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context: a business plan in Bachelor
thesis**

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Abstract

The objective of this research consists of analysing the impact of carrying out Bachelor thesis (BT) subject –focused on the creation of a new venture by implementation and elaboration of a business plan– on learning outcomes. Thus, a combination of competences is analysed and evaluated between prior and after to carry out the BT subject –consisting of a business plan–, so as to confirm to what extent the BT contributes to the outcomes obtained in acquisition of and training in competences. The results obtained indicate important and positive improvements in the following competences: interpersonal relations, teamworking, organizational issues, leadership, change management, creativity, and in particular, entrepreneurship and the application of knowledge into practice. The choice of topic for the BT emerges as a critical tool in the orientation of training emphasis towards particular competences, such as those related to entrepreneurship. Thus, a business plan implemented properly is a way of teaching and learning –learning by doing–, and consequently, a valuable tool in the training of competences related to entrepreneurship –providing knowledge, skills, and their articulation. Such BT develops entrepreneurial competence and increases the necessary competences for different entrepreneurship itineraries, as social entrepreneurship, innovative entrepreneurship, and international entrepreneurship.

ENTREPRENEURIAL LEARNING IN AN EXPERIENTIAL AND COMPETENCES TRAINING CONTEXT: A BUSINESS PLAN IN BACHELOR THESIS

Abstract

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1. Introduction

First, the transcendental and global change in the conception of the educational model and, in particular, in the planning, programming and validation of the teaching-learning process that has taken place in recent times, has created new challenges and uncertainties for higher education institutions in the area of university studies (Lackéus, 2015). Thus, these entities

must adapt, adjust, and tailor themselves to this new focus or educational paradigm (Díaz-Méndez and Gummesson, 2012; Wood and Breyer, 2017).

In this regard, the educational model based on competences (Burms and Klingstedt, 1981; Burke, 1989; Grootings, 1994; De los Ríos et al., 2010) is born as the expression of an emerging conceptual framework that integrates knowledge, skills, and values and in which it is essential to stimulate permanent learning and the acquisition of a number of suitable and reasonable skills by students at higher education institutions (Houston, 1974; Lovanova and Sunin, 2008; Surr and Redding, 2017). In this vein, Fallows and Steven (2000) and Mateo et al. (2012a) and López et al. (2019) argue that the competence acquisition is understood as the attainment of an achievement resulting from the synergistic integration of a combination of knowledge, skills, and predetermined values.

Second, BT is a key element in achieving the competences and objectives promoted by the European Higher Education Area (Altbach, 2002; Teichler, 2005; Curaj et al., 2015; De Wit, 2015). In this way, De la Orden (2011, p. 52) understands that “an individual is competent when he or she brings together enough requisites to do something, to reach somewhere, in short, to achieve something”. Moreover, Gunn (2010) and Hernández-Leo et al. (2013) highlight the importance that BT must have as a link to the professional or business world that awaits the students and it must serve as a point of connection and link to the reality of business. However, other authors point out, that competences should refer to a mission and are acquired over time and with real practical experience linked to professional activities (Woodruffe, 1993; Mirabile, 1997).

Third, in recent decades, authors such as Mason and Siqueira (2014), Audretsch and Link (2017), Matlay (2017) and Fayolle et al. (2018) state that the number of studies focused on courses and programs in entrepreneurship’s training in higher education has increased. However, previous research has focused on entrepreneurship as a subject, forgetting the great usefulness of BT as an active training tool. (Rodríguez-López and Souto, 2019). Furthermore, authors such as Kuratko (2005), Higgins et al. (2018) and Rodríguez-López and Souto (2020) argue the existence of a gap in academic literature upon entrepreneurship training, highlighting that traditional pedagogical methods are not enough to adequately prepare and educate entrepreneurship students. Moreover, these authors point out that entrepreneurial training is an issue with many gaps in which many aspects and the relationships between them are still unknown. In addition, there is little attention in the

literature regarding entrepreneurship training and entrepreneurship education in relation to international entrepreneurship. In this regard, this research breaks new ground by highlighting the role of Bachelor Thesis –carried out by a business plan– in entrepreneurship education, because of fostering entrepreneurship and entrepreneurship training through the BT is a topic that has not been explored to date (Rodríguez-López and Souto, 2019).

The aim of this paper is to analyse the impact of a BT subject -by implementation and production of a business plan- on learning outcomes of the student throughout their university studies, on the competence training. To this end, a combination of competences prior to studying the BT subject is analysed and evaluated and then compared to the outcomes obtained by the students after studying said subject, so as to confirm to what extent the BT subject contributes to the students' acquisition of and training in competences. The competency-based educational model (Tuning, 2005; 2008) emerges as a new conceptual framework unifying knowledge, values, and skills, in which continuous learning based in competences foster that the student can acquire, in a way that is progressive, active, and dynamic, the different values, skills and knowledge programmed. In this way, the competence training performed by the Bachelor thesis (BT) subject -by implementation and elaboration of a business plan- can assess on learning outcomes of the student throughout their university studies according to the competency-based educational model. The competence acquisition by carried out of the BT subject is understood as the attainment of an achievement resulting from the synergistic integration of a combination of knowledge, skills, and predetermined values.

