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The role of entrepreneurship support organizations in the
promotion of entrepreneurship education.

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ABSTRACT

In recent years, entrepreneurship has been growing in importance. European policy makers have been indicating entrepreneurship as a way to reduce the 25.6 million¹ people unemployed and, as a consequence to reach higher levels of economic growth. Education has been appointed as a way to stimulate it.

In Portugal, Entrepreneurship Support Organizations (ESOs) seem to have been more active in the promotion of entrepreneurship education by contrast to higher education institutions (HEIs). Only in Lisbon, from one ESO in 2010, there are now more than eleven, which represent more than 200 startups². Thus, the purpose of this thesis is to explore the role of ESOs in the promotion of entrepreneurship education

This thesis found that: (1) On the one hand, entrepreneurship education offered by HEIs target people who are perceived as unlikely to get involved in entrepreneurial activity, (2) on the other hand, most other ESOs target people that are more likely to be already engaged in entrepreneurial activity.

The comparisons of this thesis findings with the goals of policy makers, allowed concluding that ESOs and HEIs have a complementary role in the promotion of entrepreneurship education. Increasingly, however, ESOs are turning into hybrid organizations, which means that they focus on a wide variety of activities, and this may make the education environment more competitive.

¹ As of in December 2014. (Source: OECD)

² O Ecossistema empreendedor de Lisboa, Análise dos resultados do primeiro inquérito às startups feito em Lisboa, Câmara Municipal de Lisboa, 2013

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1. INTRODUCTION

1.1. RESEARCH TOPIC

Much has been said and written about entrepreneurship³, and it has been analyzed from different perspectives, mostly on how to promote it. However, it has been proved that successful entrepreneurship cannot be achieved without education, more specifically entrepreneurship education. Entrepreneurship cannot be taught but the skills can, and the intentions towards it can be stimulated. This has been a key underlying assumption in entrepreneurship education programs (Oosterbeek, van Praag, Ijsselstein, 2008)

In Portugal, only recently universities have been formally introducing Entrepreneurship education in their programs, and there are only a few providing the necessary practical instruments to actually do it. Therefore, it is important to understand who has been responsible for this promotion and how they do it. Thus, the role of entrepreneurship support organizations (ESOs) in the promotion of entrepreneurship education is the subject of this thesis. The intent is to clarify which kind of activities they have been developing and whether these activities should be the ones to be developed according to relevant literature that analyzes the impact of key support activities on the skills and intentions of potential entrepreneurs.

1.2. EXPECTED OUTCOMES

This thesis assesses the field of entrepreneurship education in Portugal, mostly focusing on which organizations should be the main promoters of this kind of education; higher education institutions (HEIs) or Entrepreneurship Support Organizations (ESOs). The purpose was to understand what should be the role of these two types of organizations inside the entrepreneurship ecosystem, and which activities they should promote. We thus sought to unveil how Portuguese ESOs are organized, and how they operate.

1.3. THESIS STRUCTURE

This thesis is organized and divided in five sections. The first and current section presents an introduction of the research topic as well as the expected outcomes of the research. The second section analyzes the findings of the relevant literature and identifies research possibilities that will be addressed in this thesis. The third section presents the methodology used to achieve the relevant results for the research topic. The results of the research are

³ "At the end of the year 2000, the number of entrepreneurship papers was just over 1,500; at the beginning of the year 2010, this number has grown by 2.5 times and now exceeds 5,000". (Meyer et al, 2014)

presented in the following section. Finally, the last section presents the conclusions of the results and identifies the areas for further research.

2. LITERATURE REVIEW

As a consequence of the recent economic and financial crisis, entrepreneurship has been presented as a high potential solution to reach higher levels of economic growth, and this is reflected in measures such as the investment that will be made in entrepreneurship under the €77b's 2020 Horizon program⁴. However, it is not clear what entrepreneurship is.

According to Stevenson et al, – “entrepreneurship is defined as ‘the pursuit of opportunities beyond the resources you currently control’” (Stevenson, 1983, 1985; Stevenson and Jarrilo, 1991:23). Another says that “entrepreneurship is about growth, creativity and innovation” (Wilson, 2008:2), and many more definitions of entrepreneurship could be presented but as Redford argue “beyond concepts and definitions, it is what entrepreneurship can do for an economy that is of most concern” (Redford, 2008:19).

Since Entrepreneurship is a mean to achieve higher levels of economic growth, it is necessary to stimulate it. There seems to be a consensus that the promotion of entrepreneurship should be through education, mostly because “education plays an essential role in shaping attitudes, skills and culture – from the primary level up” (Wilson, 2008:2). However, it cannot be done through normal education, it has be a kind of education shaped to capacitate the potential entrepreneurs, thus it has to be entrepreneurship education because it “provides a mix of experimental learning, skill building and, most importantly, mindset shift” (Wilson, 2008:2). The concept of entrepreneurship education is based on the idea that “the earlier and more widespread the exposure to entrepreneurship and innovation, the more likely it is that students will consider entrepreneurial careers at some point in the future” (Wilson, 2008:2).

Although the concept of entrepreneurship education is clear, the activities that have a meaningful impact on skills and intentions towards entrepreneurship are not. Therefore it is necessary to understand which ones have the most impact, and “when assessing entrepreneurship education practices around the world, it is important to understand not only what works but also why” (Wilson, 2008:2). Also, the entrepreneurship educational programs “must be market-driven and adapted to the local ecosystem” (Wilson, 2008:2).

2.1. IMPACT OF ENTREPRENEURSHIP EDUCATION

In order to establish entrepreneurship education as the primary vehicle in the promotion of entrepreneurship education, it must be proven that it has a positive impact on the intentions towards entrepreneurship. Although there are many authors that focused on

⁴ All information in: <http://ec.europa.eu/programmes/horizon2020/>

this theme, only few studied about the impact of entrepreneurship education programs, like Vesper and Gartner (1997), Oosterbeek, van Praag, and Ijsselstein (2008), and Redford (2008).

From the short literature about the impact of entrepreneurship education programs, there are some evidences of a positive impact on the skills and intentions of entrepreneurs. Also, it would be important to present results of the impact of different programs, mainly comparing programs from ESOs with programs from HEIs.

A major study conducted by the European Commission found that “Entrepreneurship education has a positive impact on the entrepreneurial mindset of young people, their intentions towards entrepreneurship, their employability and finally on their role in society and the economy” (European Commission, 2012:7). The findings of this study conducted to the elaboration of the European Entrepreneurship Action Plan 2020 that has the purpose of reigniting the entrepreneurial spirit in Europe.

The purpose of this research was to focus on entrepreneurship education programs provided by higher education institutions, and to measure the impact of these programs in four dimensions. The four dimensions were the following: (a) the impact on entrepreneurship key competence, (b) the impact on intentions towards entrepreneurship, (c) the impact on the individual’s employability and (d) the impact on society and economy.

Although to have a reliable proof that entrepreneurship education programs promoted by HEIs have the impact the European Commission intended to show, the study compare alumni of nine different HEIs with alumni from JADE, an association that was established by students who had already engaged in entrepreneurial activities, and also with a control group, alumni that never had any exposure to entrepreneurship education. The purpose was not to compare educational programs but to measure the impact of entrepreneurship education on alumni. However for the purpose of the present thesis the results of the HEIs alumni compared with the JADE alumni is interesting to try to differentiate the impact of HEIs and ESOs.

Regarding the impact on the entrepreneurship key competence, which is described as “a composition of an entrepreneurship attitude, entrepreneurial skills and knowledge of entrepreneurship” (European Commission, 2012:8), by comparing the self-perception of the three groups of alumni regarding attitude, skills and knowledge, the JADE alumni presented higher scores in almost every characteristic of the three measures in question in comparison to the other groups.

In order to deeply understand in what the JADE alumni are better than the rest of the alumni, it is necessary to describe the three dimensions of the entrepreneurship key competence presented before.

The first dimension is entrepreneurial attitude and it “covers aspects that help individuals to take action including taking responsibility for their own learning, careers and life” (European Commission, 2012:9). This is based on the following personal characteristics: sense of initiative, risk propensity, self-efficacy, need for achievement, and structural behavior.

The second dimension is entrepreneurial skills and these are “skills needed to turn ideas into action” (European Commission, 2012:10). The characteristics assessed were creativity, analyzing, motivating, networking, and adaptability. By comparing the self-perception of JADE alumni with the other two groups of alumni, they consider themselves better in these characteristics.

