (Jensen & Meckling, 1976) in which the interests of the principal, the student, does not necessarily need to be in conflict with the interests of the agent, the faculty member in charge of his/her education. Potential asymmetries of information in the relationship between faculty and students become diluted by publishing the content, methods and objectives of the study programme, as well as data on the quality of the university and its teaching staff. Moreover, control is made by monitoring the agent's behaviour. For instance, student surveys represent a key indicator in faculty evaluation, as considered in European university accreditation and quality assurance systems (e.g., Stukalina, 2014). This practice contributes to the alignment of faculty and students' interests in such a way that the agent may share

the same interests as the principal or may even be motivated to act in their best interest (Van Puyvelde et al., 2012).

Indeed, faculty could satisfy their own need for success and self-fulfilment (Davis, Schoorman, & Donaldson, 1997; Tosi, Brownlee, Silva, & Katz, 2003) by developing education programmes that allow students to learn the competences considered necessary for their future career as they would then be contributing to the improvement of their region's professional network. Thus, the needs of the agent would be perfectly aligned with those of the principal (Sundaramurthy & Lewis, 2003); and the success or failure of the university in teaching the competences students need to develop their professional careers is considered to be the success or failure of faculty members, as they are the ones who offer the service (Mael & Ashforth, 1992). Therefore, faculty would attribute the efficacy and success of education programmes to themselves, thus enhancing their own personal image (Davis et al., 1997). They would be intrinsically motivated to design and teach education programmes that would allow the desired competences to be learned, so working for the satisfaction of the students in this unusual agency relationship.

In this setting, the premise for the lack of trust of the principal in the agent and, therefore, the need for control in a typical agency approach in an organisation (Davis et al., 1997), would be replaced by an approach based on collaboration and confidence in which the interests of the principal and agent are aligned, and where a high organisational identification exists. This approach is in line with the *stewardship* theory (Sundaramurthy & Lewis, 2003).

However, faculty evaluation by the institutions in which they work usually emphasises research and the results of that research (publications/patents ...), which may cause the university faculty to redirect its attention from teaching tasks -such as designing education programmes and the most appropriate didactic methodologies to transmit their contents-to research (European Commission, 2008; Yallew, Juusola, Ahmad, & Törmälä, 2018). This situation might lead to a divergence of interest between faculty and students regarding the learning process. With the aim of attending to this particular problem, recent research (e.g., Almahasees et al., 2021; Niemi & Kousa, 2020; Uwimana et al., 2022) has analysed the convergence/divergence of faculty' and students' views about the learning process (the *how*) in higher education. For instance, Niemi and Kousa (2020) analyse students and faculty' perceptions at a Finnish High School during the COVID-19 pandemic. This type of analysis contributes significantly to improving the effectiveness and efficiency of educational programmes. Similarly, the convergence and divergence of interests on the core competences (the *what*) in entrepreneurship education, could contribute to the efficacy of achieving the learning objectives.

Indeed, by focusing on the achievement of the specified learning objectives, Madrid Fernández and Pérez Cañado (2001) state that it is a function of students' motivation, which improves as students positively evaluate the importance of the academic programme and its content (e.g., Knoster & Goodboy, 2021; Vallade et al., 2020). In this sense, Vallade et al. (2020) highlight that when the teacher explains to students the relevance of the course content, their motivation improves. In this way, instructors can stimulate learning by relating course content to the students' interests, needs and goals (Knoster & Goodboy, 2021). Therefore, the student's perceived importance of the content's relevance in the academic programme, as measured by its competences, will be a key determinant in the learning process' success. Moreover, to the extent that faculty and students converge in their joint interpretation of the competences to be achieved and their importance, the problem of agency between the two stakeholders would be reduced, strengthening the scenario proposed by *stewardship* theory.

Building on the theoretical approaches mentioned above that aid us in understanding the faculty-students relationship as key *stakeholders* in universities, understanding the relevance that each of these groups assign to the key competences to be taught in the education process might be crucial and will be the base for the future professional career of the students. The consensus as to what the contents in education programmes should be, will contribute to the success of the teaching-learning process in terms of the competences mastered. On the other hand, a divergence in these approaches will imply that the faculty, the students or both parties consider that some of the content offered is not important to developing these competences, which would illuminate actions such as the redesigning of education programmes and/or processes with the goal of training entrepreneurial managers.

## 2.2. Competences of entrepreneurial managers

Competence can be defined as a strength that an individual possesses and demonstrates, a talent that makes his or her work run properly (Cano García, 2008). Lahti (1999) defined individual level core competences as the integration of knowledge, skills, abilities and other characteristics that are critical for the success of an individual within an organisation and in different contexts. Currently, most of the definitions of competences are in line with this definition (e.g., Tittel & Terzidis, 2020) and with that assumed by the Tuning Educational Structures in Europe (Tuning, 2003, p. 69): "competences represent a combination of attributes (with respect to knowledge and its application, attitudes, skills and responsibilities) that describe the level or degree to which a person is capable of performing them".

Attending to this conceptualization, and with the aim of identifying the competences of an entrepreneurial manager, it is necessary to put the focus on the figure of the innovator who combines new resources and capabilities to initiate and accelerate the process of economic development, that is, on the figure of the entrepreneur (Schumpeter, 1934). Many researchers have focused on determining the characteristics of a successful entrepreneur (e.g., Hornaday, 1971; Hyrsky, 2000). For Rathna and Vijaya (2009, p. 29): "The decision to leave secure employment and undertake the risks of entrepreneurship is the hallmark of this special kind of person". There is consensus in the literature about the following competences for an entrepreneur: management abilities, idea generation capability, conceptual and analytical capabilities, customer management abilities, delegation and motivation abilities, ability to recognize and take advantage of opportunities, ability to formulate strategies for taking advantage of opportunities, hiring abilities, decision-making abilities, leadership abilities, and commitment (Mitchellmore & Rowley, 2010).

Entrepreneurial behaviour can occur both when founding a new organisation and when innovating within an existing one. According to Bartlett and Ghoshal (1997), operational-level managers had to evolve from their traditional role as front-line implementers

**Table 1**  
Entrepreneurial competences.

| Competences  | Abilities  | Illustrative references   |
|--|--|---|
| <b>Opportunity</b> , Ability of managers to recognize business opportunities and/or improvements in any department of the business.  | <ul style="list-style-type: none"> <li>Identify business opportunities</li> <li>Perceive unmet consumer needs</li> <li>Actively look for products/services that provide real benefit to customers</li> </ul>   | <a href="#">Ahmad et al. (2011)</a><br><a href="#">Reis, Fleury, and Carvalho (2021)</a><br><a href="#">Kyndt and Baert (2015)</a>                            |
| <b>Relational</b> , Ability of managers to create, maintain and improve interpersonal relationship with different stakeholders (clients, employees, providers ...).                          | <ul style="list-style-type: none"> <li>Manage conflicts</li> <li>Build and keep networks and relationships to get knowledge and resources</li> <li>Build consensus</li> </ul>  | <a href="#">Ahmad et al. (2010)</a><br><a href="#">Botha, Van Vuuren, and Kunene (2015)</a><br><a href="#">Lans et al. (2011)</a>                             |
| <b>Conceptual</b> , Intellectual capacity of managers to gather and process information that reflects on their decision-making process in the business (intuitive, rational, deductive ...). | <ul style="list-style-type: none"> <li>Treat new problems as opportunities</li> <li>Apply ideas and observations to alternative contexts</li> <li>Think intuitively</li> </ul>   | <a href="#">Man et al. (2002)</a><br><a href="#">Rahman et al. (2015)</a><br><a href="#">Schelfhout et al. (2016)</a>   |
| <b>Organising</b> , Ability of managers to organize human, physical, financial and technological resources.  | <ul style="list-style-type: none"> <li>Develop efficient procedures minimising unnecessary hierarchy</li> <li>Leading employees</li> <li>Supervise subordinates</li> </ul>   | <a href="#">Alcaraz-Rodríguez et al. (2014)</a><br><a href="#">Mitchelmore and Rowley (2010)</a><br><a href="#">RezaeiZadeh et al. (2017)</a>                 |
| <b>Commitment</b> , Ability and spirit of managers to, in the presence of adversity, continue with their work in the business or department.   | <ul style="list-style-type: none"> <li>Sustained Commit to long term business goals</li> <li>Refuse to let the business fail</li> <li>Restart after failure</li> </ul>   | <a href="#">Ahmad et al. (2010)</a><br><a href="#">RezaeiZadeh et al. (2017)</a><br><a href="#">Schelfhout et al. (2016)</a>                                  |
| <b>Strategic</b> , Ability of managers to formulate, implement and control business or functional strategies.  | <ul style="list-style-type: none"> <li>Set challenging but achievable business goals and vision</li> <li>Make strategic change</li> <li>Monitor progress toward strategic goals</li> </ul>   | <a href="#">Fuel et al. (2021)</a><br><a href="#">Garzón (2010)</a><br><a href="#">Rahman et al. (2015)</a>   |
| <b>Learning</b> , Ability of managers to acquire knowledge, abilities, attitudes or values that are relevant for the business activity.  | <ul style="list-style-type: none"> <li>Search for techniques, knowledge or methods that allow them to improve professionally</li> <li>Learning from diverse and heterogeneous sources of information, such as their own experience or that of others</li> <li>Transferring abilities and knowledge learned to useful actions for the business</li> </ul> | <a href="#">Ahmad et al. (2011)</a><br><a href="#">Kyndt and Baert (2015)</a><br><a href="#">Zhao et al. (2021)</a>   |
| <b>Personal strength</b> , Emotional ability that allows them to perceive, assimilate, understand and manage their own emotions as well as those of others.                                  | <ul style="list-style-type: none"> <li>Self-confidence and a positive attitude</li> <li>Self-control in stressful situations, time management</li> <li>Accepting constructive criticism</li> </ul>   | <a href="#">Reis et al. (2021)</a><br><a href="#">Schelfhout et al. (2016)</a><br><a href="#">Zhao, Seibert, and Lumpkin (2010)</a>                           |
| <b>Technical</b> , Ability of managers to use tools relevant for the business or department.   | <ul style="list-style-type: none"> <li>Knowledge of basic concepts in their area.</li> <li>Operation of and proficiency in relevant tools and techniques</li> </ul>  | <a href="#">Ahmad et al. (2010)</a><br><a href="#">Mitchelmore and Rowley (2010)</a><br><a href="#">Rahman et al. (2015)</a>                                  |
| <b>Social responsibility</b> , Ability of managers to exercise socially responsible management.  | <ul style="list-style-type: none"> <li>Environmentally friendly business decision making</li> <li>Treating employees fairly and consistently</li> <li>Offering quality sustainable products at reasonable prices</li> </ul>  | <a href="#">Ahmad et al. (2011)</a><br><a href="#">Alsmadi and Alnawas (2019)</a><br><a href="#">Ramos-González, Rubio-Andrés, and Sastre-Castillo (2021)</a> |