In addition, the competences related to internationalization are studied considering the role of the BT and stays abroad. In this regard, we also have observed a gap regarding that studying abroad is an increasing international experience, however, is scarce scholarly research has evaluated the learning outcomes of this experience to date. This study addresses entrepreneurial training and fostering entrepreneurship from a novel perspective, not only as an entrepreneurship subject or certain content in a curriculum, but as a real experience of starting a new business venture. In this vein, the BT offers a suitable context, by size and configuration, to provide the aforementioned opportunity in an academic context.

2. Entrepreneurial learning and transferring knowledge

Entrepreneurial learning is a major issue in academic literature (Solomon et al., 2002; Kuratko, 2005; Fayolle et al., 2018) because of the growing interest regarding to entrepreneurship programs and courses (Wright, 2014; Audretsch and Link, 2017; Matlay, 2017) to stimulate entrepreneurship and promote the creation of start-ups and the identification, development and exploitation of business opportunities (Rae and Wang, 2015; Marzocchi et al., 2018). In this way, Solomon and Fernald (1991) analyses the influence of entrepreneurial education in the creation of SMEs; other authors focus on different pedagogical methods for teaching entrepreneurship (Solomon et al., 1994: Fiet, 2001), and Shepherd (2004) proposes using the analysis of business failure as a method for teaching students and future entrepreneurs.

Moreover, it is worth highlighting researchers such as Pittaway and Cope (2007a) who undertake a systematic review of the literature on different topics within entrepreneurship education. More specifically, these authors find that entrepreneurship education has an impact on student propensity and intentionality. However, this study concludes that it is not clear to what extent such education impacts on the entrepreneurship level of graduates or if it enables graduates to become more effective entrepreneurs. Furthermore, for Wang and Chugh (2014) entrepreneurial learning has emerged as an important and promising research area. Thus, in this research three pairs of key learning types that deserve more attention in future research are discussed, namely individual and collective learning, exploratory and exploitative learning, and intuitive and sensing learning. Ultimately, Robinson et al., (2016) highlight the relevance of a competence-based approach for entrepreneurial learning, arguing that is necessary to move away from entrepreneurship education as being teacher-led to being more student-centered and focused on experiential and existential lifelong learning practices.

Otherwise, authors such as Zahra and George (2002) note that the ability of acquiring and transferring knowledge play an important part in exploiting entrepreneurial opportunities. In this regard, Cohen and Levinthal (1990) highlight that the knowledge previously acquired and absorptive capacity allows entrepreneurs to develop abilities differently. In particular, the absorptive capacity is regarded as an important factor in both corporate innovation and general competitive advantage (Easterby-Smith et al., 2008). In this way, Camison and Forés (2010) argue that the processes for absorbing external knowledge

become an essential element for innovation in firms and in adapting to changes in the competitive environment. Finally, Wilkesmann et al. (2009) show that knowledge transfer depends on national cultural characteristics and that cultural background affects the transferability of knowledge.

3. Competence training and BT

Competence is “the convergence of knowledge of the subject, generic skills and the communication of ideas; competences are part and final product of the education process...Competence is its construction throughout the educational process, as well as its performance, that is to say, the practical result of knowing” (Vázquez, 2001, p. 6). Thus, Armstrong and Shanker (1983), Greenbank et al. (2008), Riera (2010) and Healey et al. (2013) outline the fundamental role that the BT has as a comprehensive mechanism or instrument for monitoring and evaluating the acquisition, development and mastery of the competences achieved by the students throughout their undergraduate studies. Accordingly, the BT is configured as a project of major importance (Calvert and Casey, 2004; Pepper et al., 2001; Todd et al., 2004; Ashwin, et al., 2017), as a compulsory subject –with 6-30 ECTS credits freely assigned by each Spanish university– which must be taken in the final stage of the degree course as the culmination of those studies.

Likewise, other authors such as Stefani et al. (1997), Parsons and Knight (2005) and Todd et al. (2006) underline the distinctive and differentiating character of the BT in relation to all the other subjects on the degree course. In addition, Snavelly and Wright (2003) believe that the student must participate in the teaching-learning process, being able to choose the topic, content, and orientation of their BT. Still further, Webster et al. (2000) suggest that the student should, autonomously, plan, programme and develop their BT. However, Riera (2010) states the need throughout this whole process for a teacher-tutor to advise and orientate the student accordingly. In addition, regarding to the description and evaluation of the transversal competences in the BT subject for 64-degree courses at the Autonomous University of Barcelona, Ayza et al. (2010), highlight the existence of differences in the choices of transversal competences based on the different branches of knowledge is shown, despite the fact that by definition said competences are common to all the disciplines. Besides, this research develops a model for the evaluation of BT, with which to approach the design of indicators for some transversal competences, as well as the means and tools to evaluate them.