The third and last dimension is knowledge that “refers to having broad understanding and knowledge of entrepreneurship including the role entrepreneurs and entrepreneurship plays in modern economies and societies” (European Commission, 2012:10). Also, it can be regarded as the capability of distinguishing themselves between good or bad entrepreneurs, which means self-awareness.

These three dimensions are exactly what the Entrepreneurship Action Plan 2020 intends to be focused on because “young people who benefit from entrepreneurial learning, develop business knowledge and essential skills and attitudes including creativity, initiative, tenacity, teamwork, understanding of risk and a sense of responsibility”, to achieve this “Universities should become more entrepreneurial” (Entrepreneurship 2020 Action Plan, 2013:6), and that is why “the European Commission in collaboration with OECD has already developed a framework for entrepreneurial universities” (Entrepreneurship 2020 Action Plan, 2013:7).

Regarding the entrepreneurship education programs impact on the intentions towards entrepreneurship, this research found that “Significantly more entrepreneurial alumni are aiming for a transition towards entrepreneurship than the alumni in the control group” (European Commission, 2012:10), and once more JADE alumni were at the top, as the group more willing to become entrepreneurs. This finding conducted to intention of creating role models and reaching out specific groups, in order to “change the perception of entrepreneurs through practical and positive communication” once the “Europe has a limited number of known entrepreneurial success stories” (Entrepreneurship 2020 Action Plan, 2013:21). For the

three groups of alumni the main reason to prefer to be self-employed is the realization of a business opportunity, which clearly shows that these groups see entrepreneurship as a mean to give a solution for a problem in the market, and not as a solution for their own employment problems. Another relevant finding is that “preference for self-employment decreases with age” (European Commission, 2012:12).

As we saw entrepreneurship education programs have impact on entrepreneurship key competence, and the competence developed in these programs may or might be sought by companies, and thus it may have some impact on the individual’s employability. The research concluded that “entrepreneurship education seems to have a positive effect on the employability in terms of job experience, creativity in the current job and annual income earned of the alumni presently in paid employment” (European Commission, 2012:12). Primarily because the number of periods of unemployment is lower among entrepreneurship alumni, and relatively more entrepreneurship alumni have started their first period of employment right after their graduation. This is why the Entrepreneurship 2020 Action intends to “create an environment where entrepreneurs can flourish and grow” (Entrepreneurship 2020 Action Plan, 2013:29).

Regarding the last dimension, the study reveals that entrepreneurship education has an impact on the economy: “The likelihood that entrepreneurship alumni will participate in a business start-up is substantially higher, the frequency with which they set up businesses seems to be higher and they become self-employed earlier in their careers. In addition, the enterprises run by these individuals are perceived as more innovative and the expectations regarding employment growth and turnover growth are higher” (European Commission, 2012:14). This is why the Entrepreneurship 2020 Action Plan argues that the “new and young enterprises represent a key ingredient in creating a job-rich recovery in Europe” (Entrepreneurship 2020 Action Plan, 2013:27).

Although the research of the European Commission presents satisfactory findings for entrepreneurship education it is also important to analyze studies that somehow present a contradictory conclusion.

A study that analyses the impact of the Junior Achievement Student Mini-Company Program on college students’ entrepreneurship competencies and intentions presented interesting results regarding the ESOs’ impact. In order to measure the purposed impact, the paper analyzed a group of students that have participated in the program and compared the results of the test with a control group. The results showed that regarding entrepreneurial

skills, “apparently students with the ability and willingness to develop these skills are more likely to be found in the control than the treatment location” (Oosterbeek, van Praag, Ijsselstein, 2008:14). Moreover, “the Student Mini-Company program has significantly negative impact on entrepreneurial intentions and a zero impact on entrepreneurial skills (and traits)” (Oosterbeek, van Praag, Ijsselstein, 2008:17).

These results clearly show that the Student Mini-Company program fails to achieve its goals since “program’s objective to develop entrepreneurial skills and affect entrepreneurial intentions of the students exposed to it positively” (Oosterbeek, van Praag, Ijsselstein, 2008:17). However, “the finding that the average effect of the program on students’ intentions to become entrepreneurs is negative does not necessarily indicate that the program is ineffective” (Oosterbeek, van Praag, Ijsselstein, 2008:17).

After presenting these results to lecturers and business coaches involved in the program, “it was suggested that the Student Mini-Company program makes students’ expectations about entrepreneurship more realistic”, which means that “the benefit of the program could be that students with low levels of entrepreneurial competencies become less enthusiastic about entrepreneurship, whereas students with high levels of entrepreneurial competencies become more enthusiastic” (Oosterbeek, van Praag, Ijsselstein, 2008:17). Moreover, it will avoid the current high rates of companies’ nativity and mortality.

2.2. ENTREPRENEURSHIP EDUCATION IN EUROPE

Regarding Entrepreneurship Education in Europe, the relevant literature only focuses their analysis on higher education institutes (HEIs). Thus, the reported status quo of entrepreneurship education in Europe is somehow distorted from reality, since it is limited to the work that has been developed by HEIs disregarding what has been done by ESOs. As an example a paper entitled *Entrepreneurship education in Europe, presents as its purpose to assess “the state of entrepreneurship education in higher education institutes in Europe, comparing it to developments in the US and outlining a set of recommendations for universities and policy makers”* (Wilson, 2008:2). Therefore, the status of entrepreneurship education presented in this chapter will be focusing mainly on HEIs, from which lessons can be learned and applied to ESOs.

The fact is that “Entrepreneurship Education can help promote an entrepreneurial and innovative culture in Europe by changing mindsets and providing the necessary skills” (Wilson, 2008:3), but without the proper incentives, people in general will not follow the entrepreneurship path because “with the security of Europe’s welfare system, people are less

willing to take risks” (Wilson, 2008:3). Even more difficult it will be if “this attitude is reinforced at the university, which traditionally has been focused on ensuring students can secure future jobs- not become entrepreneurs” (Wilson, 2008:3).

The purposes of entrepreneurship education in Europe should be “the improvement of the entrepreneurship education mindset of young people to enable them to be more creative and self-confident in whatever they undertake and improve the attractiveness for employers”, “encourage innovative business start-ups”, and “improvement of their role in society and the economy” (European Commission, 2012:21). In fact, there are more people seeking this kind of training because “the demand for entrepreneurial learning has been and is still steadily increasing” (European Commission, 2012:23).

However, “there are number of obstacles hindering the uptake of entrepreneurship education such as a shortage of human resources and funding for this type of education” (European Commission, 2012:23). Moreover, “there has been a tendency in academic/teaching communities to perceive entrepreneurship education exclusively with learning how to start and run a business” (European Commission, 2012:23).

Entrepreneurship Education in Europe faces a vary number of challenges and opportunities, most of them related to Entrepreneurship itself, thus after it will be presented a more detailed analysis of the challenges and opportunities identified by the literature, and the policy recommendations to address them.

2.3. ENTREPRENEURSHIP EDUCATION IN PORTUGAL

The state of entrepreneurship education in Portugal is very similar when compared to the rest of the European Member states, and the literature on this subject is short and mostly focused on HEIs.

Redford (2008) conducted one of the most extensive researches on this topic in Portugal. The main finding is that “entrepreneurship education is a relatively new area for Portuguese higher education and an even more recent addition to primary and secondary schools” (Redford, 2008:5). However this is a very positive observation since that in 2002 there was not a single program reported at the primary and secondary levels (European Commission, 2002).

According to Redford, the entrepreneurship education courses offered in Portugal “have one or both of the following main objectives: 1) to develop entrepreneurial mindset and/or 2) to deliver information (entrepreneurship theories and concepts)” (Redford,

2008:81), which is similar to other countries (Solomon, 2005). And, in fact it seems that these courses are achieving their primary goal as Redford noticed: “the universities that offer entrepreneurship courses are tracking their alumni that started businesses in 33% of the cases” (Redford, 2008:132).

Despite the fact that “there has been a sharp increase in the number of new entrepreneurship courses offered at Portuguese universities” (Redford, 2008:93), it seems that there are not many universities providing these courses because “of the 21 universities that responded to the survey, 63.2% started offering education in entrepreneurship during 2002 or later”, which can imply that the universities that did not respond do not offer any entrepreneurship course. Another relevant fact retrieved from Redford’s surveys was that “seventy-one percent of the universities have or plan to have one or more degrees in which entrepreneurship is a required course” (Redford, 2008:127), which shows that entrepreneurship courses came to stay.

