

# Nascent Entrepreneurship and Successful New Venture Creation

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## Chapter 3

# Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs

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### ABSTRACT

*The focus of this chapter is to show the importance of entrepreneurial education for students at all non-university educational levels in order to foster enterprising skills. We also take into account the need to train other groups, such as parents and teachers, and encourage joint training. With this goal in mind, we collected information about specific practical programmes and here we provide a descriptive analysis of them. Ultimately this information should serve to provide an approximate overview of the current situation in our country and to propose future lines of action*

### INTRODUCTION

The term “entrepreneurial initiative” is gaining particular importance, especially when taken into account the younger audience entering the labour domain. More than ever people are aware that organizations find themselves in a turbulent and complex environment, in which many elements are interrelated which, furthermore, are on a constant flux of change, for example, the uncertainty of job stability. Although entrepreneurial initiative is considered important in all areas of society, it is especially important among young people; a group characterized by its creativity, innovation, entrepreneurial and adventurous spirit, lower degree of risk aversion and sensitivity to technological changes, all of which makes them more inclined to embark on these kinds of projects (Alemany et al., 2011). Education contributes greatly to the formation of entrepreneurial culture, utilizing younger people as starting point. In short, society is benefited by thrusting entrepreneurial attitudes and capacities even beyond practical applications to gain new initiatives (Ríos & Hernández, 2007).

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## ***Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs***

Overall, one could say that entrepreneurship is one of the main engines of innovation, competitiveness, and economic and social development (Carree & Thurik, 2003; van Stel et al., 2005; Wennekers & Thurik, 1999; Wennekers et al, 2005, quoted in Alemany, Alvarez, Planellas & Urbano, 2011). In one side of the spectrum, can be found a vision focused on the development of attitudes and skills needed by nascent entrepreneurs to start a business, on the other hand, entrepreneurship is emphasized as a key competence to capacitate and offer the transversal skills needed for a productive and active citizen, employment, entrepreneurship and intraentrepreneurship (European Commission, 2016).

In Spain, research projects, thesis and journal articles published regarding entrepreneurial education and its respective implementation strategies/ initiatives remains scant, although in recent years, a growing interest in expanding the literature has taken lead by the research community (Ordóñez & Bejarano, 2016). In heed of a more complete analysis on how these values are being developed at a scholar context, a plan was devised to collect information on different existing programmes and initiatives, also those being developed not only for students, but also for teachers, parents and business incubators linked to vocational education. To this end, entrepreneurial activity has been analysed in each of Spain's Autonomous Communities (Appendix 1. Figure 1) for comparative purposes, also, to highlight regions actively promoting the development of entrepreneurial initiative and to observe where it is lacking, so that in the future entrepreneurial education can be of equal quality throughout the country.

The main objective was to update the study *Education for Entrepreneurship*, published in November 2013, by gathering information about programmes related to entrepreneurship being carried out in non-university education in Spain, especially student programmes. The latter study can be accessed on <http://educarparaemprender2014.blogspot.com.es/>

As secondary objectives, in addition to describing entrepreneurship programmes for students, the following topics will be analysed:

- Training programmes for practicing teachers.
- Programmes for working with parents and families.
- Business Incubator Programmes in Vocational Education.
- Prizes and competitions open to student participation.
- Programme evaluation studies.

The study, thus, considers all educational levels: Infants and Primary to Secondary, Vocational and Adult Education, as well as unofficial education, in order to facilitate planning and improve performance in the many organizations that implement and promote these programmes, as well as to foster support for entrepreneurial initiative.

## **BACKGROUND**

The development and promotion of entrepreneurial education is one of the key political objectives of the European Union (EU) and its corresponding states. Therefore, the relevance of entrepreneurship has considerably increased, specifically, Europe 2020, a proposed ten-year strategy to create the conditions for smart, sustainable and inclusive growth, presses on its member States to improve educational development, emphasizing each sector (Infants and Primary, Secondary, Vocational and University) by

## ***Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs***

means of an integrative strategy that strengthens key competences with the objective to reduce scholar abandonment (European Commission, 2010, p.16 cited in European Commission, 2016).

An analysis realized by the Global Entrepreneurship Monitor (GEM) reflects a strong correlation between the perceived skills or aptitudes on entrepreneurship and the rate of entrepreneurial activity, which indicates the importance of education on the development of entrepreneurial competences. However, this domain is tied to a specific set of learning results, making it complicated to develop academically-wise. These results related to entrepreneurship, as informed on the Eurydice Report (European Commission/ EACEA/Eurydice, 2012), are still on development on the majority of European countries. Also, as Alemany et al. (2011) states:

*The entrepreneurial initiative is considered relevant in all aspects on society, its specifically significant between the youth, collective characterized by its creativity, innovation, entrepreneurial spirit and adventurous, less risk aversion and mayor sensibility to technological changes, all which makes them more inclined to embark on these types of projects. (p. 18)*

Even though it is considered relevant on early ages and youth, this responsibility does not only correspond to the students; this attitude that favors entrepreneurship must also come from teachers in all educational stages:

*They must be formed on certain attitudes such as tolerance to failure, initiative and creativity, because these attitudes will hardly be promoted on students if they don't believe in themselves ... without full participation on teachers in promoting entrepreneurial spirit, with educational material and specific formation, advancing too far will become improbable. (Nieto, 2012, p. 43)*

The first publications on entrepreneurship and entrepreneurial education were done in the 1980s, and are thus relatively new. In 2003, the European Commission published the Green Paper on Entrepreneurship, which defines entrepreneurship as a way of thinking or mentality that:

*Covers an individual's motivation and capacity, independently or within an organisation, to identify an opportunity and to pursue it in order to produce new value or economic success. It takes creativity or innovation to enter and compete in an existing market to change or even to create a new market. (European Commission, 2003, p. 6)*

In the broad sense, entrepreneurship is considered a general attitude that can be useful in all work activities and, even in daily life (Chamber of Commerce, 2007).

United Kingdom was pioneer in developing the first strategies specific to entrepreneurial education in 2003. Between 2007 and 2009, diverse strategies expanded across Europe, jumping from 8 participant countries in 2007 to 12 in 2009. Before the finalization of 2011, the number had risen to 14 countries. In 2015, 29 of the 38 countries studied for the Eurydice 2015 report counted on specific or general strategies connected specifically to entrepreneurial education (European Commission/ EACEA/Eurydice, 2016) (Appendix 2. Figure 2).

As indicated by the European Commission 2016, the fashion in which entrepreneurial education is integrated on curriculums at the European level is analyzed by the following three general approaches, which are not mutually exclusive (all three can happen simultaneously in any given country):

## ***Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs***

- **Cross-Curricular (Transversal) Approach:** Educational objectives aimed towards entrepreneurship are formulated in a fashion which allows it to be integrated among the values and competences to be acquired throughout all other subject matters and curricular activities (European Commission/ EACEA/Eurydice, 2016).
- **Compulsory Approach:** Entrepreneurial education is taught as a compulsory separate subject.
- **Optional Approach:** Entrepreneurial education is taught as an optional subject.