to become innovative entrepreneurs. As described by Augier and Teece (2009, p. 411): “The new world we are in [...] managers must act entrepreneurially, think strategically, and execute flawlessly (or very nearly so) if they are to lead their organisation successfully”. Therefore, while entrepreneurs are involved in founding companies that manage to change existing business paradigms, companies can also foster innovation with intrapreneurship or corporate entrepreneurship (Carland & Carland, 2007). The term ‘intrapreneuring’ was coined by Pinchot (1985) to refer to the people and processes that advocate for new products within a corporation. According to this author, an intrapreneur is a person who focuses on innovation and creativity and who transforms a dream or an idea into a profitable business within an organisational context. Although the terms entrepreneur and intrapreneur are used interchangeably in the literature to refer to entrepreneurial employees in an organisation - with consensus on the overlapping of the two of them (Altinay, 2005) -, according to Carrier (1996) what essentially distinguishes them is, above all, the context in which entrepreneurial activity takes place: while entrepreneurs innovate for themselves, intrapreneurs innovate for the companies for which they work.

Entrepreneurial competence is an over-arching construct that can be linked to a variety of sub-competences (Schelfhout et al., 2016) or competence areas (Man et al., 2002). Since the literature review by Mitchelmore and Rowley (2010), different categorisations for entrepreneurial competences have been developed (e.g., Kyndt & Baert, 2015; RezaeiZadeh et al., 2017; Schelfhout et al., 2016; Tittel & Terzidis, 2020). As Tittel and Terzidis (2020) point out, the heterogeneity in definitions, approaches and models in entrepreneurship education generates a certain confusion about which content should be included in academic entrepreneurship courses and which competences need to be developed. Based on the criteria from Ahmad, Wilson, and Kummerow (2011), we have based on the categorisation of entrepreneurial competences by Man et al. (2002) because: (a) it is comprehensive, describing a large range of competences; (b) describes in detail how variables were operationalised; (c) its scales have acceptable psychometric properties, including reliability and validity. The categorisation by Man et al. (2002) was developed to analyse the entrepreneurial competences of SME owner-managers. It has also been used in subsequent studies that analyse entrepreneurial competences and the performance of SMEs (Ahmad et al., 2010, 2011; Fuel, Pardo-del-Val, & Revuelto-Taboada, 2021; Man, Lau, & Chan, 2008; Man, Lau, & Snape, 2008; Zhao, Yang, Hughes, & Li, 2021), entrepreneurial competences in different industrial environments (Fowler, Coffey, & Dixon-Fowler, 2019; Lans, Verstegen, & Mulder, 2011; Man & Lau, 2005; Marques, Lopes, Braga, Ratten, & Santos, 2022), entrepreneurship education and training (Huezo-Ponce, Fernández-Pérez, & Rodríguez-Ariza, 2021; Lans, Hulsink, Baert, & Mulder, 2008; Mulder, Lans, Verstegen, Biemans, & Meijer, 2007) or entrepreneurial business success at the base of pyramid (Rahman, Amran, Ahmad, & Taghizadeh, 2015).

Man et al. (2002) identified six entrepreneurial competence areas: opportunity, relationship, conceptual, organising, strategic, and commitment. Subsequently, Man, Lau, and Snape (2008) identified two supporting competences: learning and personal strength. In this study, we have expanded the model of Man and colleagues by adding to these eight areas the technical and ethical orientation competences, identified, respectively, by Chandler and Jansen (1992) and Rathna and Vijaya (2009). It is relevant to highlight that these areas of competence and their main abilities also resemble the EntreComp Framework developed by The European Commission in 2016 as a reference to describe what is meant by an entrepreneurial mindset, in other words, the knowledge, abilities, and attitudes that people need to be entrepreneurial (Bacigalupo et al., 2016). Specifically, the Commission proposed 15 competences related to ideas and opportunities, resources, and actions that we can find included within the 10-competence framework we have chosen for this study. Table 1 shows a definition of each of those 10 competences and examples of specific abilities to appropriately develop each one of them.

Summarising and considering all the above, it should be noted that, on the one hand, the range of competences associated with an entrepreneurial manager is wide and varied. On the other hand, according to stakeholder theory, principal-agent theory and stewardship theory, the relevance that faculty and students attach to each competence to be taught can converge or diverge, and that fact could be a key antecedent to understand the success of the teaching-learning process. Therefore, it turns pertinent to measure the relevance of each identified competence of an entrepreneurial manager and analyse the consensus/dissensus between faculty and students from an agency approach.

### 3. Methodology

In the following subsections, we present the characteristics of our sample, the measures' validity and reliability, and the data analysis techniques.

#### 3.1. Population and sample

This study assesses the competences of entrepreneurial managers using an online structured questionnaire based on the perspectives of both faculty and students in undergraduate programmes related to business and belonging to public and private Spanish universities.

Through the Spanish Conference of Deans of Economics and Business, the researchers contacted the deans of the different business faculties of Spanish public and private universities to involve them in the data collection process. They spread the invitation to their faculty and students through their institutional e-mail service including the URL of the online platform that hosted both versions of the questionnaire. The Spanish data protection law according to the European General data Protection Regulation did not allow the research team to access the emails of both groups, but several reminders were made by email to the deans to increase the sample sizes.

The final sample was made up of 278 students and 62 faculty members, and the field work was carried out between October 2018 and January 2019. Tables 2 and 3 gather the profiles of the samples from both groups. Although there is not available information of

the population profiles of each group (faculty and students), it was considered relevant to include these two tables with data from both samples to extract a profile of the participants in the study.

Faculty profile in Table 2 shows that males are slightly predominant (56.5%), over 40 years old (82.2%), equal representation between officials and contracted personnel, extensive teaching experience (56.5% have taught for more than 20 years) and participation in projects and collaboration agreements (80.6%). Meanwhile, as for business experience, less than half have academic experience in entrepreneurship either teaching or research (41.9%), 21% have never worked in a company and 62.9% have never held a managerial position in either their own or third-party companies.

The data in Table 3 indicate that students in undergraduate business programmes are mostly females (54.3%), aged between 17 and 25 years old (85.2%), Spanish, with low participation in mobility programmes (21.2%). As for their relationship with the world of business, 46.8% have taken a business start-up course or a course on entrepreneurship, 32.7% work for a family business, 44.2% show having some work experience and 10.1% have created their own business. Lastly, data show that although 78.4% have interest in founding their own company in the future as a professional possibility, only 55.8% have a business idea as well as the intention of undertaking it in the future.

### 3.2. Measures, validity and reliability

In this study, several scales were used to measure competences and their corresponding abilities. To ensure content validity, scales were developed in three steps, following a sequential process. At the first step, after reviewing the relevant literature, we used a Delphi analysis with a panel of 17 experts – all successful entrepreneurs – who evaluated and reached a consensus on these competencies and abilities (January–April 2017). Thus, the content validity of each competence and their associated abilities was guaranteed.

The first step resulted in a questionnaire that was pre-tested at the second step (July 2018) among a small sample of the study population (faculty and students). Since we seek to analyse the perceptions of two groups of individuals with very different roles in the university, it required adapting the questionnaire items' phrasing to each group, thus obtaining two final, enhanced versions of the questionnaire. At the third step, based upon those two questionnaires, we obtained empirical evidence that allowed us to develop this research (October 2018–January 2019).

The first section in both questionnaires contained sociodemographic questions on the participants. The second section sought to assess the level of importance that respondents assign to each of the ten competences identified in the literature (this general assessment was not required for the abilities corresponding to each competence). A 7-point Likert scale was used for this purpose, where 1 meant 'not important' and 7 'very important'.

The third section of the faculty questionnaire asked, for each of the ten competences, to what degree each specific ability included in each competence was relevant for its definition or explanation. Thus, this information offered additional evidence to test content validity. In particular, each scale of competences consisted of a number of abilities ranging from 3 to 11 that were assessed using a 7-point Likert scale, where 1 was rated as 'strongly disagree' and 7 as 'strongly agree'. We obtained aggregate variables that measured the adequacy of the specific abilities included in each competence (Table 4). The high mean values (between 5.71 and 6.17) and low standard deviations (between 0.54 and 0.98) substantiated the content validity of the abilities chosen to assess each competence, that is, to what extent each ability contributes to building or materialising each competence.