Lastly, Espinosa et al. (2016) analyse the students' satisfaction with their BT, in the specific case of BT's students on degrees in Business Administration, Law and Business Administration, Tourism and Business Administration, Management of Public Entities, Labour Relations and Human Resources, and Tourism at the University of Alicante. Thus, from the results of this study, it can be deduced that the level of satisfaction in their own work and in the performance of the tutors is high. On the other hand, the students also outline aspects that can be improved about provision of clearer information about the BT, at the beginning of the academic year and the simplification of the application that is used to manage it.

4. Entrepreneurial competence, entrepreneurship related competences and BT

First, *entrepreneurial competence* is being used in tandem with other competences as the planning, organization and management of time, *application of knowledge in practice*, *the capacity to adapt to new situations*, *the capacity to generate new ideas*, *leadership*, problem solving, motivation to succeed and decision taking (Buchholz and Rosenthal, 2005; Clarke and Holt, 2010). In this regard, for Hindle and Yencken (2004) entrepreneurial competence requires other ingredients, apart from entrepreneurial capacity, such as, the capacity to innovate, take risks, take decisions in an uncertain environment, manage rapid growth in volatile environments, create extensive networks and lead the new project. These ingredients act as complements to entrepreneurial competence, enabling the creation of a new company and its subsequent development and consolidation. In other words, it is related to the identification, development, and exploitation of business opportunities.

Second, Fagerberg et al. (2005), argue that the *competence in innovation* is determined by the capacity to generate and implement a new idea, product, service, or business successfully in the market, as well as to obtain a tangible benefit from the generation of ideas in order to successfully make the most of them. Furthermore, the *competence in ethical commitment* should be based on universal values such as, justice, solidarity, environmental protection, peace, tolerance, and respect for differences, among others (Marina, 2010).

Despite the above, other researchers argue that *entrepreneurial competence* does not necessarily implicate a competence in ethical commitment, nor innovation (Lazear, 2004). Although it is true that some entrepreneurs combine these competences, to create

new innovative companies, new socially committed companies or new companies that are innovative and committed to certain ethical principles. Likewise, ethics should be linked to all businesses or companies, but they can also be considered as an isolated competence, as the fact of having entrepreneurial competence does not in itself imply the existence of a competence in ethical commitment (Rodríguez-López and Souto, 2020).

Third, Torrelles et al. (2011) point out the relevance of *leadership, interpersonal relations, problem solving and teamwork competence*, as they imply “personal disposition and collaboration with others in carrying out activities to achieve common objectives, exchanging information, taking on responsibilities, resolving difficulties that come up and contributing to the improvement and collective development” (p. 339). In this way, Tuomi (2005), demonstrates that to attain said competences it could be useful to use teaching methodologies that depend on collaborative learning based on problem solving, in which the students can cooperate and collaborate to solve the problem, for example, by adopting different roles and presenting different interpretations of the situation or problem posed (Cumming and Owen, 2001; Shapiro, 2006). Otherwise, Riera (2010) stand out *the competences in research and in analysis and synthesis*, as the carrying out of the BT allows students to learn and use techniques in research and dealing with specific data. In this regard, the attainment of primary data, for example, carrying out market research, as well as thorough analysis of data and existing secondary sources, is consolidated as a key element in achieving a quality’s BT.

Finally, Fahrutdinova et al. (2016) and López et al. (2019) highlight the importance of communication competences, in particular, the *competence related to use of a second language* among university students, with the aim by *working in an international context* and *appreciation of diversity and multiculturalism* from other countries. Moreover, Ramirez (2016) argues that *studying abroad* is an international experience that increasing numbers of students are participating in, but no scholarly research has, thus far, evaluated the learning outcomes of this experience, and Haas (2018) provides support for the hypothesis that *studying abroad* may improve cultural awareness, but also demonstrates the need for further rigorous research to be conducted in this area. Ultimately, Schenker (2019) analyses the effects of a *study abroad* program on students’ global competence. The results of this research indicate that students made statistically significant improvements in several dimensions of global competence.

5. Material and methods

5.1. Data collection and sample

The sample consists of a total of 307 subjects, 60.91% women and 39.09% men, chosen from students in their last year enrolled in the BT subject, belonging to different universities and degrees. The subject in question is compulsory and contains six ECTS credits. The topic of the BT analysed is the development of a business plan, with projects that must be unique, novel, and original, in all cases. Likewise, as BT is the expression of academic learning, the new venture must be framed in businesses related to studies or be oriented to the application of what has been learned during studies. In addition, the students had received prior academic training related to the contents of a business plan. This allows for the elimination of bias in the measurement of the variables, as well as distortions arising because of project choices of lesser or more complex topics. In this regard, the units of learning, the support materials and the content of the BTs are relatively similar for all students. Also, 64% of the respondents are of foreign origin (45% America, 20% Asia, 30% other European countries, and 5% others), and 89% of the respondents have made a *stay abroad* during their studies.