Redford argues that “Educational services provided by universities can also be supported by other initiatives such as centers for entrepreneurship and/or innovation, incubators, and business plan competitions” (Redford, 2008:93). And, as we have seen so far, the HEIs are not the only players in the promotion of entrepreneurship education, since there are ESOs that provide these initiatives. However, “many universities in Portugal are planning on creating these support structures that represent practical opportunities for the development of knowledge and help in creating an entrepreneurial endeavor” (Redford, 2008:93). As it is visible in the figure below, universities plan to develop these kind of initiatives.

Figure 10 - Intention to Develop Promotion Initiatives at Portuguese Universities

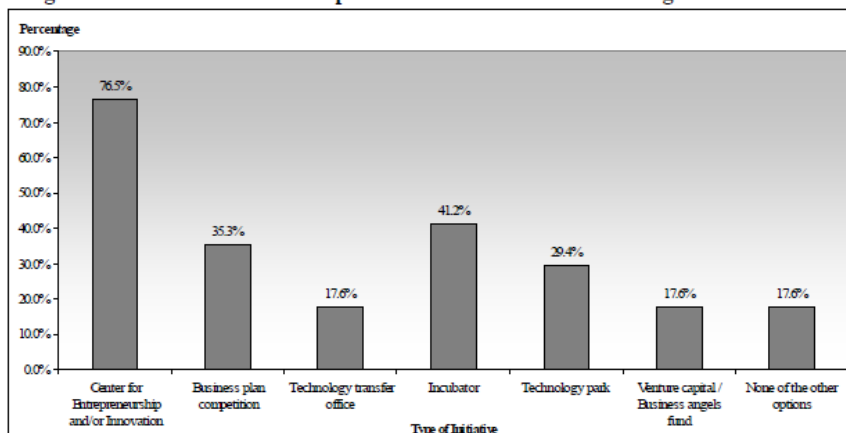
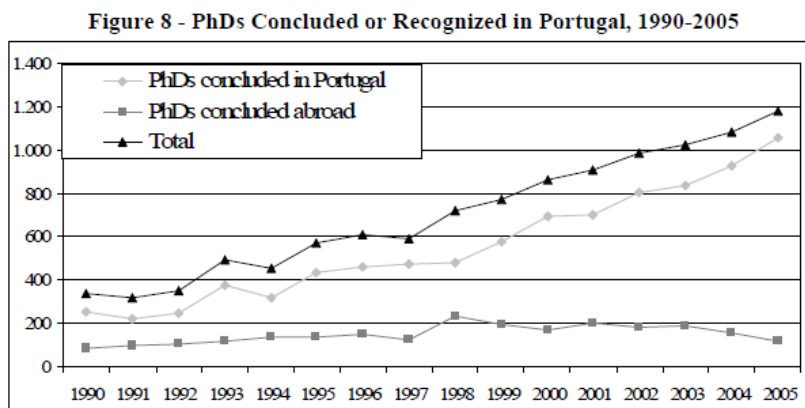


Figure 1 – Intention to Develop Promotion Initiatives at Portuguese Universities (Redford, 2008:93)

From the figure it is understandable that universities consider centers for entrepreneurship and/or innovation as the most relevant initiative in the promotion of entrepreneurship education. However, Redford noticed that “when respondents were asked if the functions and activities of an entrepreneurship center were clearly defined in the Portuguese context, 90% of the professors thought that this was not the case” (Redford, 2008:128). This is evidence that universities just seem to be following the entrepreneurship education trend. Moreover, only a few universities plan to develop technology transfer office. This is very disappointing if we consider that “PhD recipients more than tripled between 1990 and 2004” (Redford, 2008:54), as shown in the figure below, and that most of these PhDs are conducting researches not market-oriented, an issue that could be resolved by a technology transfer office. Furthermore, this shows that Portugal in this aspect did not make any improvement since the GEM Portugal Executive Report from 2004 concluded that “The educational system at all levels in Portugal does not prepare students to take advantage of new business opportunities, and does not promote creative or innovative thinking” (Baganha, 2005).



OCES, 2006

Figure 2 – PhDs Concluded or Recognized in Portugal, 1990-2006 (Redford, 2008:54)

In his study, Redford also tried to collect the students’ perception of entrepreneurship education, because they are ones to whom entrepreneurship education must serve. Below it is presented a table that summarizes Redford’s research results.

Table 64 - Benchmarks & Research Results

Benchmark	Research Results
Educational System & Entrepreneurship	Only 14.8% of students believe the Portuguese educational system develops a state of mind that encourages the creation of new firms
Capacity Building of Entrepreneurship Education	63.7% of post-secondary students believed in the possibility of owning their own business in the future
Post-Secondary System & Education System – Entrepreneurship Offerings	20 years behind the United States; many years behind other EU countries - only country in the EU not to have a program or offering in primary or secondary schools in 2002
Track Students Attitudes towards Entrepreneurship	81.2% want to work for others and only 16.1% want to create their own business
Track Students Attitudes related to Risk and Obstacles	49.9% of the respondents point to the bureaucracy of governmental entities and fears going bankrupt (58%)

Table 1 – Benchmarks & Research Results (Redford, 2008:142)

It is clear that Portuguese students do not believe in the educational system as a promoter of an entrepreneurial mindset, and this is very disappointing since 63.7% of post-secondary students believe in the possibility of owning their own business (Redford, 2008:142). According to Redford, “current programs in Portugal focus too heavily on teaching business plan development” and most of the courses “rely on lecture formats instead of utilizing computer simulation, role-playing or inviting entrepreneurial role models into the classroom” (Redford, 2008:147). Therefore, Redford argues that “pedagogies need to evolve by utilizing more experiential learning techniques” (Redford, 2008:146).

Also, Redford noticed that in Portugal, “The vast majority (90.5%) of those who are responsible for entrepreneurship education are either from the management department or the business school” (Redford, 2008:147), this means that the majority of Portuguese universities are not yet adapting to the European Union policy context, that aims “to ensure that all people, regardless of their personal characteristics and background, have an equal opportunity to start and run their own businesses” (OECD/ European Commission, 2014:4) that explains why “entrepreneurship education should be expanded to grades earlier than high school, to all socioeconomic brackets and cultural situations” (NFTE, 2013:2)

2.4. TYPES OF ENTREPRENEURSHIP EDUCATION

Even though it is important to define what types of entrepreneurship education there are, the first problem we need to address is to understand what traits and skills entrepreneurship education should aim to improve.

According to the authors Oosterbeek, van Praag, and Ijsselstein (2008:6) the most used measurement of entrepreneurial competencies and intentions is the Escan. “The Escan is

a validated self-assessment test based on 114 items (questions and statements) posed to individuals". This was the test used in this paper to measure students' entrepreneurial competencies, and this is "widely used in the Netherlands to determine people's entrepreneurial competencies". "For instance, it is a regular test used by a major bank (the Rabo bank) in their assessment of loan granting to starting entrepreneurs".

The question and statements of the Escan load into ten factors, which "entrepreneurship literature has shown to be the most important determinants of successful entrepreneurship" (Oosterbeek, van Praag, Ijsselstein, 2008:7). These ten factors are divided into two groups, traits and skills, and they are present below.

Traits	Skills
Need for achievement	Market awareness
Need for authority	Creativity
Need for power	Flexibility
Social orientation	
Self-efficacy	
Endurance	
Risk taking propensity	

Table 2 – Escan's ten factors (Oosterbeek, van Praag, Ijsselstein, 2008:7)

Since the financial institutions use this method to evaluate the entrepreneurial competencies of people, these skills and traits should be the ones that entrepreneurship education should target to impact.

In 2008, Oosterbeek, van Praag, and Ijsselstein focused their study on two different approaches that were being used to promote entrepreneurship education. Their primary discover was that entrepreneurship education has positive impact on the students' entrepreneurial spirit, on their attitude towards entrepreneurship, and on their intentions to start a business of their own. The two different approaches are entrepreneurship as a method and entrepreneurship as an occupation. Although it is not normal to teach entrepreneurship courses in primary, because the students are still far from the labor market, the study contributed to evidence that regardless of the educational level or the age of the students, entrepreneurship education is important to develop entrepreneurial traits and skills.

Entrepreneurship as an occupation intends to teach cognitive-oriented entrepreneurship by focusing on training the pupils to estimate a business idea, become self-

employed, and how to start a business. The goal of this approach is to increase the pupils' desire to become self-employed business owners. Thus, this type of entrepreneurship education is more focused on developing traits rather than skills.