## **MAIN FOCUS OF THE CHAPTER**

Spanish society has overwhelmingly been characterised by a preference for work for hire, and by a scant capacity for risk-taking. Taking these attitudes into account, it is interesting to observe in the studies published by the White Paper on Entrepreneurship (Alemany et al., 2011) that, despite the deep economic crisis and lack of economic aid, an obstacle that both men and women perceive is insecurity or fear of failure (Appendix 3. Figure 3).

In spite of this, as reflected in subsequent studies, it seems that the percentage perceiving this fear has diminished considerably since the first years this type of information became available, as shown in Figure 4 (Appendix 4) (Global Entrepreneurship Monitor [GEM] Report, 2015). In light of this information, it is worth making an effort to encourage and implement entrepreneurship in order to continue reducing this perception.

Most people seem to have a great interest in education, in part because it helps guide younger citizens towards a more complex future. Children beginning school in 2016 will retire in 2080, and despite all the experience in this field, it is even hard for people to be certain how the world will be five years from now (Rueda, 2009). That is why education is considered of utmost importance in building an enterprising culture, beginning with the youngest students at school. Fostering entrepreneurial attitudes and capabilities benefits all of society, even beyond their application to new entrepreneurial initiatives (Ríos & Hernández, 2007).

In Spain, the basic national legislation on education (Organic Law of Education, in Spanish LOE), among other goals, seeks to have students develop an enterprising spirit. The LOE, which came into effect in 2009, opened the door to progress in this area, which is officially stated in the Royal Decrees on Minimum Teachings. Nonetheless, Spain has had experiences prior to this legislation that were pioneering and have served as an example and stimulus to others, which also have gained international recognition. One such case is Valnalón, a business park in Asturias, with an integral strategy for promoting entrepreneurial culture and initiative from the very first years of education (Dirección General de Política de la Pequeña y Mediana Empresa [State Office for SME Policy], 2010).

Altogether, the Spanish legislation clearly lays out the importance of promoting entrepreneurship, and therefore can count on propitious generic legal coverage. However, a lack of concrete measures and actions to foster it has been detected, with the resulting need to establish specific support mechanisms. Thus, it can be said that Spain finds itself in an incipient stage on the road to making this new principle operative as a motivator of policy; a principle that, in line with the needs of the current contexts, is now beginning to make headway in a more practical dimension (Chamber of Commerce, 2007). Thus, jointing the educational and scientific potential, with the goal of developing entrepreneurial competences, can increase both academic progress and scientific research growth in the long run, improving innovation and the overall status of society (Fernández & Rey, 2010).

What are the competences to develop at each educational level?

- **Primary Education:** Self-confidence, common sense and creativity. One programme example is “Emprender en mi escuela” (EME), promoted by Valnalón, Asturias. (webpage: <http://www.valnaloneduca.com/cont/primaria>).
- **Secondary Education:** Strengthening of previous competences, while expanding with planning, decision making and responsibility skills. One program example is “Empresa Joven Europea (EJE), promoted by Valnalón, Asturias (webpage: <http://www.valnaloneduca.com/eje/>).
- **Post-Mandatory Secondary Education:** Strengthening of previous competences, while expanding with teamwork and innovating spirit skills (Organic Law, 2002), the latter two constituting qualities considered essential for efficient results. Two programme examples are Expertemprende de la junta de Andalucía (webpage: <http://culturaemprendedora.extremaduraempresarial.es/wp-content/uploads/2012/09/EXPERTemprende-15-16.pdf>), and Red Emprendedora (RED) promoted by Valnalón (webpage: <http://www.valnalon.com/web/dev.php/valnalon/red-emprendedora>).

In recent years, studies published have centered attention in understanding student perspective, however, there is a lacking of objective tests that can measure the development of competences related to entrepreneurial intention on students, mainly because the data collection has been primarily taken from self-evaluations. This situation calls for more reliable measurement scales. Heeding to this, the Psychometric Team from the University of Oviedo has developed a reliable scale that identifies eight dimensions specific to entrepreneurial personality in adolescents and adults. (Muñiz et al., 2014, Suárez-Álvarez, Pedrosa, García-Cueto, & Muñiz, 2014 cited in Ordóñez et al., 2016).

Although scarce, there are available programmes that evaluate impact of specific programmes, such as the development of entrepreneurial competences on students. To this date, the main contribution has been developed by José Carlos Sánchez García, of the University of Salamanca, evaluating the impact of the programme “VitaminaE” (webpage: <http://www.educa.jcyl.es/VitaminaE/es>) on entrepreneurial competences and intention from Secondary students in Castilla & León (Sánchez, 2013). Results confirm the existence of positive impact on the development programme, with competencies such as self-efficacy, proactivity, risk-taking and the intention to work by themselves.

As the 2015 GEM Report points out, according to 36 Spanish experts interviewed in that same year, the condition that favours entrepreneurship in Spain is education and/or training, whereas the main obstacle continues to be access to public and/or private financing at the different stages of the enterprising process. Thus, the main recommendations proposed are: to continue supporting the financing of entrepreneurial initiatives, to strengthen entrepreneurship through education and training and to continue implementing government policies supporting entrepreneurship (Peña et al., 2016)

Businesses are currently facing political and demographic changes, as well as new life styles, combined with a striking increase in the intensity of competition. These transformations in the economic context demand that businesses change their attitudes, generate innovations and adopt new strategic behaviours (Pérez, 1992, p. 5 quoted in Quintana, 1999), and as a result, the development of entrepreneurship and an enterprising spirit is now becoming more and more important in society. Thus, combining educational and scientific potential, with business qualifications through the development of entrepreneurial competences, prospects in taking advantage of these academic findings and the achievements of scientific research in order to make progress in the advancement, innovation and improvement of today’s society (Fernández & Rey, 2010). Hence, in primary education, the idea is to develop capabilities such

## ***Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs***

as an attitude of self-confidence, critical thinking and creativity, among others; in secondary education, consolidating these abilities will be one goal, as well as acquiring the ability to plan, make decisions, and take on responsibilities. After the stage of compulsory education, all these characteristics should be integrated together with the ability to work in a team, and cultivate an innovative spirit (Organic Law, 2002), the latter two qualities being essential to attain efficient outcomes in today's world.

In short, it has become necessary to design educational programmes that comprise all educational levels in order to foster the development of enterprising attitudes in students and, in turn, make other groups, such as teachers and families, aware of these attitudes, mainly because students perceive their parents and teachers as figures of reference, making the responsibility of jointly educating a demand.

## **METHOD**

Below we present the participants and material resources employed in the study, as well as the procedure used and description of the data.

### **Participants**

The participants that composed the initial sample were sent an email asking for their collaboration, and comprised 173 organizations corresponding to the following institutions or organizations in Spain: the Ministry of Education, Universities, Chairs of Entrepreneurship, Regional Departments of Education, State Offices for Vocational Training, Regional Departments of Industry, Innovation, Economy and Employment, as well as Institutes of Economic Development, European Business and Innovation Centres, and organizations supporting entrepreneurship; provincial and municipal governments, local and regional development agencies; rural development groups, chambers of commerce, banks (La Caixa), foundations, associations, companies, the media, business federations, Young Entrepreneur Associations (YEAs), schools, school federations, and independent promoters.