In turn, the third section of the student questionnaire asked, for each of the abilities included in the competences, to what extent they were able of performing those abilities if they held a managerial position. The reliability of each scale designed to assess each competence was analysed. The values obtained for Cronbach's alpha for each group, indicate that, both at a general level (0.983 and

**Table 2**  
Faculty profile.

| Characteristics                     | N         | %            | Characteristics  | N         | %            |
|-------------------------------------|-----------|--------------|--|-----------|--------------|
| <b>Gender</b>                       |           |              | <b>Academic experience in entrepreneurship</b>                                       |           |              |
| Female                              | 27        | 43.5         | No   | 36        | 58.1         |
| Male                                | 35        | 56.5         | Yes  | 26        | 41.9         |
| <b>Age</b>                          |           |              | <b>Number of projects and contracts with companies</b>                               |           |              |
| ≤30                                 | 4         | 6.5          | 0  | 12        | 19.4         |
| 31–40                               | 7         | 11.3         | 1–5  | 26        | 41.9         |
| 41–50                               | 28        | 45.1         | 6–10   | 14        | 22.6         |
| >50                                 | 23        | 37.1         | >10  | 10        | 16.1         |
| <b>Faculty category</b>             |           |              | <b>Number of companies in which they have worked (excluding educational centres)</b> |           |              |
| Partial-Time associate professor    | 11        | 17.7         | 0  | 13        | 21.0         |
| Graduate Teaching Assistant         | 6         | 9.7          | 1  | 15        | 24.2         |
| Lecturer                            | 19        | 30.7         | 2  | 17        | 27.4         |
| Senior lecturer                     | 21        | 33.8         | ≥3   | 17        | 27.4         |
| Professor                           | 5         | 8.1          |  |           |              |
| <b>Years worked in universities</b> |           |              | <b>Years of managerial experience</b>  |           |              |
| ≤10                                 | 10        | 16.1         | 0  | 39        | 62.9         |
| 11–20                               | 17        | 27.4         | 1–5  | 13        | 21.0         |
| 21–30                               | 30        | 48.4         | >5   | 10        | 16.1         |
| >30                                 | 5         | 8.1          |  |           |              |
| <b>Total</b>                        | <b>62</b> | <b>100.0</b> | <b>Total</b>   | <b>62</b> | <b>100.0</b> |

**Table 3**  
Student profile.

| Characteristics                                  | N          | %            | Characteristics  | N          | %            |
|--|------------|--------------|--|------------|--------------|
| <b>Gender</b>                                    |            |              | <b>Participation in a mobility programme</b>           |            |              |
| Female   | 151        | 54.3         | No   | 219        | 78.8         |
| Male   | 127        | 45.7         | Yes  | 59         | 21.2         |
| <b>Age</b>                                       |            |              | <b>Participation in entrepreneurship courses</b>       |            |              |
| 17–19  | 64         | 23.0         | No   | 148        | 53.2         |
| 20–22  | 109        | 39.2         | Yes  | 130        | 46.8         |
| 23–25  | 64         | 23.0         | <b>Parents or siblings who are business owners</b>     |            |              |
| 26–29  | 31         | 11.1         | No   | 187        | 67.3         |
| ≥30  | 10         | 3.7          | Yes  | 91         | 32.7         |
| <b>Country of birth</b>                          |            |              | <b>Work for others (including internship)</b>          |            |              |
| Spain  | 231        | 83.1         | No   | 155        | 55.8         |
| Other countries                                  | 47         | 16.9         | Yes  | 123        | 44.2         |
| <b>Time lived in Spain</b>                       |            |              | <b>Founded their own company</b>                       |            |              |
| Entire life                                      | 227        | 81.7         | No   | 250        | 89.9         |
| Most of my life                                  | 32         | 11.5         | Yes  | 28         | 10.1         |
| Between 5 and 10 years                           | 2          | 0.7          | <b>Like to found their own company in the future</b>   |            |              |
| <5 years   | 17         | 6.1          | No   | 60         | 21.6         |
| <b>Highest course in which they are enrolled</b> |            |              | Yes  | 218        | 78.4         |
| First year                                       | 59         | 21.2         | <b>Have an idea or intention to be an entrepreneur</b> |            |              |
| Second year                                      | 33         | 11.9         | No   | 123        | 44.2         |
| Third year                                       | 58         | 20.9         | Yes  | 155        | 55.8         |
| Fourth year                                      | 128        | 46.0         |  |            |              |
| <b>Total</b>                                     | <b>278</b> | <b>100.0</b> | <b>Total</b>   | <b>278</b> | <b>100.0</b> |

**Table 4**  
Adequacy according to faculty of the specific abilities included in each competence.

| Competences           | Adequacy |      |
|-----------------------|----------|------|
|                       | Mean     | S.D. |
| Opportunity           | 6.11     | 0.69 |
| Relational            | 5.72     | 0.76 |
| Conceptual            | 5.71     | 0.82 |
| Organisation          | 5.98     | 0.54 |
| Commitment            | 6.17     | 0.69 |
| Strategic             | 6.01     | 0.62 |
| Learning              | 6.09     | 0.76 |
| Personal strength     | 6.13     | 0.63 |
| Technical             | 5.75     | 0.98 |
| Social responsibility | 5.94     | 0.68 |

0.956 for students and faculty, respectively) as well as at the level of each competence, the scales are reliable, that is, the abilities included in each of them measure the same construct, as the alpha value is above 0.7 (see Table 5).

These levels of reliability allow us to create ten new aggregate variables that correspond to the students' perception of achievement of each competence and were computed as the mean value of the abilities included in each competence.

Finally, by combining information provided by faculty and students, a new variable with three categories was computed to measure student consensus/dissent with faculty concerning the importance attached to each of the ten entrepreneurial competences: (1)

**Table 5**  
Reliability of the competence measuring scales.

| Competence            | No. of abilities | Cronbach's Alpha, (students) | Cronbach's Alpha, (faculty) |
|-----------------------|------------------|------------------------------|-----------------------------|
| Opportunity           | 4                | 0.838                        | 0.671                       |
| Relational            | 9                | 0.897                        | 0.815                       |
| Conceptual            | 9                | 0.923                        | 0.829                       |
| Organisation          | 10               | 0.933                        | 0.728                       |
| Commitment            | 4                | 0.862                        | 0.703                       |
| Strategic             | 10               | 0.941                        | 0.843                       |
| Learning              | 5                | 0.915                        | 0.806                       |
| Personal strength     | 11               | 0.903                        | 0.844                       |
| Technical             | 3                | 0.905                        | 0.790                       |
| Social responsibility | 8                | 0.917                        | 0.719                       |
| <b>Overall scale</b>  | <b>73</b>        | <b>0.983</b>                 | <b>0.956</b>                |



negative dissent, when the difference between the score given by a student and the mean value of the scores given by all faculty members is less than or equal to  $-1$ ; (2) consensus, when the difference between the score given by a student and the mean value of the scores given by all faculty members is between  $-1$  and  $+1$  (excluding both values); and (3) positive dissent, when the difference between the score given by a student and the mean value of the scores given by all faculty members is equal to or greater than  $+1$ .

### 3.3. Data analyses

In order to respond to the objective of this research, the following statistical techniques were used. We ran descriptive analyses to obtain the mean and standard deviation values concerning both the level of importance that faculty and students assign to each of the ten competences, and the perception of achievement of the specific abilities included in each competence, as reported by the students. We applied a matrix methodology as a diagnostic tool in order to represent the ten competences based on the mean values assigned to each of them by faculty (x-axis) and students (y-axis) concerning their perceived importance. The resulting matrix visually displays four areas of competences. Finally, we used one-way ANOVA with Scheffé post hoc test for identifying significant differences between groups of students (according to their consensus/dissent with faculty) concerning their levels of achievement of competences. IBM SPSS Statistics 27 was the statistical software package used for the analysis.

## 4. Results

In this section, we present the results of the study organised in three subsections, clearly connected with our research objectives.

### 4.1. Importance of entrepreneurial competences by students and faculty

Table 6 gathers the mean values of the level of importance that faculty and students assign to each of the ten competences analysed. In general, the relevance assigned by faculty members to the group of competences necessary to be an entrepreneurial manager is less than that assigned by students (5.71 and 5.95, respectively), although it is seen in both groups that all competences are important since, in general, their means are above 5. This reveals that faculty consider these competences to be important to be a good entrepreneurial manager and, therefore, necessary to be able to propose an advance or an innovation and make it a reality in their setting (business, department, area or teamwork).

Faculty rated the five competences above or close to the overall mean (5.71): Opportunity (6.58), Relational (6.16), Commitment (6.15), Organisation (5.87) and Personal strength (5.85); two lowest rated being Technical (4.68) and Social Responsibility (4.89).

Considering students' opinions, all competences registered a mean above 5, with mean values between 5.56 and 6.22. The three competences below the overall mean (5.95) are Technical (5.56), Conceptual (5.74), Social responsibility (5.89) and Strategic (5.91), the highest rated being Commitment (6.22), Relational (6.15), Opportunity (6.12) and Learning (6.06). These data confirm that students assign importance to these competences in their professional career. In theory, this would positively predispose them to enrol in curricula whose theoretical-practical content contributes to their acquisition process.

Following a matrix methodology as a diagnostic tool, Fig. 1 represents the different competences based on the mean values assigned to each of them by faculty (x-axis) and students (y-axis). The cut-off point corresponds to the overall means by students and faculty and the ends of the axis show the maximum and minimum values reached by each group. In this way, the ten competences can be placed in one of the four quadrants identified.