Entrepreneurship as a method has its focus on teaching non-cognitive entrepreneurial competences, such as creativity, generating new ideas, and how to translate ideas into actions. Unlike entrepreneurship as an occupation, the purpose is not to increase the desire to become entrepreneurs but to develop creativity, proactivity, and ability to deal with uncertainty and continuous change. Thus, this type of entrepreneurship education is more focused on developing skills rather than traits.

The approach entrepreneurship as an occupation had a positive effect on the pupils' ambition for the future. Thus, it has achieved its purpose of developing the students' entrepreneurial traits.

The approach entrepreneurship as a method had an important positive effect, which was the increase in the pupils' level of connectedness to school, to classmates and to teachers. For the study authors, this is of great importance because other research has shown that the experiences in primary school are an indicator of young people's performances later in life.

After the analysis of the effects in both approaches, the conclusion was that in primary school "entrepreneurship as a method appears to be more important than entrepreneurship as an occupation" (Young Enterprise Denmark, 2012:14), because being more connected to their school, classmate and teachers increases the pupils' self-motivation in their learning process, which ultimately will lead to the same effect seen in entrepreneurship as an occupation. Moreover, the students are developing their skills that will allow them to be better professionals and/or entrepreneurs.

Based on these results and on these two types of entrepreneurship education approaches, we can establish that entrepreneurship as a method should target youngest people, who need to develop more entrepreneurial skills, and that entrepreneurship as an occupation should target people that have already developed their entrepreneurial skills.

2.5. OPPORTUNITIES AND CHALLENGES

In order to evaluate the role of ESOs in the promotion of entrepreneurship education, it is important to understand the opportunities and challenges that entrepreneurship as a whole is facing in Portugal and in Europe, and then to make a deeper analysis of these regarding entrepreneurship education.

Recently, the Global Entrepreneurship Monitor developed a study of the status quo of entrepreneurship in Portugal. According to this study, there are nine structural conditions that are used to understand the factors that help or constrain the entrepreneurial activity, and they are the following:

1. Financial Support
2. Governmental Policies
3. Governmental Programs
4. Education and Training
5. Level of R&D
6. Professional infrastructures
7. Market Openness
8. Access to Physical infrastructures
9. Culture

According to the Portuguese experts in entrepreneurship that collaborated with the Global Entrepreneurship Monitor Portugal 2012 (the most recent one available as of February, 2015), in the nine structural conditions that have been mentioned above, there is still a lot to improve. From the chart presented below, we can see where the specialists positioned Portugal, having these nine structural conditions in consideration, both in 2011 and 2012 and comparing with the European Union.

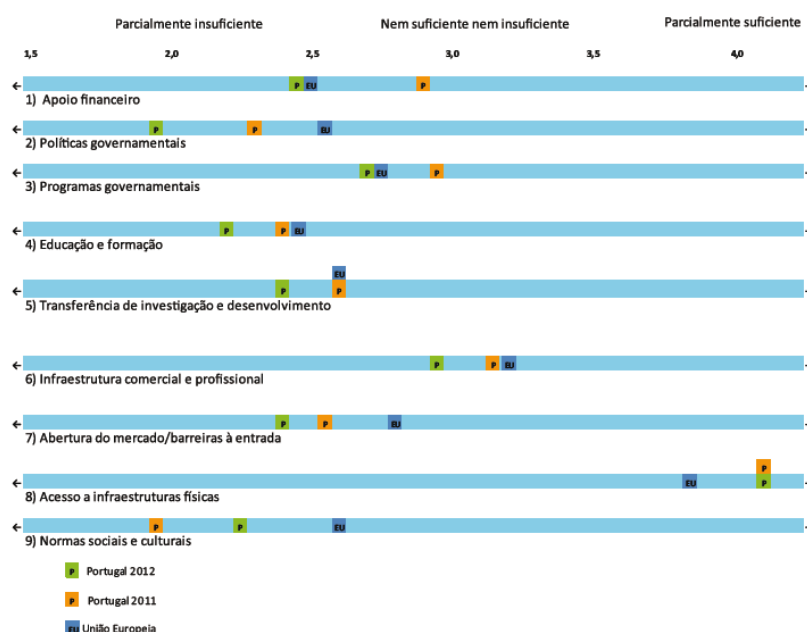


Figure 3 - Structural Conditions for Entrepreneurship. (GEM,2012:33)

In 2012, the specialist positioned Portugal behind the European Union in eight out of the nine points. The point in which Portugal is ahead of the European Union is in terms of

access to physical infrastructures. Regarding the other nine points, the specialists consider that governmental policies, education and training, level of R&D, Market Openness, and Culture are partially insufficient in the promotion of entrepreneurship, being the last point the worst in terms of classification. Given this, Portugal has a reasonable level of Financial Support, Governmental Programs, and Professional Infrastructures.

However it seems that status quo of entrepreneurship in Portugal as of 2012 was discouraging; it is not far from the European Union standards. Portugal is facing the same challenges and presenting the same opportunities as the rest of the European Union. Thus, it is necessary to understand these challenges and opportunities not at a national level but at a European level.

On its study on Entrepreneurship Education in Europe, Wilson is clear, *“For entrepreneurship to thrive it must operate in a well-functioning business and regulatory environment. Without the proper framework conditions, even potential entrepreneurs wanting to start companies will not do so”* (Wilson, 2008:3). This shows that the same concerns regarding structural conditions are shared at a European level.

However, the most relevant challenge appointed is referred to the European culture. As illustrated by the study in comparison to the United States, *“One of the main differences between entrepreneurship education in the U.S and Europe is the definition of ‘entrepreneurship’. In the US, entrepreneurship generally refers to growth-oriented ventures or companies while in Europe it is often equated with SMEs. (...) Europe has a legacy of small and medium-size business, many of them family-oriented. These companies play a larger and important role in the European Economy. However, study after study has demonstrated that the majority of SMEs in Europe are no growth-oriented at all”*. (Wilson, 2008:4). Also and more recently, GEM 2014 shown that entrepreneurial activity is higher in the U.S, having higher TEA⁵ rates (GEM, 2014:86).

Moreover, due to this culture, the programs that promote entrepreneurship are not structured as they are supposed to, as shown by the same study: *“This definitional difference means that in Europe, many “entrepreneurship” programs are actually SME training programs that focus on functional management skills for small business (Zahra,2005) rather than skills for building, financing and nurturing high-growth companies”* (Wilson, 2008:5).

⁵ TEA (Total Early-Stage Entrepreneurial Activity) is the main indicator used by GEM. It assess the percentage of working population about to engage in entrepreneurial activity or that have recently engaged.

According to author of this study, *“In Europe, entrepreneurship is still trying to find its home”, because “Activities are in place across Europe but efforts are fragmented and often driven by external actors instead of by the education system itself (European Commission, 2002)”*. This statement clearly demonstrates that ESOs are responsible for the existing developments regarding the promotion of entrepreneurship education, and that the governmental- backed educational system that we have in Europe have not done much for entrepreneurship education. Thus, an evident challenge in Europe is to change the stigma that any action pursuing changes in the economy must be taken by the public sector.

Regarding what has been done so far in the promotion of entrepreneurship education, the study recognizes that *“interactive approaches, usually project-based, are also used in Europe, [but] most entrepreneurship courses still taught by the lecture method” (Wilson, 2008:6)*, and according to the author this learn by doing approach is much more impactful than the lecture method. Thus, there is the challenge to change the curriculum of the already existing entrepreneurship educational programs towards a more practical approach.

Since this study is more oriented to the established education system, the author presents the opportunity for universities to play a more significantly role in the promotion of entrepreneurship education and in the entrepreneurship ecosystem, as shown again by a comparison to the US: *“In the U.S, the university is seen as playing a key role in the local ecosystem, in which links between academia and business operates both formally and informally” (Wilson, 2008:7)*. However, *“it will clearly take many years for an entrepreneurial culture to take root in academic departments” (Graham, 2014:44)*.

According to the challenges the study resumes them in the following five points: a) Curriculum development; b) Creating a critical mass of entrepreneurship teachers; c) Funding entrepreneurship; d) Cross-border faculty and research collaboration; and e) Spin-outs from technical & scientific institutions

Since the challenges and the opportunities are already identified, it is important to analyze the policy recommendations to address both of them. Therefore, the following subchapter is extremely important.