Of these 173 organizations or institutions, 38 were already known because of their participation in the 2013 study. 64 organizations responded, corresponding to 37% of the original sample, as can be observed in Table 1.

### **Procedure**

Data was collected over a period of two and a half months, from 18 March 2016, when the first email was sent out, to 30 May 2016. A sample was obtained of 87 student programmes, 10 teacher training

*Table 1. Organizations participating in the study*

<b>Organization</b>	<b>Known</b>	<b>New</b>	<b>Total</b>
Number			
First contact	38	135	173
Second contact	23	50	73
Respondents	32	32	64

programmes, 1 business incubator programme in vocational training and 3 family training programmes, for a total of N= 101 programmes.

The data collection was carried out in different blocks in order to be able to obtain recent information on programmes we were already familiar with and information on the new programmes, as well as on possible projects being considered for implementation. To respond to the objectives posed, several interpretations of the data were carried out of the different programmes in relation to entrepreneurship.

First of all, before beginning the data collection process, a formal letter in PDF format was drawn up providing a detailed description of the study to be carried out and asking for collaboration in the study. The letter included the URL addresses of the online questionnaires described above so that the different collaborators could respond to them.

On one hand, to bring up to date the information sheets on the organizations that participated in the November 2013 study, an email was sent utilising the email address of the Chair of Entrepreneurship of the University of Salamanca, asking for their collaboration in the 2016 study. Attached to that email were the programme sheets in Word format sent for the 2013 study, together with the presentation letter describing the study and asking for their participation. The letter included instructions for the steps to take to contribute the information necessary, including any possible changes in their respective programmes over the last three years.

On the other hand, to compile information on the new participants in the 2016 study, they were sent the same email described above, but with only the Presentation letter attached.

They completed the questionnaires according to the type of entrepreneurship programmes they were carrying out.

Finally, it should be pointed out that, in cases where the corresponding hyperlink could not be opened, the participants were sent the forms/questionnaires in a Microsoft Word format attached to an email. Researchers entered the data manually into the online questionnaire, in order to have all the data in a single format and thus, facilitate subsequent analysis of information obtained.

## **Analysis**

With the data collected, and in order to make a descriptive analysis, a single Excel document was created with the programmes divided according to the type of questionnaire answered. This document thus comprised the following four spreadsheets: student programmes (spreadsheet 1), teacher training programmes (spreadsheet 2), family training programmes (spreadsheet 3) and business incubator programmes in vocational training (spreadsheet 4).

By the same token, to be able to compare the programmes, the corresponding graphs of the different factors described in the materials section were obtained directly from the online questionnaires, both for the individual programmes and the programmes grouped into each type.

## **RESULTS**

To facilitate a better understanding of the findings, the results were analysed in several blocks. First, we describe the results of compiling the different programmes carried out in the different Autonomous Regions, as well as the number corresponding to each type of program. Secondly, we describe the results of the analysis of the factors studied.

## Analysis by Autonomous Community

In order to approach the entrepreneurship education activity being carried out in the country as a whole, Table 2 shows the distribution of the sample (N=101) in terms of the programmes and the different Autonomous Communities in which they are offered, as well as the type of programme.

The table shows that student programmes are the most numerous (87), followed by teacher training programmes and family training programmes with 10 and 3 programmes, respectively, and 1 business incubator programme.

Catalonia and the Community of Madrid are the two autonomous communities at the highest end of the ranking with respect to the number of programmes being taught, aimed both at students and teachers, followed by Asturias.

*Table 2. Summary of programmes in entrepreneurship education*

Autonomous Community	Entrepreneurship Activity					Ranking
	A	B	C	D	E	
Andalucía(10)	10				6	9.90%
Aragón(3)	3				1	2.97%
Baleares(0)						0.00%
Canarias(1)	1					0.99%
Cantabria(5)	5				2	4.95%
Castilla la Mancha(8)	5	1	2		2	7.92%
Castilla y León(1)	1					0.99%
Cataluña(20)	18	2			7	<b>19.80%</b>
Comunidad de Madrid(19)	14	5			5	18.81%
Comunidad Foral de Navarra(1)	1					0.99%
Comunidad Valenciana(2)	2				1	1.98%
Extremadura(4)	3	1			3	3.96%
Galicia(0)						0.00%
La Rioja(1)				1		0.99%
País Vasco(8)	8				5	7.92%
Principado de Asturias(11)	10		1		6	10.89%
Región de Murcia(7)	6	1			1	6.93%
<b>Total(101)</b>	<b>87</b>	<b>10</b>	<b>3</b>	<b>1</b>	<b>39</b>	
<b>Percentage (%)</b>	<b>86.13%</b>	<b>9.90%</b>	<b>2.97%</b>	<b>0.99%</b>	<b>38.61%</b>	

Note: The letters refer to the following: Student Programmes (A), Teacher Training Programmes (B), Family Training Programmes (C), Business Incubator in Vocational Training Programmes (D) Programmes that incorporate evaluation (E)

With respect to the programmes that incorporate evaluations, it should be noted that less than half of the sample (N=101), specifically 39 programmes, or 38.61% of the total, carried out programme evaluations.

Finally, although it was not possible to collect data from either Galicia or the Balearic Islands, it does not necessarily mean that there are no programmes being carried out there.

## **Student Programmes**

First of all, we highlight the most outstanding results yielded from the factors analysed:

- **Educational Level:** As can be seen in Figure 5, this kind of programme prevails both in Compulsory Secondary and in Vocational Training, with a total of 44, respectively, which corresponds to 44.8% of the sample.
- **Type of Programme:** In Figure 6 it can be observed that the largest percentage of the programmes are offered during the school day in class time, comprising 49.5% of the total sample (N=87). In addition, the programmes pertaining to compulsory subjects make up the lowest percentage.
- **Type of Entrepreneurship:** As can be seen in Figure 7, the types of entrepreneurship with the highest percentage are, on one hand, business entrepreneurship, at 28.6%, this being understood to refer to units producing goods and services (Duarte & Tibana, 2009) but also social-business entrepreneurship, at 28.6%. Social entrepreneurship refers to projects emphasizing social contents, from areas such as communication skills and medicine (Duarte & Tibana, 2009).
- **Hours Per Course:** Figure 8 refers to the total hours the course is taught each academic year. It shows that most of the courses have between 35 and 37 hours, comprising 33% of the sample, whereas courses given for 100 hours are in the minority, corresponding to 9.9% of the sample.
- **Number of Students:** For the academic year 2015-2016, it is estimated that the total number of students in the 87 programmes was 196,231. This is a very small number compared to the total number of students in the Spanish population in non-university education for the same academic year, 2015/2016: 8,111,298 (Spanish Ministry of Education, Culture and Sport, 2015).
- **Language Used in Teaching:** Spanish is the language most used for teaching, with 44 responses, for 87.9% of the total.
- **Country of Origin:** By the same token, and in line with the prevalence of Spanish as the teaching language, the country of origin of the great majority of the programmes is Spain, at 93.4% of the sample.
- **Teacher Training:** As can be observed in Figure 9, a high percentage of programmes do carry out teacher evaluation, specifically 60.4%. The total number of teachers involved since the programmes began is 6,467.
- **Teaching:** 63.3% of the sample programmes (50 programmes) are taught by teachers pertaining to the school. Volunteer teachers show the lowest percentage, with 10 programmes corresponding to 12.7% of the sample.