The data was collected during the academic year 2016/2017, at the beginning and end of the subject (before and after the BT were carried out), with the aim of being able to make the pertinent comparisons. The tool for data collection was a questionnaire, which design was based on that employed in López et al. (2019). In addition, despite not making any modifications, a pre-test on five individuals and five scholars was carried out. Likewise, the response to the questionnaire was voluntary and it aimed to maintain the anonymity of the participants, by only identifying that the responses made before and after carrying out the BT corresponded to the same individual.

5.2. Variables

The variables used were designed based on the list defined in López et al. (2019), choosing those competences identified in the teachers' guides for the BT subject in the previous five years, as well as the other information provided in the mentioned teachers' guides, such as the express or implicit mention of a competence and the objectives and results expected in the subject. Each competence was conceptualized as a dynamic combination of knowledge, understanding, abilities and skills that correspond directly and specifically to each

denomination; that is, an articulated set –of knowledge, understanding, abilities and skills– own of each variable’ denomination. Thus, the variables in this study are:

- Organization, planning, and time management.
- Teamworking.
- Problem solving.
- Decision taking.
- Leadership.
- Interpersonal relations.
- Adapting to new situations: change management.
- Entrepreneurial initiative and spirit.
- Ethical commitment (including respect for ethical values).
- Application of knowledge to practice.
- Innovation.
- Research.
- Analysis and synthesis.
- Motivation to succeed (obtain objectives).
- Generating new ideas (creativity).
- A second language.
- Appreciation of diversity and multiculturalism.
- Working in an international context.
- Cultures and customs from other countries.

The measurement of the variables is carried out using the Likert 5-point scale, which describes the level of training reached in each of the competences from 1 (very low) to 5 (very high).

Moreover, another of the variables in the study, not related to competences, consists of the overall satisfaction of the students with their degree. In this case the measurement scale is Likert 5 points, with values from 1 (very low) to 5 (very high).

5.3. Data analysis

The analysis carried out was of a quantitative nature. Firstly, the results are described using arithmetic means (before and after carrying out the BT) regarding to the competence training. Secondly, to prove if any significant differences exist between before and after doing the BT, the Wilcoxon test for related samples was used.

Berman and Wang (2017), Corder and Foreman (2014) and Pallant (2013) highlight that with ordinal variables, as is the case in this study, it is necessary to use non-parametric statistics, given that to the contrary, the violation of the assumptions of parametric tests would lead to results that were invalid, unreliable and imprecise. The Wilcoxon signed-rank test is a non-parametric statistic that compares pairs of variables among related samples, allowing us to statistically contrast the existence of differences between the pairs (Wilcoxon, 1945). This test calculates the differences between the pairs (such as those arising from before and after an event), to then classify the differences in ranks, among which it is possible to distinguish positive statuses, negative statuses, and equal statuses. Furthermore, the Wilcoxon test is stronger than other non-parametric tests (such as the signs test, which is optimal for nominal data), as it considers the size of the differences between the pairs.

The size of the effect (r) is calculated based on the equation proposed by Rosenthal (1991) and Pallant (2013), as the division of value Z (in the Wilcoxon test) by the square root of N (number of total observations, including both time frames). Likewise, the interpretation of the size is based on Cohen (1988) (0.1 = small effect; 0.3 = medium effect; 0.5 = large effect), even though Cohen himself highlights the need to contextualize the interpretation. In this regard, Glass et al. (1988) is particularly critical, as one variable can represent a small intervention or change, which in turn, competes with many other changes or interventions. Thus, a modest value, in the size of the effect, could imply a very significant

impact. Therefore, in our research it is essential to contextualize the results, as the BT is a subject with 6 ECTS in the context of a whole degree with 240 ECTS with multiple subjects.

In addition, the differences between subjects with and without stays abroad are analysed with the Wilcoxon-Mann-Whitney test. This test is a non-parametric method for comparing two independent samples, such as individuals with stays abroad and individuals without stays abroad. Wilcoxon (1945) and Mann and Whitney (1947) provide an optimal test for ordinal variables, such as the Likert type, which covers samples of different sizes. So, we use it in order to detect the existence of differences between two independent samples of different sizes in relation to one ordinal variable.

The statistical analysis was carried out using the SPSS 15.0 statistical programme.

6. Results

The descriptive analysis consisting of arithmetic means is presented in table 1. The averages before carrying out the BT are below 4 and above 3.2; however, the averages after carrying out the BT are between 4.5 and 4, with the exception of the competence of innovation (3.95), the competence in research (3.85), the competence of a second language (3.73), the competence of appreciation of diversity and multiculturalism (3.48), the competence of working in an international context (3.8) and the competence of cultures and customs from other countries (3.43).