2.6. POLICY RECOMMENDATIONS

The European commission in their policy recommendations regarding entrepreneurship education established 44 points for improvement divided into ten essential

recommendations⁶ for the promotion of entrepreneurship (Wilson, 2008). Even though all of them are important, this thesis will only take into consideration the ones that should be taken into account by ESOs, because most of them are targeting universities as the main promoters of entrepreneurship education, as it is shown by the following argument “*Europe has the unique opportunity to (...) focus on integrating the most relevant and high-quality practices into its higher education institutes*” (Wilson, 2008:18). Thus, some of the recommendations are only directed to universities, and not to ESOs.

One of the most recent studies from policy makers (European Commission, 2012), which also targets the role of higher education institutions in the promotion of entrepreneurship education, presented some policy recommendations. The study in question, already mentioned earlier in this chapter, presented the following policy recommendations: a) Policy should be supportive of entrepreneurship programs; b) Entrepreneurship education should become obligatory and expanded to all disciplines; c) Learning by doing should be an important part of training; d) Value the impact on society; and e) Measure impact in more than one period.

Although these policy recommendations do not have the same extension if compared with the ones from the earlier study, they summarize the ones from the first one. Thus, it is clear that during the four years after the policy recommendations analyzed in this thesis little has changed.

⁶ Appendix C

3. METHODOLOGY

The research design and interview guidelines for this thesis were provided by Professor Andrei Villarroel and the field work was conducted as a collaborative effort within the context of Dissertation Seminar taught by Professor Villarroel February through June 2014. The aspect that this thesis refers to within that research design aims at understanding the role of Entrepreneurship Support Organizations (ESOs) with respect to the Education dimension. A baseline set of 20 ESOs contacted for this research were organizations who had signed a Letter of Intent to contribute to doing research with Professor Villarroel. We also identified and enrolled 8 additional ESOs to have a richer sample, representative of Portuguese ecosystem.

3.1. DATA

For the purpose of this thesis, we gathered first-hand information directly from the organizations that this thesis refers as ESOs.

After establishing the 27 ESOs from which we would gather data, it was important to understand in which way these ESOs were involved in the ecosystem, meaning in which way they contribute to promote entrepreneurship education.

After having identified the main topics of research through the relevant literature, we started reaching the ESOs to start an interviewing process. This interviewing process was continuously improved after each interview due to the arising of new issues that would worth to address. So, during the 21 interviews that we have done, the focus started to narrow towards the purpose of the thesis, and ultimately it allow us to construct a survey that we have sent to the remaining 6 ESOs.

From the information and data gathered in the interviews and surveys, it was possible to build an analysis about the entrepreneurship education in Portugal. The methodology of analysis will be described below.

3.2. METHOD

In this thesis it is considered two different forms of entrepreneurship education, and each form associated with different kinds of support activities. The division of entrepreneurship education in two forms was inspired from a research paper elaborated by the Young Enterprise Danmark, and adapted to the approach that this thesis pretends to follow. As in Young Enterprise the purpose of this is to “categorized them according to their focus” because “Most

impact evaluations of entrepreneurship education has so far focused only on a single educational design". (Young Enterprise Danmark, 2012:33)

The first form is practical entrepreneurship education that is associated with activities that try to have an impact on the skills and intentions of potential entrepreneurs. Usually it is the empowerment of the entrepreneur with tools that he can later use on his activity.

The second form of education is associated with the networks built by the ESOs. These networks correspond to the connections that each ESO has, or with other ESOs, or with other type of organization which the link allow the entrepreneurs to have access to some knowledge or educational activities.

Contrary to the first form of entrepreneurship education, the ability of the entrepreneurs to improve themselves through these networks depends not only on the quality of the network but also on the entrepreneurs' personality traits. For instance, a more extroverted entrepreneur could take more advantages of the networks than an introverted entrepreneur.

In order to analyze these two forms of education, it was necessary to associate them with some characteristics and/or activities. The characteristics and activities that are assigned to the two forms of education in the table below, and every item will be carefully explained after.

Practical Entrepreneurship Education	Entrepreneurship Education Through Network
<ul style="list-style-type: none"> ○ Pre-university education ○ University education ○ General Education ○ Professors' education ○ Mentoring ○ Coaching ○ Training ○ Workshops 	<ul style="list-style-type: none"> ○ Networking to cross areas of knowledge ○ Networking as final purpose ○ Business networks improvement ○ Legal support ○ Match with investors ○ Partnership with investors ○ Networking with other ESOs ○ Partnership with other ESOs

Table 3 – Characteristics and Activities of the two forms of entrepreneurship education

Practical Entrepreneurship Education:

In this thesis, this form of education is divided in a set of eight differentiated activities. The first four activities are focused on the target groups, and the second four are activities more oriented to someone that already is an entrepreneur and that aim to educate him.

Activities focusing on the target groups:

1. Pre-university education includes activities that promote an entrepreneurial mind-set on pre-university students; it can comprise a wide range of activities such as competitions, school programs, workshops, and so forth.
2. University education includes all activities that promote the entrepreneurial mind-set on university students. These activities should be more oriented to creating a business than the pre-university education.
3. General education includes all activities that promote the entrepreneurial mind-set without targeting any group of people in particular. These activities might be very specific and others very comprehensive.
4. Professors' Education includes all activities that help professors to develop skills to promote an entrepreneurial mind-set on students. Usually, the target is high school professors.

Activities focusing on entrepreneurs:

1. Mentoring consists in providing general support to the entrepreneurs' project. This support arrangement is established by the ESOs, and the mentor is someone, normally external to the ESO, that has during his career acquired a high level of expertise in a subject related to the project.
2. Coaching consist in a following and accompanying the day-to-day progress of the entrepreneurs' projects by someone that belongs to the ESOs' structure and has experience in a startup common operations.
3. Training consists in a planned and structured program, which the main goal is to provide entrepreneurs with a tool. This program is exhaustive on a specific subject, thus it consists usually in two sessions or more.
4. Workshops consist in one-off events, which mean that they are not part of a regular sequence of events. These events are intended to provide some insights about a useful subject for the entrepreneur.

Entrepreneurship Education through Network:

1. Networking to cross areas of knowledge is activities (excluding incubation) that promote an exchange of experiences between people of different areas of knowledge. It can also be a networking platforms that aim to join different areas of knowledge
2. Networking as final purpose are events that the only purpose is to stimulate networking among the participants; this means that there isn't any activity associated with the event. These events can be dinners, cocktails; or any kind of events that promote a networking environment among different players
3. Business networks improvement consists in trying to create a match between the entrepreneurs and suppliers or clients. This activity also comprises the efforts to help with the startups' internationalization.
4. Legal support consists in providing any kind of legal advice, it can be for Intellectual property or related with any day-to-day practice. This support can be given by someone inside the ESOs, or by a partner, usually law firms.
5. Match with investors is the process of facilitating a match between investors and entrepreneurs; it can be through competitions, or through support on calls for investment. The support given in applications for governmental incentives is also considered as a match.
6. Partnership with investors consists in having investors as partners of the ESOs, not only for investing on projects but to give feedback on what the entrepreneurs need to improve. This close relation with investors allows the ESOs to improve and develop pre-identified promising start-ups.
7. Networking with other ESOs consists in contributing and helping other ESOs, mostly as communication partners of particular events. This means that the ESOs cooperate but do not collaborate.

8. Partnership with other ESOs implies a stronger relationship than the last item. It comprises collaboration, which means that ESOs really work in partnership. It can be incubating projects from other ESO that do not offer incubation, or co-organizing events with other ESOs, and so forth.

After describing the points of the both forms of entrepreneurship education here considered, it is necessary to present the status quo of entrepreneurship education in Portugal having in consideration the analysis of these two forms. For the purpose of the analysis, the information was collected as it was described in the methodology section of this thesis. Thus, it comprises the information retrieved from 27 ESOs.

4. ANALYSIS

In this chapter, we will analyze the results gathered from the interviews and surveys. As it was described in the chapter named methodology, the information collected comprises information from 27 different ESOs. It is expected that this information gives us a response for the hypothesis of this thesis as well as an overview of the Portuguese entrepreneurship ecosystem.

4.1. PRACTICAL ENTREPRENEURSHIP EDUCATION

Regarding practical entrepreneurship education⁷ we can see from the chart below that the activities that are more common are the ones targeting people that somehow can be already called eminent potential entrepreneurs, since it is expected that general population and university students could engage in a venture more rapidly than pre-university students.