Depending on the intersection of the data obtained, the upper right quadrant of Fig. 1, which was named 'key competences', gathers the competences that faculty consider relevant to be a good entrepreneurial manager and students consider relevant for their future career. Therefore, these competences should be promoted in education programmes where can expect high propensity to student enrolment. These competences have a high academic value that would increase the attractiveness of the degree, and which should be key in defining the marketing strategy of universities when designing and communicating business-related degrees, as well as when choosing student internships. The upper left quadrant, which was named 'unlinked competences', contains competences faculty

**Table 6**  
Faculty and students' level of importance assigned to each competence.

| Competences           | Faculty     |      | Students    |      |
|-----------------------|-------------|------|-------------|------|
|                       | Mean        | S.D. | Mean        | S.D. |
| Opportunity           | 6.58        | 0.64 | 6.12        | 1.09 |
| Relational            | 6.16        | 0.98 | 6.15        | 1.05 |
| Conceptual            | 5.71        | 1.19 | 5.74        | 1.12 |
| Organisation          | 5.87        | 0.98 | 5.94        | 1.11 |
| Commitment            | 6.15        | 0.92 | 6.22        | 1.02 |
| Strategic             | 5.60        | 1.06 | 5.91        | 1.09 |
| Learning              | 5.63        | 1.10 | 6.06        | 1.06 |
| Personal strength     | 5.85        | 0.94 | 5.95        | 1.18 |
| Technical             | 4.68        | 1.18 | 5.56        | 1.10 |
| Social responsibility | 4.89        | 1.44 | 5.89        | 1.13 |
| <b>Overall mean</b>   | <b>5.71</b> |      | <b>5.95</b> |      |

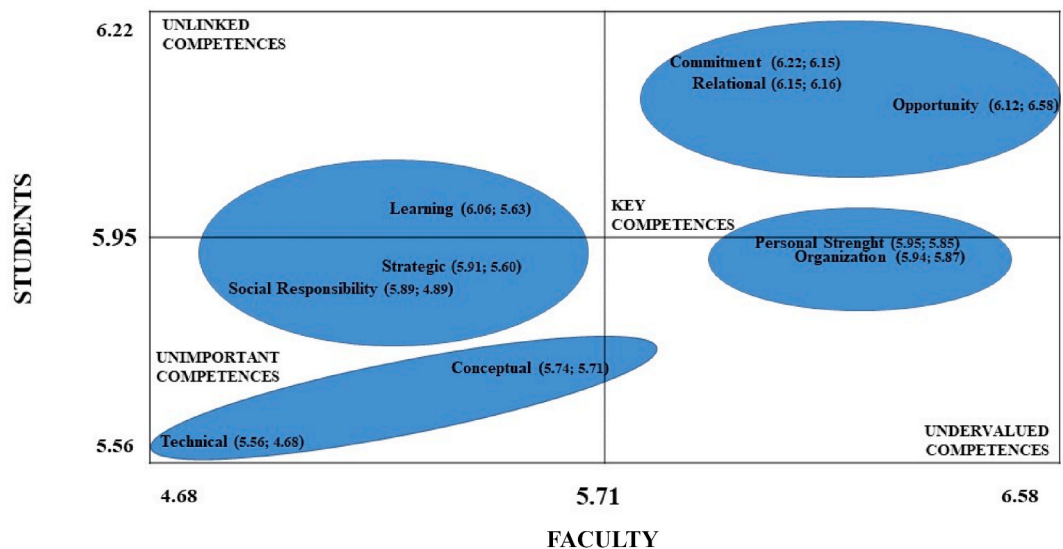


Fig. 1. Importance matrix of entrepreneurial competences: students versus faculty.

consider less relevant to be an entrepreneurial manager, but that students value as important for their future career. These are competences required to all types of managers, not expressly linked by faculty to the entrepreneurial nature of an individual, however for the students they are. The lower right quadrant, which was named 'undervalued competences', contains competences considered important by faculty, although students opine that they are less important for their future career. In this case, universities should question to what extent do undergraduate business programmes transmit the importance of these competences and translate this importance into appropriate theoretical-practical contents. The lower left quadrant, which was named 'unimportant competences', contains competences that both faculty and students value as less important from an entrepreneurial perspective and, therefore, should not be promoted nor used as a differentiating element in the strategy used, although they should not be dismissed entirely.

As seen in Fig. 1, the ten competences can be grouped into four clusters, which follow the circles identified based on their proximity in scores. Clearly, there are two groups of competences, a group of key competences (Commitment, Relational, and Opportunity) and another group of unimportant competences (Technical and Conceptual). The other five competences are characterised by being located very near the cut-off point, although some competences are closer to the competences undervalued by students (Personal strength and Organisation) and others closer to unlinked competences (Learning, Strategic and Social responsibility).

#### 4.2. Students' perception of achievement of the abilities associated with entrepreneurial competences

In this section, the data extracted from the third section of the student questionnaire are analysed. The students assessed to what degree they were able to put into practice each ability. Table 7 gathers the mean values and standard deviation for each competence.

In general, students' self-rating is quite high, as the overall mean score is 5.35 on a Likert scale from 1 to 7. Furthermore, the standard deviation is high (between 0.94 and 1.28), which indicates sample dispersion. It must be highlighted that there is significant room for improvement in the abilities related to the competences of Opportunity (4.99), Conceptual (5.07) and Strategic (5.10), where the situation for the competence of Opportunity is critical, as it is a key competence for entrepreneurship (see Fig. 1 above).

Table 7

Students' perception of achievement of each competence as an aggregate measure of abilities.

| Competences           | Perception of achievement |      |
|-----------------------|---------------------------|------|
|                       | Mean                      | S.D. |
| Opportunity           | 4.99                      | 1.12 |
| Relational            | 5.29                      | 1.03 |
| Conceptual            | 5.07                      | 1.13 |
| Organisation          | 5.29                      | 1.08 |
| Commitment            | 5.44                      | 1.12 |
| Strategic             | 5.10                      | 1.09 |
| Learning              | 5.61                      | 1.11 |
| Personal strength     | 5.68                      | 0.94 |
| Technical             | 5.32                      | 1.28 |
| Social responsibility | 5.71                      | 1.01 |
| Overall               | 5.35                      | 0.91 |

#### 4.3. Students and faculty consensus on the competences' importance and its relationship with students' perception of achievement

Finally, we have analysed whether the student consensus or dissent with faculty regarding the importance assigned to each of the ten entrepreneurial competences may influence the students' perception of their level of achievement of these competences. In order to do so, we analysed student consensus/dissent with faculty, dividing the students into three groups: Group 1, students with negative dissent (students give less importance to the competence than faculty overall); Group 2, students in consensus (students give similar importance to their competence compared to faculty overall); and Group 3, students with positive dissent (students assign more importance to the competence than faculty overall). The three groups of students are shown in Table 8. As indicated for all competences, except for social responsibility, most students agree on the average importance assigned by the entire faculty for each of the competences, although the range is wide (42.4%–79.1%).

One-way ANOVA was then carried out to determine whether there were any significant differences between each pair of groups in terms of perceived achievement in each of the ten competences (Table 9). As indicated, there are significant differences between the groups for all competences, except for Personal strength. The results clearly indicate that a consensus exists between students and faculty regarding the importance given to entrepreneurial competences. It also shows that the granting of greater importance by students leads to a greater perception of achievement in all of the competences, even in cases where the difference in the mean values is not significant.

Concerning key competences - Opportunity, Relational, and Commitment -, results in Table 9 show that the students in the consensus group (Group 2), the ones that agree with faculty on the relevance of these competences, show a greater perception of achievement than the group of students with negative dissent (Group 1) regarding these competences; thereby giving support to the relevance of consensus.

Results for the unlinked competence of Learning show that the students in the consensus group (Group 2) and those with positive dissent (Group 3) show a higher perception of achievement than the group of students with negative dissent for this competence. This result also supports the relevance of consensus.

Conceptual, Organisation, and Social Responsibility, none of them key competences for an entrepreneurial manager according to our matrix, show results that point in the same direction. For the three competences, students in the consensus group (Group 2) show a higher perception of achievement than the group of students with negative dissent (Group 1). Nevertheless, when students attach more importance than faculty to these three competences (Group 3), their collective perception of achievement rises. Thus, this consensus should be considered a minimum condition by which a student can effectually improve the degree of his or her achievement.

Referring to Strategic competence, results in Table 9 show that only when the students attach a greater importance than faculty to this competence (Group 3), their perception of achievement becomes higher. This contrasts with the remaining unlinked competences wherein consensus is a sufficient condition for enhancing their achievement. The same phenomenon occurs in the case of Technical competence, an unimportant competence in the matrix, because the group of students with positive dissent (Group 3) show a higher perception of achievement than the rest (Groups 1 and 2), indicating that for these two competences, the consensus is a minimum condition that must be exceeded for students to perceive improvement in their academic achievement.

Finally, and concerning Personal Strength, the other undervalued competence, the results in Table 9 indicate that there are not significantly differences in the perception of achievement among the three groups of students.