Furthermore, as pointed out in the method section, a very important factor is to what extent the programme carried out promotes the development of some of the competences considered important in the context of entrepreneurship education: self-confidence, sense of initiative, creativity, perseverance, time management and task organization, problem-solving and decision-making, risk/uncertainty

## ***Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs***

management, assessment of opportunities, leadership, teamwork, communication and ability to get on with others. Our analyses showed that all these competences were rated highly.

Regarding the teaching materials used, websites prevail in 64 programmes, corresponding to 70.3% of the sample of student programmes.

As for the institutions involved, many of the N=87 programmes for students did not mention which were the institutions participating, and therefore the data collected are not representative.

### **Teacher and Family Training Programmes**

See Table 3.

### **Business Incubators in Vocational Training**

Only one of these programmes was found in our study, *Spin-Off en FP*, in the Autonomous Community of La Rioja:

## **SOLUTIONS AND RECOMMENDATIONS**

The findings presented in this chapter fulfil the objectives posed for the study, in addition to supporting the theoretical foundation of the competences considered necessary to foster good development of entrepreneurship.

Generally, and summarizing the findings obtained from the interpretation of all the information collected, it can be concluded that the types of programmes predominantly carried out at present are those aimed at students, an important point when taken into account that the ultimate objective of entrepreneurship education is to promote student participation and involvement in enterprising activities. When considered the autonomous communities all together, as shown in Table 2, it can be observed that Catalonia and Madrid implement the most programmes. This may be a direct result of the fact that they are two of the most influential communities in the country and are looked up to by the rest. Another reason may be that they are very large communities both in territory and population per square meter. Asturias is the third autonomous community in the ranking, and prominent already with experience prior to the entry into force of the Basic Education Law of 2009. Asturias was a pioneer in implementing entrepreneurship education programmes that have served as an example and a stimulus to others, and have gained international recognition, as in the case of Valnalón, an integral strategy for helping students acquire entrepreneurship initiative and culture as from the very first levels of education (DGPYME, 2010).

Regarding the number of programmes that include evaluation, it can be observed that there is not much difference from one autonomous community to the other. Continual evaluation contributes infor-

*Table 3. Teachers and parents trained*

	<b>Teachers Trained</b>	<b>Parents Trained</b>
Number since the beginning of the programme	+1350	212

mation about the effectiveness of the programmes implemented, in order to be able to maintain them if they are successful, change them if they are missing one characteristic or another, or replace them if they are not viable.

The findings regarding the student programmes show that the predominant educational level for these kinds of programmes is Compulsory Secondary Education and Vocational Training, stages for very significant age groups: between 12 and 16 years of age and over 18, respectively, in which individuals begin to be aware of what they want to do professionally. These findings are consistent with the theory: Compulsory Secondary Education is an obligatory and free stage that completes basic education. It consists of four academic years in which the development of entrepreneurial attitudes and/or competences is fundamental. After this stage, students can move on to post-compulsory education, one choice of which is Vocational Training, important in the sense that it is becoming more and more orientated towards high-level qualifications, as well as providing support in the context of Applied Innovation, mainly for small and medium sized enterprises. In relation to this, the programmes imparted as compulsory subjects are the least frequent. If the goal is to foster a positive and firm attitude towards entrepreneurship, however, we could start by converting these programmes that are now being offered as elective subjects in the curriculum into compulsory subjects. As pointed out by Cañamero and Pascual (2012), it is fundamental to continue taking into account talent existing in the stage of secondary education, in order to move towards making the subject “entrepreneurial initiative” less elective and more compulsory, since by focusing only on the “instrumental” competences too much talent is left by the wayside. Nonetheless, as far as the students’ opinions are concerned, the latest studies reveal that 56% consider that entrepreneurial initiative should be an elective, as opposed to the 14% of students who feel that it should be compulsory (Bel-Durán, Fernández-Guadaño, de las Vacas, & Martín-López, 2016).

The number of teachers and parents trained since the beginning of the entrepreneurship programmes is important to be able to make periodic comparisons between the first year of programme implementation and subsequent years since a satisfactory education depends directly on the quality of the teaching. In this case, it limits the ability to quantify the data, since several of the organizations in the sample sent ambiguous numbers to estimate. As pointed out in the theoretical part, students perceive their parents and teachers as figures of reference, thus making it imperative for all of them to be educated together.

Finally, as illustrated in Figure 10, the ranking of competences developed shows the frequency of those taught and promoted, as well as the ones lacking, such as creativity showing a high index related to low development on some curriculums. It would be interesting to use the data obtained and compare them with subsequent studies, or even with studies carried out in other countries of Europe, with the idea of observing whether the trend towards a positive assessment of each of the competences is maintained.

## **FUTURE RESEARCH DIRECTIONS**

The teachers are committed to this idea, and revise the practices being carried out in order to adjust the outcomes obtained to the desired outcomes and even to adapt them to the individual needs of each student, making a commitment to personalized attention. By the same token, with the next studies to be done in this field, it will be necessary to focus on the evaluation of existing programmes and their methodology. This review should focus not only on students but also on the evaluation of teacher training programmes, since teachers are the ones who need a broad range of competences related to entrepreneurship which they can then transmit to their students. If teacher training fails, the transmission of competences will

## ***Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs***

also fail. Future studies should also focus on initiatives with prizes and competitions open to student participation, since these kinds of stimuli will encourage participants to become actively involved in the attaining of goals. Some data on these have already been collected but are not presented here since a second stage of this same study will be devoted to this topic.

New teaching methods and multidisciplinary content state problems to both, the institutions and teachers (Corduras Martinez et al., 2008 cited on European Commission/ EACEA/Eurydice, 2016). Many teachers are not prepared to take on the new challenges, therefore, its necessary to include multidisciplinary content on entrepreneurship and practical approaches on professorship formation (Sorgman & Parkinson, 2008).

The fact that VitaminE is the only programme from Spain studied by the European Commission on entrepreneurial education puts on perspective the lacking of this subject on the research field. Given this, its strongly encouraged to continue studies on the impact these emerging programmes offer, since their growth in numbers has not been followed parallel with scientific research. One example of a project aimed to change this is “Educar para Empezar: Evaluando Programas para la Formación de la Identidad Emprendedora en la Education Obligatoria”, developed by an interdisciplinary research group from Universidad de Sevilla and financed by the Ministry of Economy and Competitiveness within the National Programme for Fostering Excellence in Scientific and Technical Research. This project intends to expand on how is being implemented the “EME de Educacion Primaria y “Empresa Joven Europea” (EJE) de Educacion Secundaria” programme, and its impact on students from six different Autonomous Communities: Andalucía, Asturias, Cataluña, Galicia, Madrid and Murcia. In the selection of these two initiatives, it has weighted upon its extensive trajectory as well as his notable diffusion on territories (Ordóñez et al., 2016).