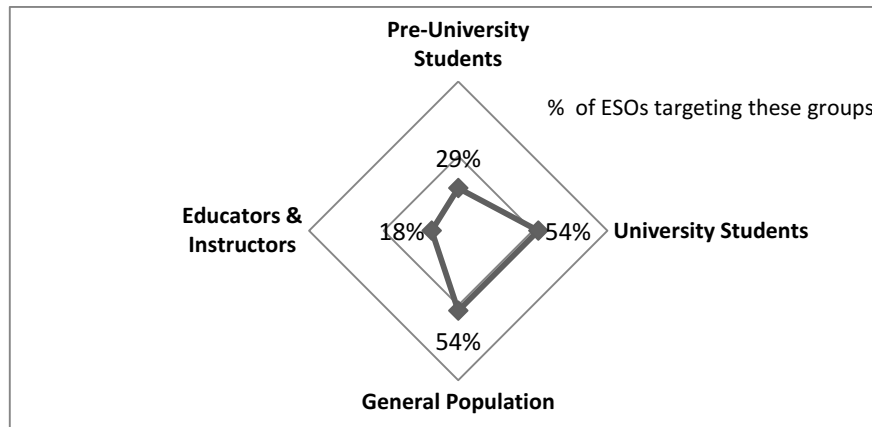


Figure 4 – Practical Entrepreneurship Education Targets

Moreover, it seems that ESOs are trying to stimulate an entrepreneurial mindset on people that could more easily become entrepreneurs, that is why 54% of the ESOs have activities for university students and people in general. On the other hand, there are the pre-university students to whom most of the ESOs do not plan activities. The activity that occurs the less has educators and instructors as target, with only 18% of the ESOs promoting this kind of activities. This means that the activities that try to promote an entrepreneurial mind-set are less developed over activities that intended give more than a cultural shift.

However, there is a huge concern that HEIs should become the main promoters of entrepreneurship education, because they “strive to minimize the institutional barriers to this cross-fertilization to provide the most creative and innovation learning process possible” (Wilson, 2008:6). Thus, most of the policy recommendations target the university students based on the belief that they will have a faster impact on the entrepreneurship ecosystem, and most of the ESOs seem to be following the major policy recommendations instead of also

⁷ See the description in p.21.

taking into account activities that might have impact on the young people’s mindset. Even worst are the results in capacitating educators and instructors, as noticed in the literature, there is a necessity to train professors to become effective educators in order to improve the standards of entrepreneurship education.

Regarding the activities developed by ESOs, the activity that has been used the most to promote practical entrepreneurship education is workshops and the second most used is mentoring, as you can see from the chart below. Usually workshops are given by someone that is an expert in a particular subject, and mentoring by someone that through personal experience might guide the entrepreneurs in the sector that they are entering. Clearly, this shows that ESOs are establishing connections with people outside the organizations that might teach something to entrepreneurs in a particular area of knowledge, or in a particular industry.

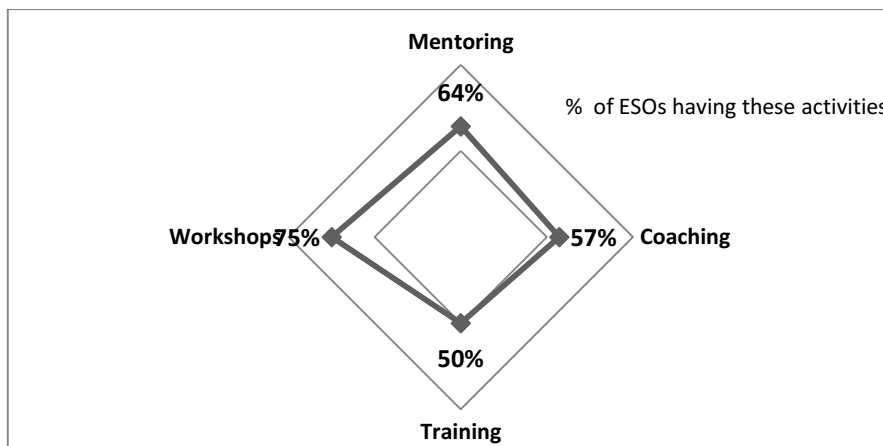


Figure 5 – Practical Entrepreneurship Education Activities

From the table in the next page, we can understand how each point of practical entrepreneurship education is or isn’t correlated to the rest. Although the sample is very small, we can see that the correlation between University Students and Pre-university students is significant. This means that most of the ESOs that target university students also target pre-university students.

Also, we can see that the correlation between workshops and, mentoring and training is significant, which means that, consistently with the chart presented earlier, almost every ESO that develops workshops also do mentoring and training.

		Pre-University Students	University Students	General Population	Educators & Instructors	Mentoring	Coaching	Training	Workshops
Pre-University Students	Correlation Coefficient	1,000	.580**	.417*	,317	,115	,373	,138	,152
	Sig. (2-tailed)		,002	,030	,107	,569	,055	,492	,450
	N	27	27	27	27	27	27	27	27
University Students	Correlation Coefficient	.580**	1,000	.400*	.426*	,316	,320	,182	.418*
	Sig. (2-tailed)	,002		,039	,027	,108	,103	,363	,030
	N	27	27	27	27	27	27	27	27
General Population	Correlation Coefficient	.417*	.400*	1,000	.426*	.474*	.472*	.481*	.418*
	Sig. (2-tailed)	,030	,039		,027	,012	,013	,011	,030
	N	27	27	27	27	27	27	27	27
Educators & Instructors	Correlation Coefficient	,317	.426*	.426*	1,000	,135	.395*	.459*	,255
	Sig. (2-tailed)	,107	,027	,027		,502	,041	,016	,200
	N	27	27	27	27	27	27	27	27
Mentoring	Correlation Coefficient	,115	,316	.474*	,135	1,000	.533**	.419*	.756**
	Sig. (2-tailed)	,569	,108	,012	,502		,004	,029	,000
	N	27	27	27	27	27	27	27	27
Coaching	Correlation Coefficient	,373	,320	.472*	.395*	.533**	1,000	,257	.463*
	Sig. (2-tailed)	,055	,103	,013	,041	,004		,196	,015
	N	27	27	27	27	27	27	27	27
Training	Correlation Coefficient	,138	,182	.481*	.459*	.419*	,257	1,000	.555**
	Sig. (2-tailed)	,492	,363	,011	,016	,029	,196		,003
	N	27	27	27	27	27	27	27	27
Workshops	Correlation Coefficient	,152	.418*	.418*	,255	.756**	.463*	.555**	1,000
	Sig. (2-tailed)	,450	,030	,030	,200	,000	,015	,003	
	N	27	27	27	27	27	27	27	27

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 – Correlations among targets and activities

4.2. ENTREPRENEURSHIP EDUCATION THROUGH THE ESO'S NETWORK

Regarding the entrepreneurship education through network built by the ESOs⁸, we can see that it is more developed than the practical entrepreneurship education. In every point there are more than half of the ESOs that establish these kinds of links.

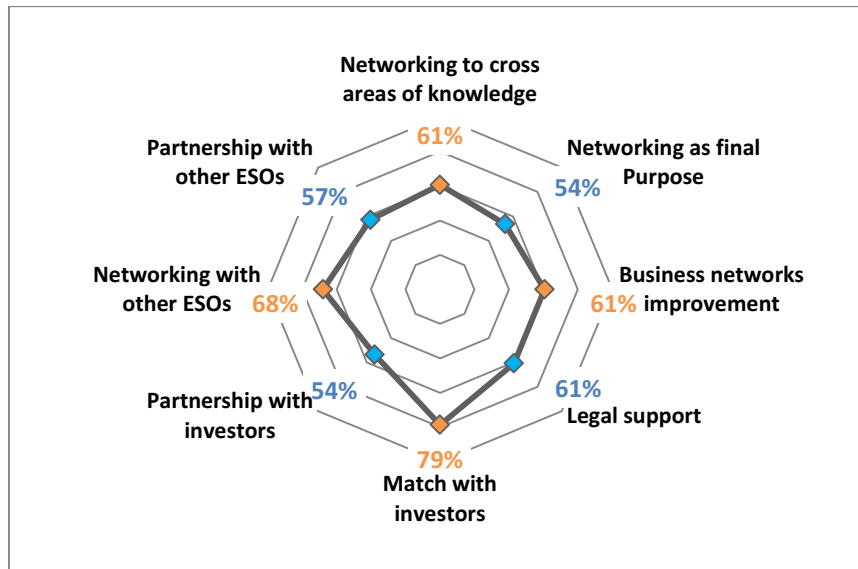


Figure 6 – Activities of Entrepreneurship Education through the ESOs's network

Most of the ESOs state that they often try to match the entrepreneurs' projects in need of financing with potential investors. In fact, during the interviews it was clear that from their point of view there is too much investors available and not so many good projects that worth investing. That is probably why 79% of the ESOs perform this matching.