## 5. Discussion

The present study analyses the consensus/dissensus between faculty and students regarding the relevance assigned to each entrepreneurial competence, as we propose such consensus can be a condition that relates to students' achievement of those competences. Because a lack of consensus exists concerning the competences that entrepreneurs master (e.g., Kyndt & Baert, 2015; RezaeiZadeh et al., 2017; Schelfhout et al., 2016) and about those that should be acquired by would-be entrepreneurs and so stressed in education programmes (Robinson et al., 2016; Solomon, 2007), the present work first involves in building a valid catalogue. Specifically, after reviewing previous literature (e.g., Man et al., 2002; Man, Lau, & Snape, 2008; Rathna & Vijaya, 2009) and empirically validation, ten competences (and 73 specific abilities associated) were found: Opportunity, Relational, Conceptual, Organisation,

**Table 8**  
Groups of students according to their consensus/dissent with faculty on the importance given to entrepreneurial competences.

| Competences           | Group 1, Negative dissent |      | Group 2, Consensus |      | Group 3, Positive dissent |      |
|-----------------------|---------------------------|------|--------------------|------|---------------------------|------|
|                       | N                         | %    | N                  | %    | N                         | %    |
| Opportunity           | 64                        | 23.0 | 214                | 77.0 | –                         | –    |
| Relational            | 66                        | 23.7 | 212                | 76.3 | –                         | –    |
| Conceptual            | 35                        | 12.6 | 157                | 56.5 | 86                        | 30.9 |
| Organisation          | 28                        | 10.1 | 140                | 50.4 | 110                       | 39.6 |
| Commitment            | 58                        | 20.9 | 220                | 79.1 | –                         | –    |
| Strategic             | 24                        | 8.6  | 153                | 55.0 | 101                       | 36.3 |
| Learning              | 27                        | 9.7  | 126                | 45.3 | 125                       | 45.0 |
| Personal strength     | 29                        | 10.4 | 133                | 47.8 | 116                       | 41.7 |
| Technical             | 11                        | 4.0  | 118                | 42.4 | 149                       | 53.6 |
| Social responsibility | 10                        | 3.6  | 80                 | 28.8 | 188                       | 67.6 |

**Table 9**

Perception of competences' achievement and consensus/dissent clusters.

| Competences           | Group 1, Negative dissent |      | Group 2, consensus |      | Group 3, Positive dissent |      | Perception of achievement, <i>F(p)</i> | Scheffe' Test              |
|-----------------------|---------------------------|------|--------------------|------|---------------------------|------|--|----------------------------|
|                       | Mean                      | S.D. | Mean               | S.D. | Mean                      | S.D. |  |                            |
| Opportunity           | 4.55                      | 1.11 | 5.13               | 1.09 | –                         | –    | 13.581 (0.000)                         | –                          |
| Relational            | 5.02                      | 0.90 | 5.38               | 1.06 | –                         | –    | 6.242 (0.013)                          | –                          |
| Conceptual            | 4.48                      | 1.09 | 5.03               | 1.11 | 5.40                      | 1.08 | 8.993 (0.000)                          | 1-2**<br>1-3**<br>2-3***   |
| Organisation          | 4.51                      | 0.78 | 5.19               | 1.07 | 5.62                      | 1.03 | 14.259 (0.000)                         | 1-2***<br>1-3***<br>2-3*** |
| Commitment            | 4.93                      | 0.98 | 5.58               | 1.12 | –                         | –    | 16.133 (0.000)                         | –                          |
| Strategic             | 4.59                      | 0.81 | 4.97               | 1.00 | 5.43                      | 1.18 | 9.037 (0.000)                          | 1-2***<br>2-3***           |
| Learning              | 4.53                      | 1.31 | 5.61               | 0.91 | 5.85                      | 1.12 | 17.687 (0.000)                         | 1-3***<br>2-3***           |
| Personal strength     | 5.38                      | 0.76 | 5.65               | 0.84 | 5.78                      | 1.07 | 2.247 (0.108)                          | –                          |
| Technical             | 5.09                      | 1.33 | 5.07               | 1.29 | 5.53                      | 1.25 | 4.471 (0.012)                          | 1-2**                      |
| Social responsibility | 4.46                      | 1.60 | 5.44               | 0.89 | 5.89                      | 0.96 | 14.816 (0.000)                         | 1-2***<br>1-3**<br>2-3***  |

Note: \*\*\* $p < 0.01$ ; \*\* $p < 0.05$ .

Commitment, Strategic, Learning, Personal strength, Technical, and Social responsibility. These competences were used for later analysis.

These ten entrepreneurial competences are placed on a matrix based on the importance assigned to them by faculty and students. As a result, two areas of overlap and two areas of divergence are identified. Of the ten competences analysed, both faculty and students qualify the areas referred to as Commitment, Relational, and Opportunity (i.e., key competences) as important. Furthermore, they both assign lesser importance to the Conceptual and Technical competences. The overlap of criteria with regard to the competences may be explained by a possible distinction between the critical elements to performing the facets of entrepreneurship and technical administration in managerial positions. Specifically, the development of the entrepreneurial facet is associated with: determining to go ahead with an entrepreneurial project even when faced with adversity; the ability to create, maintain and improve interpersonal relationship; and the ability to recognize business opportunities and/or improvements in any business setting. By contrast, the conceptual ability to gather and process information or the use of tools relevant to the business, decline in importance for entrepreneurship, as they are most probably circumscribed to the facet of technical administration. This ranking of relevance of entrepreneurial competences, for which there is overlap between faculty and students, appears to be in line with the distinction made by Solomon (2007) between entrepreneurship education and business management education. In this regard, founding a company (entry) is considered a separate activity from business administration (Gartner & Vesper, 1994). The distinguishing element of entrepreneurship, according to Solomon (2007), requires individuals to be able to identify opportunities and develop ideas on how to exploit those opportunities.

This study also finds competences in relation to which faculty and students diverge. Specifically, the competences of Personal Strength and Organisation are relevant for faculty members in this study, but less so in the opinion of students (i.e., undervalued competences). The importance assigned by faculty to these competences would justify, if we look at the approach by Robinson et al. (2016), their inclusion with greater emphasis in education programmes and, as a consequence, greater mastery by students. To the extent that each faculty member tends to assign greater importance to those areas in which they are an expert -e.g., due to their teaching specialisation (Business organisation, Sales, Finances ...), research activity they conduct or professional experience-, that

specialisation affects their view on the competences that are actually relevant for entrepreneurial management (Robinson et al., 2016; Solomon, 2007). If this is the case, their perspective could be distorted in cases in which their specialty does not overlap with the aspects relevant for entrepreneurship. In turn, and from the student's perspective, the discrepancy around undervalued competences could be promoted by their lack of understanding of the setting in which they will need to professionally navigate once they graduate.

Another area of divergence between faculty and students concerns the competences of Learning, Strategic and Social Responsibility, which are relevant in this case for students, but to a lesser extent for faculty who do not closely associate them with entrepreneurial activity (i.e., unlinked competences). Although students' interest positively predisposes them for their study, faculty could limit their teaching to the prescriptions established in the education programme. In this regard, the competence of Social Responsibility is noteworthy as it registers the largest gap between the importance assigned by faculty and students. This may be explained by the greater sensitivity of *millennials* to the social responsibility of companies (Leveson & Joiner, 2014), which materialises in, among other aspects, their greater desire to work for companies with this social commitment (McGlone, Spain, & McGlone, 2011) or their purchasing behaviour (Harun, Prybutok, & Prybutok, 2018). A second element that may be associated with the difference found is related to the perspective that faculty and students could have on business social responsibility, which is more thorough to the former and to a greater extent associated with philanthropic actions and environmental topics to the latter.

Furthermore, an individualized analysis of the relationship between what each student thinks about his/her academic achievement and such student's agree or disagree with faculty on the importance attached to each of the entrepreneurial competences, reveals relevant and interesting relationships. First of all, the least academic achievement is reached in the event of negative dissent, i.e., when the student attaches lower importance to a competence than faculty does. However, when there is consensus, students' perception of achievement improves. Whereas Knoster and Goodboy (2021) note that teaching with relevance strategies improves students' performance, the results of this study suggest that academic achievements are determined by the existence of consensus between faculty and students on the level of importance attached to these competences. Moreover, generally speaking, when the student attributes a higher value to a competence than faculty does (i.e., positive dissent), the perception of achievement also attains the highest values. To summarize, once faculty who design and teach a course recognises the importance of a competence for entrepreneurial education, it is fundamental for its academic achievement by the students that they also recognize the importance of that competence.

Secondly, our data reveal that students perceive a higher level of competences' achievement when there is consensus with faculty and/or when they (students) positively dissent. Particularly, when we consider Opportunity, Relational, and Commitment, key competences for an entrepreneurial manager (see Fig. 1), we find a clear support for the positive role of consensus. Having said that, and generally speaking, the average scores of the remaining competences in both groups (consensus and positive dissent) show a rising trend, which suggests that it is crucial for faculty to recognize the relevance of the competences that students also consider important. This confirms what some studies suggest (e.g., Ndou et al., 2018; Wong & Chan, 2021), that education programme design must take into consideration students' needs and expectations in order the curriculum to succeed. Moreover, when faculty members show students how important a competence is, this can influence the latter's perception on the importance of such competence. However, independently from faculty's input, students have their own academic, professional and personal background, which can influence their perception of the relevance of competences. To sum it up, a student's academic achievement especially improves when the importance attached to a competence by faculty matches his or her perceived importance. Therefore, the consensus area acts as a minimum hygiene factor required for academic achievement to significantly improve.

Based upon the findings for individual competences, attention should be particularly paid to the wider differences in the perception of achievement of both the Social Responsibility and Learning competences between students with negative dissent and students with positive dissent. Thus, these are the most positively influenced competences when students attach a greater importance to them than faculty.

Furthermore, it is relevant to note the high number of students included in the positive dissent group for the Social Responsibility competence, which confirms it is an essential competence for them. Learning depends on students' proactive attitude that promotes the continuous development of knowledge, skills and values required for business success. This has been stressed by Villardón-Gallego, Yáñez, Elexpuru, and Achurr (2013, p. 68): "The learning competence is a key part of university education because it determines the possibility to continue learning throughout one's life and the capacity to successfully face life as a citizen and professional". In addition, several studies recognize the transversal relevance of Social Responsibility. Fonseca, Bernate, Betancourt, Barón, and Cobo (2019) emphasize that it is necessary for university curricula to foster civic, ethical and responsible values among students in order to prepare them to take leadership in providing solutions to society's problems. Therefore, we recommend a strengthening of the Social Responsibility competence and, therefore, its higher presence in both the "what" and "how" components of entrepreneurial education. Wren (2021) also highlights the importance of designing academic activities focused on debating and reflecting upon society's problems, preparing students to overcome social challenges and work in various contexts while reaffirming their social identity or consciousness.