These improvements in level reached in the studied competence training are the result of some significant increases in all the studied competences. In fact, all of the competences studied have improved their averages considerably, which shows that the competence level in “organization, planning and time management”, “teamworking”, “problem solving”, “decision taking”, “leadership”, “interpersonal relations”, “adapting to new situations: change management”, “entrepreneurial initiative and spirit”, “ethical commitment (including respect for ethical values)”, “application of knowledge to practice”, “innovation”, “research”, “analysis and synthesis”, “motivation to succeed (achieve objectives)”, “generating new ideas (creativity)”, “a second language”, “appreciation of diversity and multiculturalism”, “working in an international context” and “cultures and customs from other countries”, has been greatly enriched through the carrying out of the BT.

The two biggest increases correspond to entrepreneurial initiative and spirit and the application of knowledge to practice, with values of 0.53 and 0.44 respectively, the smallest increase, though still a fairly significant 0.19, corresponds to appreciation of diversity and multiculturalism.

Table 1: arithmetical means of competences.

	N	Mean (before BT)	Mean (after BT)	Difference in Mean
Adapting to new situations: change management	614	3.91	4.24	0.33
Generating new ideas (creativity)	614	3.80	4.11	0.31
Problem solving	614	3.81	4.08	0.27
Innovation	614	3.67	3.95	0.28
Decision taking	614	3.96	4.26	0.29
Leadership	614	3.92	4.25	0.33
Entrepreneurial initiative and spirit	614	3.93	4.45	0.53
Application of knowledge to practice	614	3.76	4.21	0.44
Research	614	3.58	3.85	0.27
Analysis and synthesis	614	3.73	4.02	0.29
Organization, planning, and time management	614	3.83	4.18	0.34
Teamworking	614	3.84	4.19	0.35
Interpersonal relations	614	3.94	4.31	0.37
Ethical commitment (including respect for ethical values)	614	3.89	4.14	0.24

Motivation to succeed (achieve objectives)	614	3.98	4.27	0.29
A second language	614	3.4	3.73	0.33
Appreciation of diversity and multiculturalism	614	3.3	3.48	0.19
Working in an international context	614	3.41	3.8	0.39
Cultures and customs from other countries	614	3.21	3.43	0.22

Note: N is the total number of observations, including both time periods.

With the aim of corroborating whether the large positive improvements in the competence level shown by the arithmetic means are statistically significant, table 2 shows the results obtained in the Wilcoxon test.

The results of the Wilcoxon signed-rank test produce a $p < 0.01$, therefore, the hypothesis of equality of averages can be rejected and it can be concluded that for each of the pairs compared, before and after carrying out the BT, differ significantly. In this way, the increase in the level of competences between before and after carrying out the BT is statistically significant, which reveals the important impact that the BT has on the students' competence training.

Table 2: Wilcoxon signed-rank test.

	Z	Asymp. Sig. (bilateral)
Adapting to new situations: change management	-10.10	0.000
Generating new ideas (creativity)	-9.80	0.000
Problem solving	-9.11	0.000
Innovation	-9.33	0.000
Decision taking	-9.49	0.000
Leadership	-10.10	0.000
Entrepreneurial initiative and spirit	-12.73	0.000

Application of knowledge to practice	-11.66	0.000
Research	-7.25	0.000
Analysis and synthesis	-8.47	0.000
Organization, planning, and time management	-10.25	0.000
Teamworking	-10.34	0.000
Interpersonal relations	-10.63	0.000
Ethical commitment (including respect for ethical values)	-8.66	0.000
Motivation to succeed (achieve objectives)	-9.43	0.000
A second language	-8.03	0.000
Appreciation of diversity and multiculturalism	-3.03	0.002
Working in an international context	-8.97	0.000
Cultures and customs from other countries	-4.25	0.000

Entrepreneurial initiative and spirit presents the most significant difference between before and after executing the BT, with a sizeable effect (0.51) – in general terms –, and once the BT has been contextualized as a subject with 6 credits within a 240 credits syllabus, made up of multiple subjects, it can be considered as having an extremely high and crucial effect within the training received during higher education. In fact, 53% of students surveyed improved their competence level in *entrepreneurial initiative and spirit*.

Application of knowledge to practice has the second highest difference, with a very significant effect (0.47) that, once contextualised, shows an extremely important and relevant effect; 44% of students improve in *application of knowledge to practice*.

Interpersonal relations, teamworking, leadership, adapting to new situations: change management, organization, planning, and time management and generating new ideas (creativity) also have large increases after performing the BT, with a very significant

effect of the BT subject, once contextualised within the undergraduate studies; the size of the effect on each of these competences being 0.43, 0.42, 0.41, 0.41, 0.41 y 0.4 respectively. Also, once contextualized, the effect on *research* (0.29), *decision taking* (0.38), *innovation* (0.38), *motivation to succeed (achieve objectives)* (0.38), *problem solving* (0.37), *ethical commitment (including respect for ethical values)* (0.35), *a second language* (0.32), *working in an international context* (0.36), and *analysis and synthesis* (0.34) are also important.