## **CONCLUSION**

Presently, none of the countries covered by the GEM report has implemented in its fullness entrepreneurial education in its education centers. For this to succeed, its essential to have a working strategy in force; one which is supervised, with concrete financing system, that has its learning results periodically evaluated and that the subject of entrepreneurship is fully integrated on both, initial and permanent formation on teachers. Irrelevant of the subject taught and scholar level, is fundamental to achieve a high-quality programme on students (Europe Commission, 2016).

Although there can be an increase in educational strategies, both specific and general on each country, in Spain education is transferred to each Autonomous Community; each possess its own formative programme, which creates a mayor dispersion across the country. Since this diversity is present, there is no singular evaluation of the overall educational progress in Spain. The principal objective of this study is to compile information about existing programmes on the country, mainly because there exists none to this date.

Entrepreneurship education is setting its sights more and more on making a niche for itself in all levels of education, since it is only by starting in the early years, as in the case of grammar or maths, that competences as important as the ability to innovate and create can be developed to the highest potential. Research invested on this field highlight the importance of this aspect. The capacities needed for entrepreneurship change according to the project or organization in which the person finds itself (Hoffmann

et al., 2012), therefore, entrepreneurship cannot be taught efficiently with just traditional educational methods, rather it should include dimensions related to practice and active student involvement.

It is essential to take into account talent existing at the stage of secondary education and to make the subjects addressing entrepreneurship more compulsory than elective, since by focusing only on “instrumental” competences too much talent is neglected. The data support the importance of increasingly choosing to carry out practices aimed at changing the subject on entrepreneurship to a compulsory subject across the board. Only in this way can the students who take it and society in general become more aware of the importance of developing the abilities that characterize the profile of an entrepreneur for problem-solving, not only when looking for work, but for any decision-making in daily life. More in-depth study of the range of subjects being offered in the educational system is thus considered necessary to reinforce the skills currently receiving less attention, but which are a clear example of potential for the economic development of the country.

It is also important to continue increasing the number of programmes of this type taught in Infant and Primary Education, in order to develop important competences such as innovation and creativity starting in the early years of childhood.

Finally, and as the most important point, if we want entrepreneurship education programmes to be viable and effective, they need to be continually evaluated to be able to identify both their strong points, maintain and promote them for other initiative; and their weak points, to implement practices to change and improve them.

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## **Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs**

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## **KEY TERMS AND DEFINITIONS**

**Business Incubators in Vocational Training:** Initiatives created to support entrepreneurs and that are promoted by public or private organizations promoted by public and/or not-for-profit private institutions.

**Creativity:** The ability to use the materials available to arrive at adequate and viable solutions. It requires great mental potential and is currently considered fundamental in the profile of an enterprising individual.

**Enterprising Spirit:** Refers to personal characteristics such as creativity, innovation, motivation for achievement and autonomy. It should not be confused with “entrepreneur”; one can have an enterprising spirit without perceiving opportunities to be taken advantage of.

**Entrepreneur:** A person who perceives an opportunity in the world around them and adapts their material and personal resources, such as motivation, creativity, or perseverance in order to attain a specific objective.

**Entrepreneurial Initiative:** The ability of entrepreneurs to perceive an opportunity and transform it.

**Entrepreneurship Education:** Education focused on developing entrepreneurial competences at all educational levels with the goal of contributing to social change by committing to transforming ideas into actions.

**Innovation:** A person’s ability to use the resources currently available to create new products or incorporate resources that have not yet been used to make new products.

**Transversal:** Educational objective aimed towards integrating the values and competences of a single subject among those to be acquired throughout all subject matters and curricular activities.

APPENDIX 1

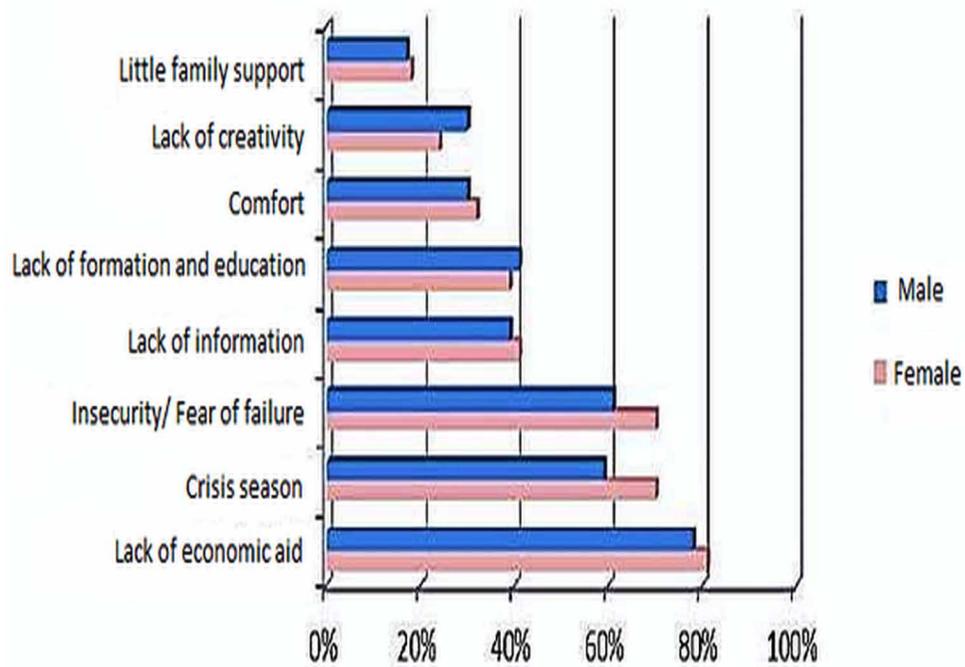
Figure 1. Autonomous communities of Spain





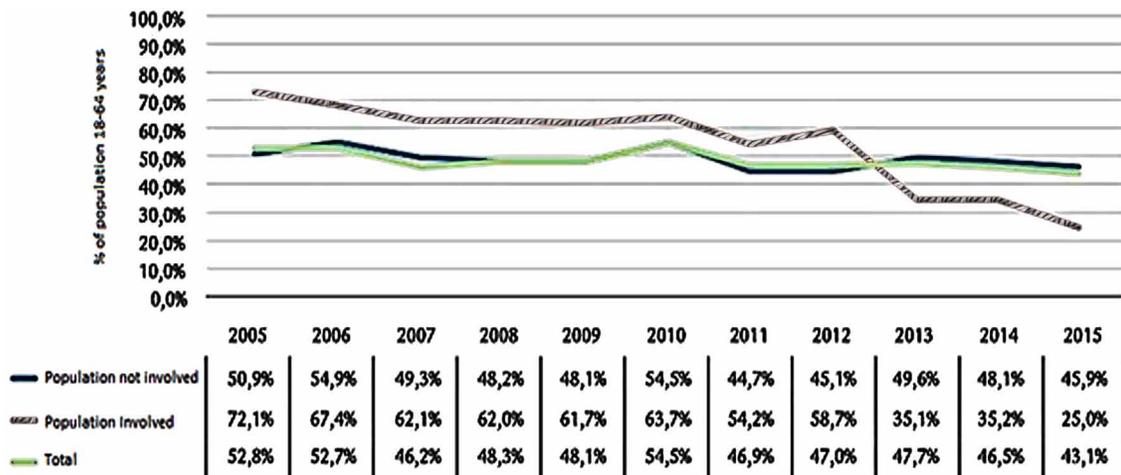
### APPENDIX 3

Figure 3. Perceived obstacle to entrepreneurship  
Source: Libro Blanco del Espíritu Emprendedor (2011)