## 6. Conclusions

Previous literature lacks consensus on the competences that distinguish entrepreneurs and consequently, those that should be prioritised in education programmes (Robinson et al., 2016; Solomon, 2007). There is also no consensus on the conditions under which universities can contribute to training students who master these entrepreneurial competences (Kuratko & Morris, 2018) or on the factors that contribute to make entrepreneurship education successful (Hoppe, 2016). In this context, the study carried out allows for several contributions to the literature, which encompass methodological, theoretical, and practical issues.



### 6.1. Theoretical implications

From a *theoretical perspective*, this study offers two main contributions. First, this research provides a catalogue of ten entrepreneurial competences (Opportunity, Relational, Conceptual, Organisation, Strategic, Commitment, Learning, Personal Strength, Technical, and Social Responsibility) accompanied by 73 specific abilities acquired by those individuals who have developed the above-mentioned competences. This catalogue is based on theoretical and empirical supports, since its design took into account previous literature (e.g., Man et al., 2002; Man, Lau, & Snape, 2008; Rathna & Vijaya, 2009) and evidence provided by academics and successful entrepreneurs. Because previous research fails in offering consensus on the set of competences and specific abilities that an entrepreneur must master (e.g., Kyndt & Baert, 2015; RezaeiZadeh et al., 2017; Schelfhout et al., 2016) or future entrepreneurs must learn (Solomon, 2007), the offered catalogue is valuable as it can help move towards reaching consensus.

Second, we provide a new approach based on the combination of three theories - i.e., stakeholder theory (Freeman, 1984, 1994), principal-agent theory (Jensen & Meckling, 1976) and stewardship theory (Sundaramurthy & Lewis, 2003) which allows for new variables and conditions to be identified and considered in entrepreneurship education. From this approach, the study analyses two key stakeholders in universities, faculty and students, in terms of the importance they assign to each entrepreneurial competence analysed. In this way, new evidence is provided from faculty in undergraduate business programmes and from students participating in those programmes. The theoretical approach provided also allows for in-depth analysis into the consensus/dissensus between faculty and students from an agency approach (Jensen & Meckling, 1976). Specifically, this research found that competences of Commitment, Relational, and Opportunity are relevant for faculty and for students while Conceptual and Technical competences are of lesser relevance (i.e., exist consensus about they are key/unimportant competences, respectively). It is remarkable that those considered key are related to critical elements to individuals perform the facet of entrepreneurship while those considered unimportant can be more related to the facet of technical administration. From this perspective, the effective design and development of curricula at the universities that facilitate the acquisition of key competences emerge as a relevant aspect of the teaching-learning process success concerning entrepreneurship education.

In addition, dissensus between faculty and students was found regarding other five competences. Specifically, competences of Personal Strength and Organisation were relevant for faculty but less for students, and competences of Learning, Strategic and Social Responsibility were relevant for students, but less for faculty. Because the existence of these areas of discrepancy may harm student's satisfaction with the education received, this study also provides an assessment criterion to be considered when analysing the success of the teaching-learning process in universities: the overlap or divergence between students and faculty with regard to the relevance assigned to entrepreneurial competences to acquire.

Finally, this study provides evidence of new conditions for the success or failure of entrepreneurship education, that is, of educational processes aimed at developing entrepreneurial competences: the consensus or dissensus on the importance assigned to these competences by both students and faculty. In particular, this study finds that the least academic achievement is attained by students when they attach less importance to a competence than the faculty. However, when consensus between them exists on such a level of importance, students' perception of achievement improves; students' achievement may be even higher in cases of positive dissensus, that is, when they attach more importance than faculty to a certain competence. From this perspective, it may be said that consensus between faculty and student emerges as a hygiene factor or minimum point from which it is possible to reach any outstanding improvement in academic achievement.

### 6.2. Methodological implications

From a methodological point of view, this study provides a measurement scale for competences of entrepreneurial managers. The scale is composed of ten entrepreneurial competences and their corresponding 73 specific abilities presented in two versions, that aimed at faculty and that at students. This scale represents a valuable contribution given that its development is based on an exhaustive literature review (e.g., Man et al., 2002; Man, Lau, & Snape, 2008; Rathna & Vijaya, 2009) as well as on perspectives provided by academics and professionals (i.e., Delphi study and pre-test). The scale possesses high reliability in two different samples (i.e., faculty and students), as well as content validity. In addition, the two samples were collected in a national scale study, and likely biases due to closer contexts were avoided. This scale, besides providing a measurement tool for entrepreneurial competences that other studies can use, allows an assessment from a competence-based approach of the degree to which students are acquiring those competences. Furthermore, the measurement provided by this scale can be considered as an additional element of judgement for recruiters responsible for selecting the adequate candidates to hold vacant entrepreneurial management positions.

### 6.3. Practical implications

From a *practical perspective*, implications of this study can be useful for academic institutions. First, universities will find here the entrepreneurial competences that should be prioritised while developing education programmes for undergraduate business degrees, as well as relevant areas of improvement for future curricula. To this respect, Kuratko and Morris (2018) recommended that universities establish a group of well-defined entrepreneurial competences with the ability to facilitate business activity in any setting. Within the framework of this recommendation, our work offers a catalogue of ten competences and, more specifically, suggest the need for considering competences of Commitment, Relational, and Opportunity.

Second, universities could analyse the degree to which key competences are being acquired by students. In those cases in which areas of improvement are identified, it would be advisable that those competences be prioritised by the university agents involved in

developing the curricula. For example, this research found that the competences of Commitment, Relational, and Opportunity, despite being key for entrepreneurship, occupy middle to lower places among the ten competences analysed with regard to the level that students perceive they have acquired them. This suggests the need to reflect on the appropriateness of separately programming educational actions oriented at creating entrepreneurial competences and others oriented at influencing and strengthening those most closely associated with founding a business (e.g., by including in the curricula specific business start-up courses).

Third, the existence of discrepancies in the importance assigned by faculty and students to the competences to acquire, as well as the impact of such discrepancies on students' academic achievement, suggest the need to undertake a deeper analysis that can guide universities in their decision making. For example, regarding the convenience of designing curricula whose content and development incorporate new student demands or, alternatively, of raising awareness of students with regard to important competences for their future career. In line with this content, this study offers useful information for defining marketing strategies for universities when designing and communicating business-related degrees.

#### 6.4. Future research

The results of this study invite further studies to be undertaken. For example, the high standard deviation found in students regarding the acquisition of specific entrepreneurial abilities, invites in-depth analysis into the characteristics of this group, aiming to identify factors that may promote this imbalance in the levels of acquisition. In this regard, the distinction between students in different academic years seems opportune, given that being further along in the curricula, may be associated with greater exposure to educational content significant to developing entrepreneurial competences. Other variables of interest are work and/or entrepreneurial experience of students, as this may condition the effect of educational content on acquiring entrepreneurial abilities or even the university in which they study. The fact that our study includes different Spanish universities all having their own curricula should be taken into consideration, which may possibly condition the intensity in teaching the different entrepreneurial competences. In this regard, the use of multilevel analysis, which allows the incorporation of individual-level variables concerning students and organisational-level ones concerning the curricula of the university in which students pursue their undergraduate degree, could contribute to the field of education in entrepreneurial competences (e.g., importance attached to certain knowledge areas of an undergraduate degree). Finally, it is proposed as a line of future research to conduct qualitative studies through focus groups with the objective of identifying the strategies and policies to be implemented by universities to achieve successful entrepreneurship education and eliminate discrepancies between groups.

#### Funding

This work was supported by the Universidad de Las Palmas de Gran Canaria (Project: PIE2018-33).

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#### References

- Abidin, M. (2015). Higher education quality: Perception differences among internal and external stakeholders. *International Education Studies*, 8(12), 185–192. <https://doi.org/10.5539/ies.v8n12p185>
- Ahmad, N. H., Halim, H. A., & Zainal, S. R. M. (2010). Is entrepreneurial competency the silver bullet for SME success in a developing nation? *International Business Management*, 4(2), 67–75. <https://doi.org/10.3923/ibm.2010.67.75>
- Ahmad, N. H., Wilson, C., & Kummerow, L. (2011). A cross-cultural insight into the competency-mix of SME entrepreneurs in Australia and Malaysia. *International Journal of Business and Management Science*, 4(1), 33–50. <https://search.informit.org/doi/10.3316/informit.851764310084321>
- Alcaraz-Rodríguez, R., Alvarez, M. M., & Villasana, M. (2014). Developing entrepreneurial competences in students in the life sciences: The Lifetech Ad-Venture program. *On the Horizon*, 22(3), 182–191. <https://doi.org/10.1108/OTH-11-2013-0053>
- Almahasees, Z., Mohsen, K., & Amin, M. O. (2021). Faculty's and students' perceptions of online learning during COVID-19. *Frontiers in Education*, 6, Article 638470. <https://doi.org/10.3389/educ.2021.638470>
- Alsmadi, S., & Alnawas, I. (2019). Consumer rights paradigm: Development of the construct in the Jordanian context. *Journal of Business Ethics*, 159(3), 777–794. <https://doi.org/10.1007/s10551-018-3815-4>
- Altinay, L. (2005). The intrapreneur role of the development directors in an international hotel group. *Service Industries Journal*, 25(3), 403–419. <https://doi.org/10.1080/02642060500050707>