The remaining competences with significant statistical differences present relevant sizes of effect between before and after carrying out the BT, once contextualised. While appreciation of diversity and multiculturalism has the most moderate effect of all the competences addressed, with a value of 0.12, the size of the effect on *cultures and customs from other countries* is 0.38.

Thus, all the competences analysed have statistically significant differences between before and after the BT, differences consisting of important increases in the competence training of the students and, therefore, sizeable effects on each of the studied competences.

In order to study in depth, the four competences related to internationalization, and given the number of subjects in the sample with stays abroad during their studies, the role of stays abroad in relation to the competence training of BT is addressed.

The table 3 shows important differences between the means of individuals with and without stays abroad; in fact, the means of individuals with a stay abroad is considerably higher, even higher than the mean of the entire sample. Therefore, BT obtains better results in the competences training related to internationalization if it is combined with a stay abroad.

Table 3: arithmetical means of competences related to internationalization.

	Mean (after BT; without stay abroad)	Mean (after BT; with stay abroad)	Difference in Mean
A second language	1.94	3.95	2

Appreciation of diversity and multiculturalism	2.64	3.58	0.95
Working in an international context	2.06	4.01	1.95
Cultures and customs from other countries	2.36	3.55	1.19

The table 4 shows the Wilcoxon-Mann-Whitney test with a $p < 0.001$, and therefore, we can conclude that individuals with stay abroad and individuals without stay abroad differ significantly with respect to competences training after BT.

Table 4: Wilcoxon-Mann-Whitney test.

	Z	Asymp. Sig. (bilateral)
A second language	-8.4	0.000
Appreciation of diversity and multiculturalism	-4.69	0.000
Working in an international context	-8.64	0.000
Cultures and customs from other countries	-5.79	0.000

Lastly, the impact of the BT subject on the students' satisfaction with their studies is valued. The variable overall satisfaction with studies has an arithmetic mean of 4.04 before the BT and one of 4.38 after carrying out the BT, the difference in the average before and after the BT being 0.34. The Wilcoxon signed-rank test produces $Z = -10.25$, with a bilateral significance (two-tailed) of 0.000 ($p < 0.001$). Thus, the BT also has an important and statistically significant impact on the overall satisfaction of the students with their studies in Higher Education Institutions.

7. Discussion

The main role of university institutions is to generate, promote and exchange knowledge and their social contribution in training and empowering professionals is of the utmost relevance. Thus, the students receive training that is oriented towards enabling them to

carry out a specific professional activity, as they follow a curricular plan. In this way, our research is in line with authors such as Rich (2010) and De la Orden (2011); these authors assert that education based on competences can be configured as extremely useful and valuable for the graduates' future attainment of employment, as it generates, stimulates, and perfects their professional performance. Likewise, our work is in line with studies such as Mateo et al. (2012b) and Mclean et al. (2017) that positively value the model of education based on competences, indicating the key role of the curricular plan followed, which bases itself on the improvement in a number of competences that the student, must acquire and better during their studies, with the aim of enabling them to execute their chosen professional activity.

Furthermore, this paper agrees with the research by Martínez and Carmona (2009) and Marina (2010), regarding to the educational model based on competences, is configured as a new academic culture, which is necessary and indispensable for the development of entrepreneurship, within the integrating framework of contemporary modern societies. Therefore, student learning not only integrates the attainment of basic knowledge of the area studied but also of a series of competences which are essential for carrying out their future professions. At the same time, these competences allow for the strengthening of the knowledge acquired at university, the acquisition of other knowledge specific to the activity or functions performed, and the adaptation to changes in the environment or advances in the area of study. As a result, and in line with the work by Rowley and Slack (2004), the students obtain basic knowledge in their degree, as well as the necessary competences to progress in their professional careers, perfecting their skills and knowledge throughout their professional life.

Robinson et al. (2016) point out that entrepreneurial education should be more based on student-centred models of learning and focused on experiential and existential lifelong learning practices to develop entrepreneurial awareness, mindsets, skills, and competences. In this regard, López et al. (2019) points to a competence development model, where the term competence encloses a dynamic combination of knowledge, understanding, skills and abilities. The model based on competences stimulate permanent learning and the acquisition of articulated knowledge and skills (Fallows and Steven, 2000; Mateo et al., 2012a; and López et al., 2019). Thus, López et al. (2019) identify important differences between the results of higher education institutions and the

demands of the labour market. Furthermore, Robinson et al. (2016) affirm that there are very few examples of concrete courses that address the experiential learning of entrepreneurship and Rodríguez-López and Souto (2019) propose and describe an itinerary to implement business plans in BT. In this way, our results take the next step, by specifically analysing the contribution of experiential learning focused on entrepreneurial education, in a dynamic context of continuous learning. Consequently, these findings show a significant advance in entrepreneurship competence, as a dynamic and articulated expression of knowledge, understanding, skills and abilities related to entrepreneurship.