### APPENDIX 4

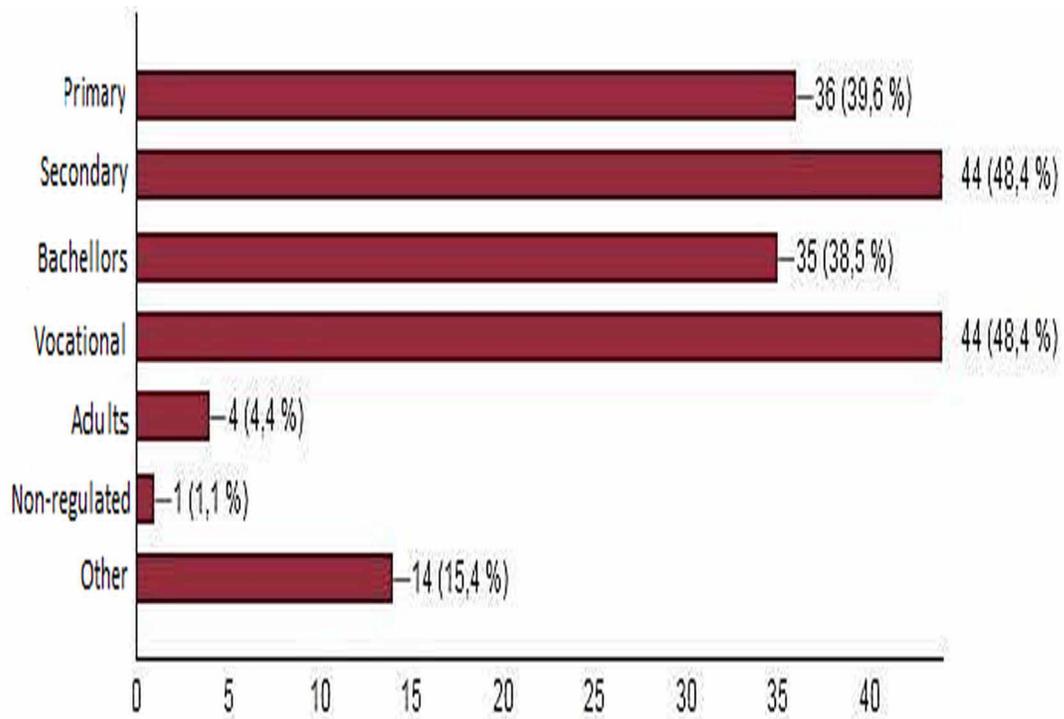
Figure 4. Evolution of the perception of fear of failure as an obstacle to entrepreneurship  
Source: GEM España, APS, (2015)