- Augier, M., & Teece, D. J. (2009). Dynamic capabilities and the role of managers in business strategy and economic performance. *Organization Science*, 20(2), 410–421. <https://doi.org/10.1287/orsc.1090.0424>
- Bacigalupo, M., Kampylis, P., Punie, Y., & Van Den Brande, L. (2016). *EntreComp: The entrepreneurship competence framework*. Luxembourg: Publication Office of the European Union. <https://doi.org/10.2791/593884>. EUR 27939 EN.
- Bartlett, C. A., & Ghoshal, S. (1997). The myth of the generic manager: New personal competencies for new management roles. *California Management Review*, 40(1), 92–116. <https://doi.org/10.2307/41165924>
- Bauman, A., & Lucy, C. (2021). *Enhancing entrepreneurial education: Developing competencies for success*. The International Journal of Management Education. <https://doi.org/10.1016/j.ijme.2019.03.005>. Article 100293.
- Boldureanu, G., Ionescu, A. M., Bercu, A. M., Bedrule-Grigoruță, M. V., & Boldureanu, D. (2020). Entrepreneurship education through successful entrepreneurial models in higher education institutions. *Sustainability*, 12(3). Article 1267 <https://doi.org/10.3390/su12031267>.
- Botha, M., Van Vuuren, J. J., & Kunene, T. (2015). An integrated entrepreneurial performance model focusing on the importance and proficiency of competencies for start-up and established SMEs. *South African Journal of Business Management*, 46(3), 55–66.
- Cano García, M. E. (2008). La evaluación por competencias en la educación superior. *Profesorado: Revista de Currículum y Formación de Profesorado*, 12(3), 1–16.
- Carland, J. C., & Carland, J. W. (2007). Intrapreneurship: A requisite for success. *Entrepreneurial Executive*, 12, 83–94.
- Carrier, C. (1996). Intrapreneurship in small business: An exploratory study. *Entrepreneurship: Theory and Practice*, 21(1), 5–20. <https://doi.org/10.1177/104225879602100101>
- Cascavilla, I., Hahn, D., & Minola, T. (2022). How you teach matters! An exploratory study on the relationship between teaching models and learning outcomes in entrepreneurship education. *Administrative Sciences*, 12(1). <https://doi.org/10.3390/admsci12010012>. Article 12.
- Chandler, G. N., & Jansen, E. (1992). The founder's self-assessed competence and venture performance. *Journal of Business Venturing*, 7(3), 223–236. [https://doi.org/10.1016/0883-9026\(92\)90028-8](https://doi.org/10.1016/0883-9026(92)90028-8)
- Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a stewardship theory of management. *Academy of Management Review*, 22(1), 20–47. <https://doi.org/10.5465/amr.1997.9707180258>
- European Commission. (2008). *Entrepreneurship in higher education, especially within non-business studies*. Brussels: European Commission. Retrieved from <https://ec.europa.eu/search/?queryText>. (Accessed 14 October 2021).
- Fonseca, J., Bernate, J., Betancourt, M., Barón, B., & Cobo, J. (2019). Developing social responsibility in university students. In *Proceedings of the 2019 11th international conference on education technology and computers*. <https://doi.org/10.1145/3369255.3369275>. Amsterdam Netherlands.
- Fowler, E. A., Coffey, B. S., & Dixon-Fowler, H. R. (2019). Transforming good intentions into social impact: A case on the creation and evolution of a social enterprise. *Journal of Business Ethics*, 159(3), 665–678.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston: Pitman.
- Freeman, R. E. (1994). The politics of stakeholder theory: Some future directions. *Business Ethics Quarterly*, 4(4), 409–421, 3857340.
- Fuel, P., Pardo-del-Val, M., & Revuelto-Taboada, L. (2021). Does the ideal entrepreneurial team exist? *The International Entrepreneurship and Management Journal*. <https://doi.org/10.1007/s11365-020-00739-x>
- Gartner, W. B., & Vesper, K. H. (1994). Experiments in entrepreneurship education: Successes and failures. *Journal of Business Venturing*, 9(3), 179–187. [https://doi.org/10.1016/0883-9026\(94\)90028-0](https://doi.org/10.1016/0883-9026(94)90028-0)
- Garzón, M. D. (2010). A comparison of personal entrepreneurial competences between entrepreneurs and CEOs in service sector. *Service Business*, 4(3–4), 289–303. <https://doi.org/10.1007/s11628-009-0090-6>
- Harun, A., Prybutok, G., & Prybutok, V. (2018). Do the millennials in the USA care about the fast food industry's involvement in corporate social responsibility? *Young Consumers*, 19(4), 358–381. <https://doi.org/10.1108/YC-02-2018-00776>
- Hoppe, M. (2016). Policy and entrepreneurship education. *Small Business Economics*, 46(1), 13–29. <https://doi.org/10.1007/s11187-015-9676-7>
- Hornaday, J. A. (1971). Research about living entrepreneurs. In G. A. Kent, D. L. Sexton, & K. H. Vesper (Eds.), *Encyclopedia of entrepreneurship*. Englewood Cliffs, NJ: Prentice Hall.
- Huezo-Ponce, L., Fernández-Pérez, V., & Rodríguez-Ariza, L. (2021). Emotional competencies and entrepreneurship: Modeling universities. *The International Entrepreneurship and Management Journal*, 17(3), 1497–1519. <https://doi.org/10.1007/s11365-020-00683-w>
- Hyrsky, K. (2000). Entrepreneurial metaphors and concepts: An exploratory study. *International Small Business Journal*, 18(1), 13–34. <https://doi.org/10.1177/026624699181001>
- Iwu, C. G., Opute, P. A., Nchu, R., Eresia-Eke, C., Tengeh, R. K., Jaiyeoba, O., et al. (2021). Entrepreneurship education, curriculum and lecturer-competency as antecedents of student entrepreneurial intention. *International Journal of Management in Education*, 19(1), Article 100295. <https://doi.org/10.1016/j.ijme.2019.03.007>. Article.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Kalyar, M. N., Ahmad, B., & Kalyar, H. (2018). Does teacher motivation lead to student motivation? The mediating role of teaching behavior. *Educational Studies*, 3, 91–119. <https://doi.org/10.17323/1814-9545-2018-3-91-119>
- Knoster, K. C., & Goodboy, A. K. (2021). Making content relevant: A teaching and learning experiment with replication. *Communication Education*, 70(1), 4–26. <https://doi.org/10.1080/03634523.2020.1788106>
- Kozlinska, I., Mets, T., & Rõigas, K. (2020). Measuring learning outcomes of entrepreneurship education using structural equation modeling. *Administrative Sciences*, 10(3). <https://doi.org/10.3390/admsci10030058>. Article 58.
- Kuratko, D. F., & Morris, M. H. (2018). Examining the future trajectory of entrepreneurship. *Journal of Small Business Management*, 56(1), 11–23. <https://doi.org/10.1111/jsbm.12364>
- Kyndt, E., & Baert, H. (2015). Entrepreneurial competencies: Assessment and predictive value for entrepreneurship. *Journal of Vocational Behavior*, 90, 13–25. <https://doi.org/10.1016/j.jvb.2015.07.002>
- Lahti, R. K. (1999). Identifying and integrating individual level and organizational level core competencies. *Journal of Business and Psychology*, 14(1), 59–75. <https://doi.org/10.1023/A:1022906400927>
- Lans, T., Hulsink, W., Baert, H., & Mulder, M. (2008). Entrepreneurship education and training in a small business context: Insights from the competence-based approach. *Journal of Enterprising Culture*, 16(4), 363–383. <https://doi.org/10.1142/S0218495808000193>
- Lans, T., Versteegen, J., & Mulder, M. (2011). Analysing, pursuing and networking: Towards a validated three-factor framework for entrepreneurial competence from a small firm perspective. *International Small Business Journal*, 29(6), 695–713. <https://doi.org/10.1177/026624610369737>
- Leveson, L., & Joiner, T. A. (2014). Exploring corporate social responsibility values of millennial job-seeking students. *Education + Training*, 56(1), 21–34. <https://doi.org/10.1108/ET-11-2012-0121>
- Lindner, J. (2018). Entrepreneurship education for a sustainable future. *Discourse and Communication for Sustainable Education*, 9(1), 115–127. <https://doi.org/10.2478/dcse-2018-0009>
- Lv, Y., Chen, Y., Sha, Y., Wang, J., An, L., Chen, T., ... Huang, L. (2021). How entrepreneurship education at universities influences entrepreneurial intention: Mediating effect based on entrepreneurial competence. Article *Frontiers in Psychology*, 12, Article 655868.
- Madrid Fernández, D., & Pérez Cañado, M. L. (2001). Exploring the student's motivation in the EFL class. *Present and future trends in TEFL*, 12, 321–364.
- Mael, F., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13(2), 103–123. <https://doi.org/10.1002/job.4030130202>
- Man, T. W. Y., & Lau, T. (2005). Business environment and patterns of entrepreneurial competencies of SME owner/managers in Hong Kong. *Journal of Small Business and Enterprise Development*, 12(4), 464–481. <https://doi.org/10.1142/S0218495808000065>
- Man, T. W. Y., Lau, T., & Chan, K. F. (2002). The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing*, 17, 123–142. [https://doi.org/10.1016/S0883-9026\(00\)00058-6](https://doi.org/10.1016/S0883-9026(00)00058-6)