Hindle and Yencken (2004) outline that entrepreneurship competence requires other ingredients as well. Thus, this paper findings highlight the set of competences that an experiential entrepreneurial activity in an academic environment can enhance. These results demonstrate the previous proposition of Robinson et al. (2016), regarding the fact that entrepreneurship learning is mainly experiential. At the same time, the results delve into the statements of Rodríguez-López and Souto (2019), by detailing to what extent and how the experience of making a realistic business plan with sufficient scope and detail can contribute to entrepreneurial education and fostering entrepreneurship. In fact, Pittaway and Cope (2007b), in the same vein as Rodríguez-López and Souto (2019), argue the value of work-based learning that seeks to simulate the contexts or activities in which entrepreneurs learn. Therefore, a BT implemented in a business plan is experiential, a part of what an entrepreneur carries out, in which entrepreneurs learn. Another important contribution in this sense, being a tutored learning, errors, failures, frustration, ... of the entrepreneur in the entrepreneurship process could be avoided.

Pittaway and Cope (2007a) conclude that entrepreneurship education has impact on student propensity and intentionality, but that it is unclear the effect on the entrepreneurship level of graduates or if it enables graduates to become more effective entrepreneurs. Nevertheless, our findings show a progression in entrepreneurial competence, representing not only an increase in values or intentions, but also an increase in the skills, knowledge and abilities that constitute the entrepreneurial activity, as well as its articulation.

The academic literature highlights the different pedagogical methods –for teaching entrepreneurship– that have been explored to date (Solomon et al., 1994; Fiet, 2001), in which the distinctive and differentiating character of BT in relation to the rest of the

subjects (Stefani et al., 1997; Parsons and Knight, 2005; Todd et al., 2006) has received little attention (Rodríguez-López and Souto, 2019), despite the fact that the results we have obtained point towards a significant contribution from the side of entrepreneurial learning in an experiential way. Thus, the development of entrepreneurship through the BT is a topic that demands more contributions, rendering the findings to be of even more importance, as they clearly reveal a way forward in the promotion and development of entrepreneurship and the acquisition of entrepreneurs.

It should also be noted, as an example, that proposals such as that of Shepherd (2004), regarding with an entrepreneurial education method based on the analysis of business failure, can be extended to BT –consisting of a realistic business plan–, since entrepreneurial learning is mainly fed by our own experiences (we learn more from our mistakes or failures than from those of others ...). In this way, we can highlight the possibility that was offered to continue with the entrepreneurial process in incubators of each higher education institutions involved, in order to give continuity to the projects.

Finally, many authors state that entrepreneurship requires other ingredients related to entrepreneurial competence (such as Buchholz and Rosenthal, 2005; Clarke and Holt, 2010; Hindle and Yencken, 2004; Rodríguez-López and Souto, 2020). In this regard, the results obtained corroborate that an entrepreneurial experience will have a direct impact not only on entrepreneurial competence, but also on the range of competence that is used in an interrelated manner in entrepreneurship. Thus, our results show this set of competences.

8. Conclusions

In this context, the BT emerges as a means to make a quantitative leap in students' competence training, taking as its foundation the learning methodology known as "learning by doing". In a constantly changing environment, as is the current one, the student must learn to learn, taking an active part in their own learning. In fact, "doing" and "knowing" mutually reinforce each other, not for nothing "knowhow" is the key to competent individuals. Even more, in the BT the students put to the test all they have learned throughout their studies in an applied manner, which creates an excellent way to connect and to interrelate everything learnt during their studies.

Nevertheless, the BT is not a miraculous option that can compensate for the lack of prior appropriate and quality training, be that in competences or knowledge of the degree subject, it simply emerges as a means to strengthen and articulate what has been learnt and to develop the basic knowledge and competences acquired before its execution. Thus, this research brings to light the essential role that the BT plays in competence training, as the findings show its important impact on student competences, although it is important once more to emphasize that a good prior level in competences is indispensable, as the BT requires this base to generate quantitative progress, though it can make up for some gaps and deficiencies that cannot be attained in subjects with other characteristics.

Also noteworthy is that the BT has a significant impact on the most important and highly valued competences in the business world, such as: *entrepreneurial initiative and spirit, adapting to new situations, generating new ideas (creativity), leadership, innovation and decision taking*; in fact, the competences with the greatest improvements are some of the most critical for competitiveness and growth within the business fabric. Here, *entrepreneurial initiative and spirit* should be especially highlighted, as it plays a fundamental role in today's social and economic environment, with diverse policies pursuing their appearance and development.

Likewise, it is essential to point out two aspects; the first relating to the unquestionable support lent by the other competences that show improvement with the BT to entrepreneurship, as entrepreneurship needs other competences to strengthen and underpin it, with some of the most important ones being leadership, innovation, generating new ideas (creativity), decision taking, problem solving, interpersonal relations and adapting to new situations; the second aspect refers to the fact that the impact of the BT on competence training not only substantially depends on the carrying out of the work itself, but also on the content and more importantly the theme of the BT.