## APPENDIX 5

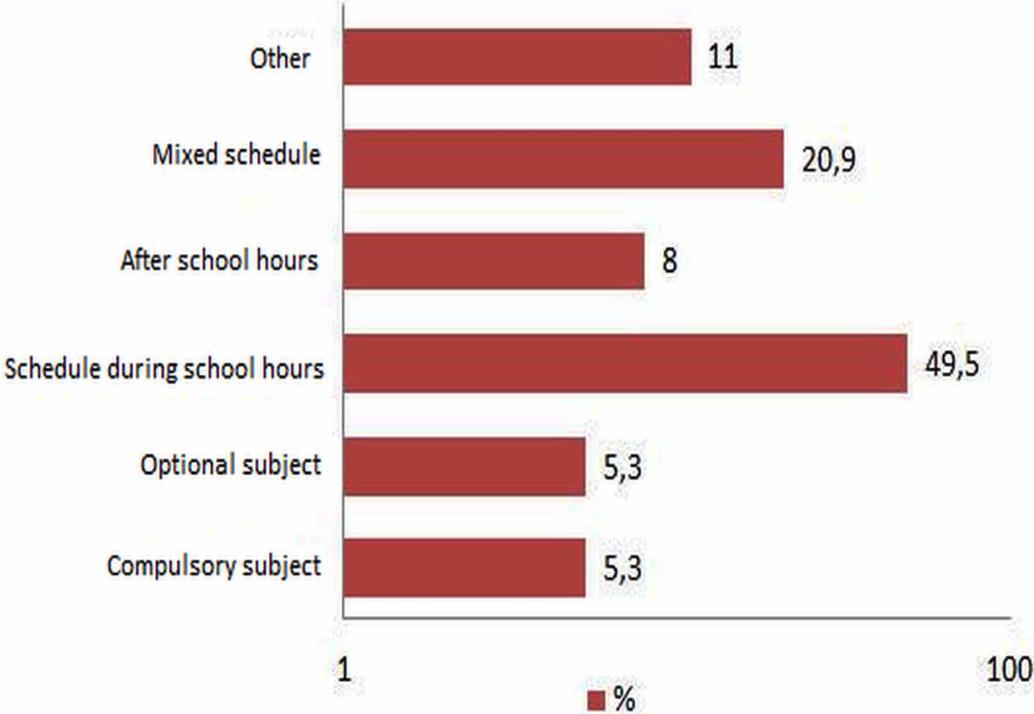
Figure 5. Educational level

Source: Google Forms



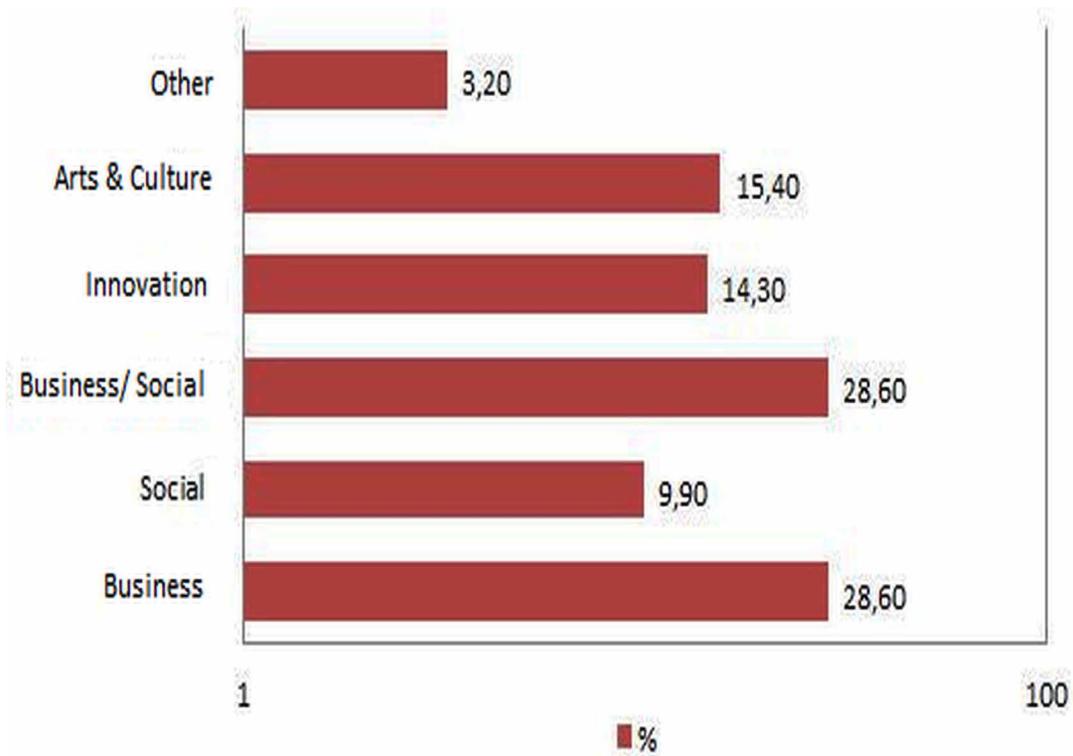
APPENDIX 6

Figure 6. Programme type  
Source: Google Forms



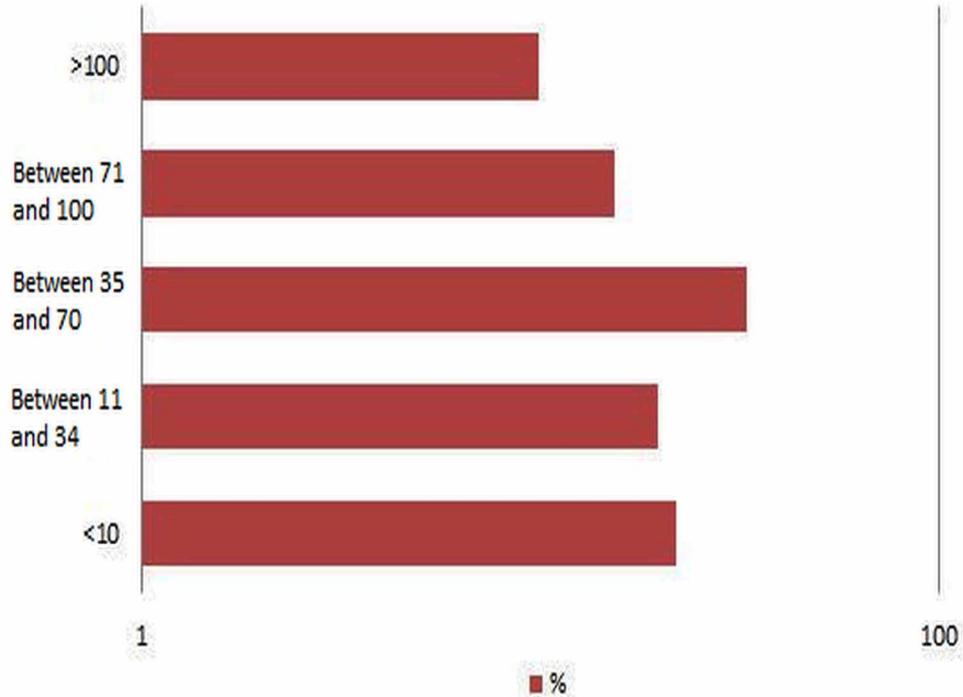
## APPENDIX 7

Figure 7. Type of entrepreneurship  
Source: Google Forms



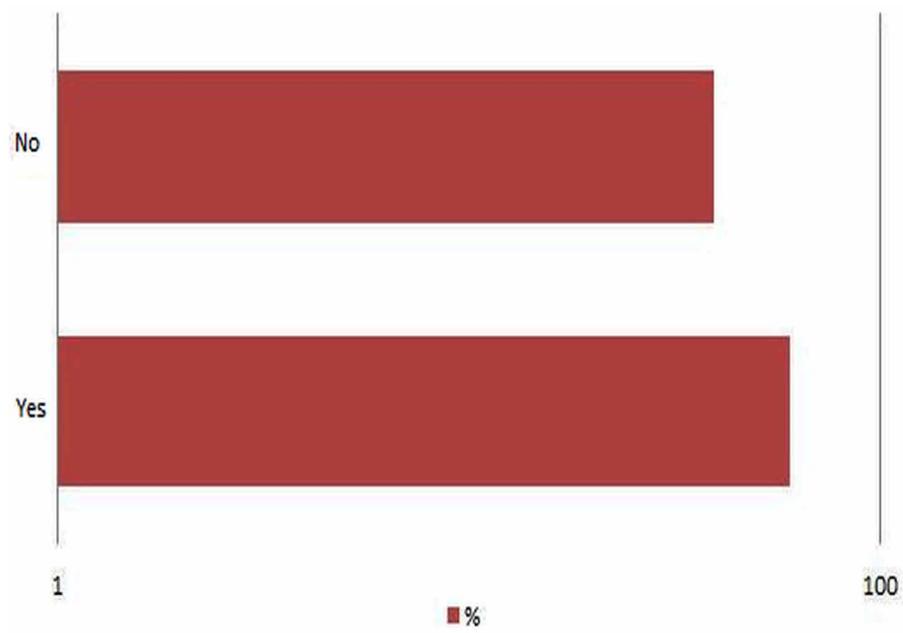
APPENDIX 8

Figure 8. Total number of hours taught by academic year  
Source: Google Forms



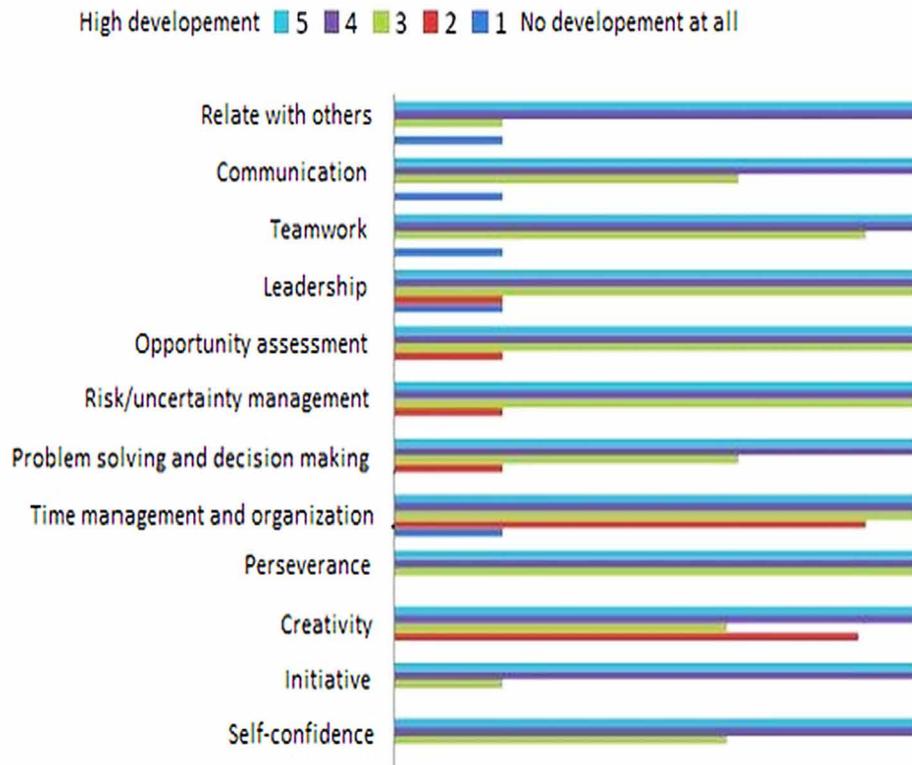
APPENDIX 9

Figure 9. Teacher training  
Source: Google Forms



## APPENDIX 10

*Figure 10. Ranking of competences developed*  
Source: Google Forms



## APPENDIX 11

### Instrument

Two online methods were used to collect information about the entrepreneurship education programmes in Spain's different Autonomous Communities.

On one hand, four types of online questionnaires were created, applying Google Forms. Each questionnaire corresponds to a specific type of programme: questionnaire on programs with students, questionnaire on teacher training programmes, questionnaire on programmes that work with families and a questionnaire for business incubators in centres for vocational training.

On the other hand, organizations that, for technical reasons, could not complete the questionnaire online and informed us to that effect, were sent an email with the same questionnaire in a Microsoft Word format.

Each of the questionnaires was used to assess a series of factors:

## **Student Programmes**

- **Educational Level:** Seven response options for non-university studies: Infants/Primary, Compulsory Secondary, Upper Secondary, Vocational Training (FP), adults, non-official, and “other” (such as special education).
- **Type of Programme:** Six response options referring to the type of subject in which the programme was imparted: compulsory subject, elective, programme offered during regular school hours, programme offered during extracurricular hours, programme offered during mixed hours (school and extracurricular) and “other”.
- **Type of Entrepreneurship:** Six response options referring to the different types of entrepreneurship that could form part of a teaching programme: business entrepreneurship, social entrepreneurship, social and business entrepreneurship, innovation entrepreneurship, art and culture entrepreneurship, and “other”.
- **Hours per School Year:** Five response options referring to the total number of hours devoted to the entrepreneurship programme over the school year: less than 10 hours; between 11 and 34 hours; between 35 and 70 hours; between 71 and 100 hours, and more than 100 hours.
- **Number of Students:** This item refers both to the total number of students who have taken the course since the programme was first implemented, and the total number of students participating in academic year 2015-2016.
- **Languages in Which the Programmes are Taught:** Six response options for the teaching language: Spanish, Basque, Catalan, Galician, English, and “other”.
- **Country:** Four response options referring to the country where the programme was created or first implemented: Spain, the United Kingdom, the United States, and “other”.
- **Exporting:** This refers to whether the programme has been taught in places other than the one of origin: other countries or other regions.
- **Institutions Involved:** Eight response options as to what institutions or agents make the programmes possible: Ministry of Education, Regional Department of Education, Regional Department of Industry/Economy/ Employment, town councils/groupings of small town councils, school head team and teaching staff, forms part of the school’s project, and a group of teachers.
- **Relation of the Students to Their Environment:** Five response options referring to the means the students use to relate to their surroundings in order to acquire competences: visits to institutions; participation in markets and/or exhibitions; visits to banks and/or businesses; market studies; and “other”.