- Man, T. W. Y., Lau, T., & Chan, K. F. (2008). Home-grown and abroad-bred entrepreneurs in China: A study of the influences of external context on entrepreneurial competencies. *Journal of Enterprising Culture*, 16(2), 113–132. <https://doi.org/10.1142/S0218495808000065>
- Man, T. W. Y., Lau, T., & Snape, E. (2008). Entrepreneurial competencies and the performance of small and medium enterprises: An investigation through a framework of competitiveness. *Journal of Small Business and Entrepreneurship*, 21(3), 257–276. <https://doi.org/10.1080/08276331.2008.10593424>
- Marques, C. S., Lopes, C., Braga, V., Ratten, V., & Santos, G. (2022). Intuition and rationality in intrapreneurship and innovation outputs: The case of health professionals in primary health care. *The International Entrepreneurship and Management Journal*, 18(2), 579–602. <https://doi.org/10.1007/s11365-021-00761-7>
- McGlone, T., Spain, J. W., & McGlone, V. (2011). Corporate social responsibility and the millennials. *The Journal of Education for Business*, 86(4), 195–200. <https://doi.org/10.1080/08832323.2010.502912>
- Minai, M. S., Raza, S., bin Hashim, N. A., Zain, A. Y. M., & Tariq, T. A. (2018). Linking entrepreneurial education with firm performance through entrepreneurial competencies: A proposed conceptual framework. *Journal of Entrepreneurship Education*, 21(4), 1–9.
- Mitchellmore, S., & Rowley, J. (2010). Entrepreneurial competencies: A literature review and development agenda. *International Journal of Entrepreneurial Behavior & Research*, 16(2), 92–111. <https://doi.org/10.1108/13552551011026995>
- Morris, M. H., Neumeyer, X., & Kuratko, D. F. (2015). A portfolio perspective on entrepreneurship and economic development. *Small Business Economics*, 45(4), 713–728. <https://doi.org/10.1007/s11187-015-9678-5>
- Morris, M. H., Webb, J. W., Fu, J., & Singhal, S. (2013). A competency-based perspective on entrepreneurship education: Conceptual and empirical insights. *Journal of Small Business Management*, 51(3), 352–369. <https://doi.org/10.1111/jsbm.12023>
- Mulder, M., Lans, T., Versteegen, J., Biemans, H., & Meijer, Y. (2007). Competence development of entrepreneurs in innovative horticulture. *Journal of Workplace Learning*, 19(1), 32–44. <https://doi.org/10.1108/13665620710719330>
- Nabi, G., Liñán, F., Payolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *The Academy of Management Learning and Education*, 16(2), 277–299. <https://doi.org/10.5465/amle.2015.0026>
- Ndou, V., Secundo, G., Schiuma, G., & Passiante, G. (2018). Insights for shaping entrepreneurship education: Evidence from the European entrepreneurship centers. *Sustainability*, 10(11). <https://doi.org/10.3390/su10114323>. Article 4323.
- Neck, H. M., & Greene, P. G. (2011). Entrepreneurship education: Known worlds and new frontiers. *Journal of Small Business Management*, 49(1), 55–70. <https://doi.org/10.1111/j.1540-627X.2010.00314.x>
- Niemi, H. M., & Kousa, P. (2020). A case study of students' and teachers' perceptions in a Finnish high school during the COVID pandemic. *International Journal of Technology in Education and Science*, 4(4), 352–369. <https://doi.org/10.46328/ijtes.v4i4.167>
- Olokundun, M. A., Ibadunni, A. S., Peter, F., & Ogbari, M. (2017). Entrepreneurship educator's competence on university students' commitment to learning and business plan writing. *Academy of Strategic Management Journal*, 16(2), 1–10.
- Pinchot, G., III (1985). *Intrapreneuring: Why you don't have to leave the corporation to become an entrepreneur* (University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship).
- Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal*, 25(5), 479–510. <https://doi.org/10.1177/0266242607080656>
- Rahman, S. A., Amran, A., Ahmad, N. H., & Taghizadeh, S. K. (2015). Supporting entrepreneurial business success at the base of pyramid through entrepreneurial competencies. *Management Decision*, 53(6), 1203–1223. <https://doi.org/10.1108/MD-08-2014-0531>
- Ramos-González, M. d. M., Rubio-Andrés, M., & Sastre-Castillo, M. Á. (2021). Effects of socially responsible human resource management (SR-HRM) on innovation and reputation in entrepreneurial SMEs. *The International Entrepreneurship and Management Journal*. <https://doi.org/10.1007/s11365-020-00720-8>
- Rathna, K. G., & Vijaya, T. G. (2009). Competencies of entrepreneurs and intrapreneurs: A comparative study. *South Asian Journal of Management*, 16(2), 28–46.
- Reis, D. A., Fleury, A. L., & Carvalho, M. M. (2021). Consolidating core entrepreneurial competences: Toward a meta-competence framework. *International Journal of Entrepreneurial Behavior & Research*, 27(1), 179–204. <https://doi.org/10.1108/IJEBR-02-2020-0079>
- RezaeiZadeh, M., Hogan, M., O'Reilly, J., Cunningham, J., & Murphy, E. (2017). Core entrepreneurial competencies and their interdependencies: Insights from a study of Irish and Iranian entrepreneurs, university students and academics. *The International Entrepreneurship and Management Journal*, 13(1), 35–73. <https://doi.org/10.1007/s11365-016-0390-y>
- Robinson, S., Neergaard, H., Tanggaard, L., & Krueger, N. F. (2016). New horizons in entrepreneurship education: From teacher-led to student-centered learning. *Education + Training*, 58(7/8), 661–683. <https://doi.org/10.1108/ET-03-2016-0048>
- Schelfhout, W., Bruggeman, K., & De Maeyer, S. (2016). Evaluation of entrepreneurial competence through scaled behavioural indicators: Validation of an instrument. *Studies In Educational Evaluation*, 51, 29–41. <https://doi.org/10.1016/j.stueduc.2016.09.001>
- Schumpeter, J. A. (1934). *The theory of economic development*. Cambridge, MA: Harvard University Press.
- Shikalapo, E. E. (2020). The role of motivational theories in shaping teacher motivation and performance: A review of related literature. *International Journal of Research and Innovation in Social Science*, 4(4), 64–76.
- Solomon, G. (2007). An examination of entrepreneurship education in the United States. *Journal of Small Business and Enterprise Development*, 14(2), 168–182. <https://doi.org/10.1108/14626000710746637>
- Souitaris, V., Zerbinati, 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>
- Spaeth, M., & Hakkanen, C. (2010). Entrepreneurship in higher education: An overview. In H. von Holst, H. Nguyen, & J. Wikander (Eds.), *Innovation driven research education: An introduction* (Vol. 1). Stockholm: KTH Royal Institute of Technology.
- Stukalina, Y. (2014). Identifying predictors of student satisfaction and student motivation in the framework of assuring quality in the delivery of higher education. *Business, Management and Education*, 12(1), 127–137. <https://doi.org/10.3846/bme.2014.09>
- Sundaramurthy, C., & Lewis, M. (2003). Control and collaboration: Paradoxes of governance. *Academy of Management Review*, 28(3), 397–415. <https://doi.org/10.5465/amr.2003.10196737>
- Tittel, A., & Terzidis, O. (2020). Entrepreneurial competences revised: Developing a consolidated and categorized list of entrepreneurial competences. *Entrepreneurship Education*, 3(1), 1–35. <https://doi.org/10.1007/s41959-019-00021-4>
- Tosi, H. L., Brownlee, A. L., Silva, P., & Katz, J. P. (2003). An empirical exploration of decision-making under agency controls and stewardship structure. *Journal of Management Studies*, 40(8), 2054–2071. <https://doi.org/10.1046/j.1467-6486.2003.00411.x>
- Tuning, P. (2003). *Tuning educational structures in Europe. Informe final. Proyecto piloto - Fase I*. Retrieved from <http://tuningacademy.org/wp-content/uploads/2014/02/TuningEUI-Final-Report-SP.pdf>. (Accessed 13 October 2021).
- Uwimana, P., Mukamana, D., Babenko-Mould, Y., & Adejumo, O. (2022). Exploring factors affecting the facilitation of nursing students to learn paediatric pain management in Rwanda: A descriptive qualitative study. Article PLoS One, 17(2), Article e0263609. <https://doi.org/10.1371/journal.pone.0263609>
- Vallade, J. I., Kaufmann, R., & Frey, T. K. (2020). Facilitating students' motivation in the basic communication course: A self-determination theory perspective. *Basic Communication Course Annual*, 32(1). Article 9. Retrieved from <https://ecommons.udayton.edu/bcca/vol32/iss1/9>. (Accessed 3 April 2022).
- Van Puyvelde, S., Caers, R., Du Bois, C., & Jegers, M. (2012). The governance of nonprofit organizations: Integrating agency theory with stakeholder and stewardship theories. *Nonprofit and Voluntary Sector Quarterly*, 41(3), 431–451. <https://doi.org/10.1177/0899764011409757>
- Villardón-Gallego, L., Yáñez, C., Elexpuru, I., & Achurr, C. (2013). Autonomy and competence for learning. *European Journal of Social & Behavioural Sciences*, IV(1), 66–74. <https://doi.org/10.15405/ejsbs.2013.1.9>
- Wennekers, S., Van Wennekers, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24(3), 293–309. <https://doi.org/10.1007/s11187-005-1994-8>
- Wong, H. Y., & Chan, C. K. (2021). A systematic review on the learning outcomes in entrepreneurship education within higher education settings. *Assessment & Evaluation in Higher Education*, 1–18. <https://doi.org/10.1080/02602938.2021.2021583>
- Wren, S. T. (2021). Improving Emirati students' social responsibility competence through global citizenship education. *Learning and Teaching in Higher Education: Gulf Perspectives*, 17(2), 80–94. <https://doi.org/10.1108/LTHE-09-2020-0046>

- Yallew, A. T., Juusola, H., Ahmad, I., & Törmälä, S. (2018). Exploring principal-agent theory in higher education research. *Working Papers in Higher Education Studies*, 3, 78–98.
- Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381–404. <https://doi.org/10.1177/0149206309335187>
- Zhao, W., Yang, T., Hughes, K. D., & Li, Y. (2021). Entrepreneurial alertness and business model innovation: The role of entrepreneurial learning and risk perception. *The International Entrepreneurship and Management Journal*, 17(2), 839–864. <https://doi.org/10.1007/s11365-020-00637-2>