Another factor that helps ESOs to match projects with investors is the number of ESOs that work in partnership with investors, with 54% of the ESOS doing it. Despite the fact that the number of ESOs that work in partnership with investors is slightly lower than the percentage that do match, this activity is even more important than getting financing because it instructs entrepreneurs to adapt to the market in order to the investors recognize potential for investing.

Furthermore, Portuguese ESOs grant access to other important players that are usually related to the process of creating a start-up, such as legal offices and suppliers. In fact, 61% of the ESOs facilitate connections with legal offices, and suppliers and/or other services important for the operations of a start-up, as you can see in the chart above under 'business networks improvements'.

⁸ See the description in p.21

		Networking to cross areas of knowledge	Networking as final Purpose	Business networks improvement	Legal support	Match with investors	Partnership with investors	Networking with other ESOs	Partnership with other ESOs
Networking to cross areas of knowledge	Correlation Coefficient Sig. (2-tailed) N	1,000 27	.549** ,003 27	-,054 ,788 27	,206 ,303 27	,029 ,885 27	,240 ,228 27	,174 ,385 27	-,054 ,788 27
Networking as final Purpose	Correlation Coefficient Sig. (2-tailed) N	.549** ,003 27	1,000 1,000 27	0,000 1,000 27	,240 ,228 27	-,043 ,833 27	,250 ,209 27	-,091 ,653 27	-,158 ,431 27
Business networks improvement	Correlation Coefficient Sig. (2-tailed) N	-,054 ,788 27	0,000 1,000 27	1,000 1,000 27	.434* ,024 27	,067 ,738 27	0,000 1,000 27	-,115 ,569 27	0,000 1,000 27
Legal support	Correlation Coefficient Sig. (2-tailed) N	,206 ,303 27	,240 ,228 27	.434* ,024 27	1,000 1,000 27	.424* ,027 27	.394* ,042 27	,342 ,081 27	,108 ,590 27
Match with investors	Correlation Coefficient Sig. (2-tailed) N	,029 ,885 27	-,043 ,833 27	,067 ,738 27	.424* ,027 27	1,000 1,000 27	.533** ,004 27	.526** ,005 27	,270 ,174 27
Partnership with investors	Correlation Coefficient Sig. (2-tailed) N	,240 ,228 27	,250 ,209 27	0,000 1,000 27	.394* ,042 27	.533** ,004 27	1,000 1,000 27	.399* ,039 27	,316 ,108 27
Networking with other ESOs	Correlation Coefficient Sig. (2-tailed) N	,174 ,385 27	-,091 ,653 27	-,115 ,569 27	,342 ,081 27	.526** ,005 27	.399* ,039 27	1,000 1,000 27	,229 ,250 27
Partnership with other ESOs	Correlation Coefficient Sig. (2-tailed) N	-,054 ,788 27	-,158 ,431 27	0,000 1,000 27	,108 ,590 27	,270 ,174 27	,316 ,108 27	,229 ,250 27	1,000 1,000 27

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Table 5 – Correlations among activities

From the table above, we can see that the correlation between the promotion of networking to cross areas of knowledge with the promotion of networking as final purpose is significant. It may mean that ESOs consider that events that have only the purpose of networking are the best way to cross areas of knowledge.

Also, we can see that the correlation between match with investors with partnership with investors and networking with other ESOs is significant. It is clear that most of the ESOs try to work closely with investors both to try to match them with the entrepreneurs' project but also for entrepreneurs to get feedback from the investors. Moreover, the correlation between match with investors with networking with other ESOs may indicate that ESOs also to try to get in touch with investors from the other ESOs' networks.

4.3. RELATION AMONG ESOs

Another relevant point is the level of cooperation among ESOs. Although the numbers show that ESOs are working together either by networking or by partnership in the promotion of entrepreneurship, it also implies that some ESOs do compete among the others since there is 32% of the ESOs that do not have any kind of relationship with other ESO.

Regarding the positioning of the ESOs taking into account these two forms of entrepreneurship education, we can see that the majority of the ESOs are concentrated in the top right of the chart below. This means that these ESOs are very hybrid, which means that they do not offer a key support activity in which they are very good but instead they offer a lot of different activities.

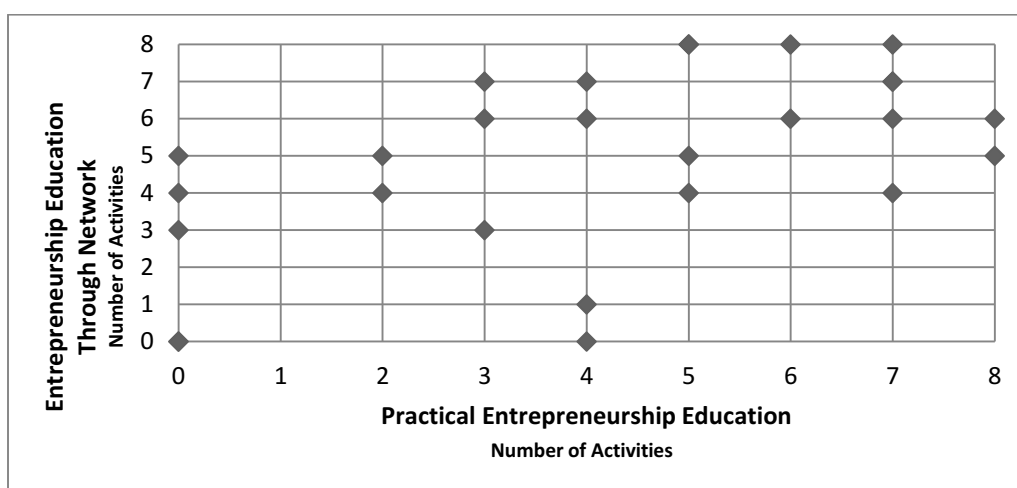


Figure 7 – Number of activities performed by each ESO in the two forms of entrepreneurship education.

The concentration on the top right of the chart indicates that the Portuguese ESOs are very similar, which can also suggest that they might compete among them in order to attract the most promising entrepreneurs in order to get more status if these entrepreneurs thrive.

During the interviews and survey, there was always the purpose to assess whether the Portuguese ESOs compete among themselves. However, based on the results gathered, and presented earlier in Entrepreneurship Education through Network under Networking with other ESOs and Partnerships with other ESOs, it is not clear whether they compete or do not compete among themselves. The results only state that some of the ESOs cooperate or collaborate among themselves.

In order to have another source information to assess whether Portuguese ESOs compete among themselves or not, it was made an overview of the created events by the considered ESOs to see whether there was any collaboration between these 27 ESOs. The purpose was to see how many links each ESO had out of the 26 possible links, which means that it was only considered links among ESOs present in this thesis. Also considered were the links stated on the ESOs websites. The results of this analysis are presented in the table below.

Number of links with other ESOs	Number of ESOs
0-2	12
3-4	7
5-6	4
7-8	2
9-10	0
11-12	0
13+	2

Table 6 – Number of links among ESOs

As we can see from the table above, out of the 26 possible links among the 27 ESOs, only two ESOs have more than 50% out of the possible links and almost half of the considered ESOs have between 0 and 2 links out of the possible 26. The two ESOs that have 13 or more links are Portugal Ventures and Beta-i. This clearly shows that there is some competition, or alternately, unwillingness to work together to achieve a common goal that is the promotion of entrepreneurship and entrepreneurship education. However, this is utilized by entrepreneurs to get several streams of promotion by participating in events organized by different ESOs.

An important fact that would influence collaboration and prevent ESOs from competing among them is specialization. In fact, 17 of the 27 ESOs stated that they are specialized in some areas. However, the areas in which they are specialized are broader and

therefore they overlap specialized areas of other ESOs. Furthermore, even ESOs that have some kind of specialization do accept projects from areas that they are not specialized in, if these projects show some potential of success.

4.4. THE LINK BETWEEN ESOs AND UNIVERSITIES

Still regarding collaboration, it is also important to consider the links with universities, since the literature indicates HEIs to be the most important institutions in the promotion of entrepreneurship education because HEIs “offer access to a number of unique resources that can be particularly helpful to budding entrepreneurs” (Teixeira, 2010:14). However this analysis will not be so depth as the links among ESOs, because this thesis does not intend to study the role of universities in the promotion of entrepreneurship education, even though the literature concedes them a primary role.