- **Teachers:** This item asks whether there are teacher training programmes or not.
- **Teaching:** Four response options referring to the group in charge of developing the educational programme: teaching staff at the school, teachers from outside the school, volunteers, and “other”.

## **Academic Year the Programme Was Implemented**

- **Teaching Materials Used in the Programme:** Five response options: textbooks and/or periodicals, websites, blogs, social networks, “other”.
- **Evaluation:** This refers to whether or not the programmes carried out are evaluated.

## ***Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs***

- **Assessment of Competences:** To what extent does the programme carried out boost the development of the following 12 competences and/or capabilities: self-confidence, sense of initiative, creativity, perseverance, time management and task organization, problem-solving and decision-making, risk/uncertainty management, assessment of opportunities, leadership, teamwork, communication and ability to get on with others. To measure these, a 5 point Likert scale was used to indicate lesser to greater development of these competences, respectively. webpage: <https://drive.google.com/open?id=1TzIMge3fQZKMPXZezhYIH1BxuHSR1vqvgF4InBqM7hM>

### **Teacher Training Programmes**

- **Languages in Which the Course Is Taught:** Six response options: Spanish, Basque, Catalan, Galician, English, “other”.
- **Educational Levels, Modality, and Duration of the Training:** Infants/primary, compulsory secondary, upper-secondary, vocational, adults, non-official, and others, such as special education. Modality: face-to-face, online, blended. Total number of hours of training received (<20, between 20 and 40, >20) and total number of teachers trained since the programmes was first taught.
- **Teaching Materials Used in the Programme:** Six response options: textbooks and/or periodicals, websites, blogs, social networks, “other”.

Academic year the programme was implemented webpage: [https://drive.google.com/open?id=1\\_OcI-4uAIhib1DUbrBTwoMGxz3MRsH0aZtYQJdYcRRuo](https://drive.google.com/open?id=1_OcI-4uAIhib1DUbrBTwoMGxz3MRsH0aZtYQJdYcRRuo)

### **Family Training Programmes:**

- **Languages in Which the Course Is Taught: Six Response Options:** Spanish, Basque, Catalan, Galician, English, “other”.
- **Educational Level of the Children, Modality, and Duration of the Training:** Infants/primary, compulsory secondary, upper-secondary, vocational, adults, non-official, and others, such as special education. Modality: face-to-face, online, blended. Total number of hours of training received (<20, between 20 and 40, >20) and total number of parents trained since the programme was first taught.
- **Teaching Materials Used in the Programme:** Six response options: textbooks and/or periodicals, websites, blogs, social networks, “other”.

Academic year the programme was implemented webpage: [https://drive.google.com/open?id=1sF\\_dY-CBKie9plu8pHRb9qL6jCpOhevzz14W4II1P44](https://drive.google.com/open?id=1sF_dY-CBKie9plu8pHRb9qL6jCpOhevzz14W4II1P44)

### **Business Incubator Programmes in Vocational Training**

Information on the schools in which the programme is carried out, the trajectory of the company in the last three years, services to businesses, available spaces, description of admission criteria, description of economic conditions, maximum time of permanence, hours of teacher training, hours of head team training, and participation of outsiders.

## ***Entrepreneurship Education as a Key Antecedent to Boost Nascent Entrepreneurs***

All the questionnaires contain a final section in which respondents can send their suggestions and complementary documentation to the email of the Chair of Entrepreneurship.

In addition to these online questionnaires, we were also in possession of the programme details compiled for the 2013 report in a Word format.