However, a poor or deficient implementation of the BT makes the described above impossible, the same happens should the BT lack the required consistency and scope. In this regard, a special mention should be given to the choice of topic for the BT, as it is by no means trivial, but impacts greatly on the results of the learning process; that is to say, it emerges as a tool in the configuration of the group of competences that the BT should embody, and at the same time, in the level reached in each competence. In fact, if the theme of the BT has a greater focus or emphasis on one or more competences, then these

will be the ones in which the greatest results are achieved. Herein, the value of the BT on the training and enabling of future entrepreneurs becomes evident, as well as its unquestionable role in developing entrepreneurial spirit. What better tool, if any, could be developed and implemented to provide our students with entrepreneurial spirit and initiative.

Special mention requires that the choice of an BT focused on the creation of a business plan –as it was the case of the sample analysed– not only contributes to entrepreneurial training in general, but as it can be seen in the results obtained, it also contributes to innovative entrepreneurship (as a result of the combination of entrepreneurship competence with innovation competence and research competence), social entrepreneurship (as a result of the combination of entrepreneurship competence with ethical commitment competence), international entrepreneurship (as a result of the combination of entrepreneurship competence with competences related to internationalization), etc.

Likewise, the competences that constitute the basis of international entrepreneurship not only feed from BT, but also from other training activities that complement it –such as the case of stays abroad. Therefore, BT oriented towards carry out a business plan takes advantage of previous training activities and previous training experiences, as well as also guides previous training results towards entrepreneurial activity in its multiple forms. The results of the students –with stays abroad– show very bulky results between before and after carrying out their BT, above those of the entire group analysed, which undoubtedly implies that other experiences reinforce and feed the results that can be obtained with a BT consisting of a realistic business plan. Thus, the development of a business plan is leveraged on other training experiences that can complement and expand it, in order to increase the results obtained.

In the field of competence training great challenges lay ahead for the universities in their aim to reach what companies are looking for and what entrepreneurial activity demands. Moreover, competence training is not something that should or can be done correctly with a sudden commitment in some isolated subjects in one's studies, nor during the last two years of a student's education. In fact, competences need to be forged, sharpened, propelled, and developed throughout an individual's entire education (from primary to higher education) in a constant and gradual way.

In short, the BT subject has great potential in training students, though it must have the appropriate scale, contents, and theme to contribute in the desired fashion to the students training. Interest in the BT will irrepressibly increase in the next few years, as it is a unique subject within the study programmes. Despite the considerable effort that it requires from students, the benefits are irrefutable, to the point that it significantly affects the students' satisfaction with the studies received during their university training.

A BT (consists of the creation of a business plan unique, novel, and original) represents a first real approach to the entrepreneurship, both for its magnitude and level of detail. An experience of these characteristics highlights the increase in competences related to business that it implies and requires, obviously, its proper execution requires higher levels of competence than those acquired within other subjects. In fact, any business plan necessarily involves a learning process, in turn mentoring –in the business plan– allows take more advantage of such learning while guiding it towards successful end, considerably increasing the chances of reaching a viable and profitable new venture. In this sense, many entrepreneurs fail or abandon in the initial stages of new venture creation, sometimes they do not manage to materialize their idea in a viable business plan, sometimes it is profitability, at other times they are pitfalls related to limitations in their knowledge and skills, etc. Thus, failure in entrepreneurship' early stages could be reduced and limited, allowing more new ventures emerges and a reduction in avoidable early failures.

Learning from mistakes –as an entrepreneur' characteristic– points to an important learning capacity of the entrepreneur. In this sense, this article shows that entrepreneurial activity is a learning process in itself, in which knowledge, skills, competences (as a structured form of knowledge and skills) and entrepreneurial experience are accumulated. Really, if we provide training options consisting of first approximation to the labour market or real work experience –such as internships–, it will not make sense to provide real entrepreneurial experiences of enough scale.

Future lines of research aimed at extending the analysis carried out, among others, could be oriented towards studying the effects of: previous attitudes and aptitudes, family networks, contributions in tandem with other actual experiences mentored, creation of entrepreneurial networks during the elaboration of the business plan, impact of a stay abroad in promoting the creation of entrepreneurial networks, connection with incubators

in universities, entrepreneurial team, creation of an interdisciplinary entrepreneurial team, and entrepreneurial itineraries. Additionally, a promising research line would lie in the contribution to the training of environmental entrepreneur, sustainable entrepreneur, and eco-entrepreneurs. In this way, in the group of competences analysed, it is possible to create groups of competences related to a specific type of entrepreneurship. Probably one of the more promising possibilities and potential of the exposed, it does not lie only in promoting entrepreneurship itself, but in promoting and training in such way that the multiple forms of entrepreneurship are enabled to emerge, which in many cases happen in an interrelated way.

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Highlights:

BT may contribute significantly to the development of entrepreneurial competence

If BT is a business plan, competency training is oriented towards entrepreneurship

BT allows to connect, develop and articulate knowledge and skills.

BT increases the necessary competences for different entrepreneurship itineraries

A business plan is an excellent way of learning by doing in entrepreneurship context