From the 27 selected ESOs there are some that have born inside an academic environment. Some of these organizations are BET, Audax, CEO, BGI, CEIM, Teclabs, and Tecminho. The first four are ESOs from business schools, and the last three from universities more faced to technology. From the large number of Portuguese universities there are only seven that have an ESO born in their environment, and these ESOs were not created by universities themselves but by a group of individuals and then the universities gave their support to these ESOs. As it was noticed by Redford, business schools still have a strong relation with entrepreneurship centers; however we can see that more technological HEIs are also taking this step.

Also, from the 27 selected associations there are only 11 that try to bring universities knowledge to the market. This consists in creating activities that aim to attract researchers and PhDs to conduct their researches towards the purpose of market their findings. The goal of these activities is for these researches to have market awareness in order to do not spend their time investigating something that doesn't have any market potential and focus on things that could bring innovation to the market.

From those 11 organizations, four are the ones mentioned earlier, and the remaining 4 built their relationship with the universities by themselves and not by the academia interest. This clearly shows that academia is still much closed within its own environment, and if universities pretend to be successful promoters of entrepreneurship education, they also need a mindset shift, as the literature suggests.

4.5. ESO'S IMPACT

Another relevant finding during the interviews and surveys was that Portuguese ESOs are trying that the entrepreneurs' projects have a global impact. Only 8 from the 27 ESOs considered, do not intent to have a global impact and to have a more local/national impact. Contrary to the literature that states that the work of ESOs in Europe has been only to help SME to thrive and not to help them to grow, this thesis clearly shows that ESOs are trying to be more selective and turn the entrepreneurs' projects into gazelles⁹, which means high growth companies.

Despite the fact that these ESOs are clearly focusing on a global impact the majority do not neglect the local impact, and 23 of the 27 ESOs pretend to have a local impact, which means that 5 ESOs solely aim globally.

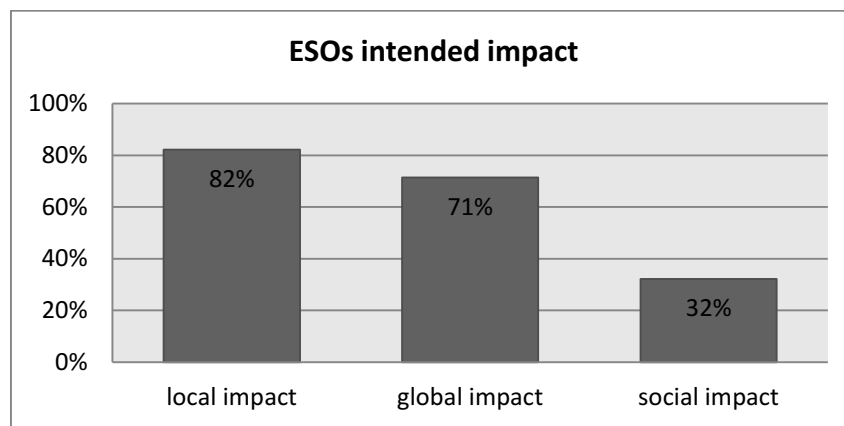


Figure 8 – ESOs intended impact

Still regarding the ESOs intended impact; we can see that there only 32% of them engage in projects that plan to have a social impact. Thus, the majority of Portuguese ESOs try to have an impact mostly on the economy, by helping creating successful and high-growth companies that ultimately will have a social impact by creating jobs.

Even though the ESOs seem to be adapting and offering activities that help to promote a more entrepreneurial mindset on people in general, they lack in measure the impact of their activities in order to have a more insightful analysis on their contribution in the promotion of entrepreneurship education. The purpose of this thesis was at the beginning not only to evaluate the role of the ESOs in the promotion of entrepreneurship education but also to see their impact on the number of startups created, the evolution of projects incubated and their success rate, the evolution of jobs created directly and indirectly, the amount of money raised

⁹ Term introduced in Birch, D (2002), 'Slump, What Slump', Fortune Magazine, Small Business, December

for startups by the ESOs, and the evolution of the startups' revenues. This was an ambitious goal but unable to achieve it due to the inability of all the ESOs to gather these information. In fact there were only a few ESOs that gather this kind of information, and these are the ones that have public funds backing up their events.

Another type of impact that should be measured is the skills and intentions towards entrepreneurship. Although this is a measurement already done at the European level, it has not been developed at a national level. Thus, it is impossible to assess which organizations should have governmental support in order to achieve higher levels of entrepreneurship through entrepreneurship education.

4.6. LIMITATIONS

ESOs may have conveyed information that overvalued their role in the ecosystem. In the interviews we asked about their positive experiences and their negative ones to minimize this. However, it was not possible to contrast positive and negative for every aspect of the survey.

Another limitation of this thesis is the absence of differentiation between the types of ESOs, based on their key support activities. This generalization should be kept in mind when reading the analysis of the impact that some ESOs have in the entrepreneurial ecosystem.

5. CONCLUSION

In this thesis, we tried to assess the role of entrepreneurship support organizations in the promotion of entrepreneurship education, as opposed to the role of higher education institutions. Much literature presents higher education institutions as the main players in this promotion, but they do recognize the work that has been developed by ESOs.

5.1. MAIN CONCLUSIONS

Firstly, it is important to draw conclusions based on the activities that ESOs promote and their activity inside the entrepreneurship ecosystem. If we take into account what we called Practical Entrepreneurship education, it is necessary to increase the number of activities targeting pre-university students, since such programs encourage “creativity, self-sufficiency, and personal initiative” and provide “adequate instruction on market economic principles” (GEM 2014:57), and also activities intended to capacitate professors with skills that help them to promote an entrepreneurial mind-set on their students, as also shown by the “shortage of human resources (...) for this type of education” (European Commission, 2008). ESOs seem to be trying to address the challenges and opportunities in the entrepreneurship education environment. However, ESOs are looking to have an immediate impact by focusing their activities for people that have more chances of becoming entrepreneurs over taking actions to promote a cultural and a mind-set shift on younger people, and that’s maybe why in GEM 2014 its authors argue that the low discontinuance rate in Europe “can be an indicator of the low level of preparedness of business ventures” (GEM 2014:38)

Secondly, and regarding what we called Entrepreneurship Education through ESOs’ Network, it is clear that Portuguese ESOs are focusing their efforts in building their networks in order to facilitate the entrepreneurs that they support. It is expected that entrepreneurs take advantages from these networks and also gain knowledge. Thus, ESOs’ networks are intended to give tools for immediate action towards the concretization of a project, which means that ESOs’ actions are consistent with the immediate impact that they are trying to achieve, and the way they target people, and the same applies to HEIs since “the educational system at all levels in Portugal does not prepare students to take advantage of business opportunities” (Baganha, 2005). However, there has been some improvements since in the GEM 2014 Framework Conditions, Portugal was classified above the European Average under Entrepreneurship Education¹⁰.

¹⁰ Portugal got a score of 3,04 in Entrepreneurship Education - Post-Secondary Education, and the European Average was 2,82. (GEM 2014:58)

Thirdly, Portuguese ESOs seem to be hybrid organizations, which that they do not focus on a particular key support activities, but instead they offer wide variety of activities. Being the Portuguese ESOs very similar in terms of activities developed, we hypothesize the possibility of a competing environment among them, even though they affirm that there is cooperation among them. We found that there is a strong indication of competition (see p.34) and that specialization could be a solution for this problem and a facilitator for the sharing of good practices, in other words “a well-functioning business and regulatory environment” (Wilson, 2008:3).

Fourthly, we noticed that there isn't almost any link between the origin of ESOs with higher education institutions, and the ones that exist are mostly with business schools and technological universities. Thus, there is a need to increase the relationships and an opportunity for higher education institutions to be more participative in the entrepreneurship ecosystem in Portugal.

To sum it up, neither ESOs nor HEIs should be the main promoters of entrepreneurship education. In fact, higher education institutions need to take a more collaborative role in the promotion of entrepreneurship education. However, this do not mean that they should be the main promoters but they should work together with ESOs, in order to take advantage of the networks already established, and help them to improve their practical entrepreneurship education. Also, more ESOs should try to establish close relationship with universities and try to get their students expertise to the market, more specifically the PhD students. In other words, these two players have a complementary role in the promotion of entrepreneurship education, as also noticed by Redford: “Educational services provided by universities can also be supported by other initiatives such as centers for entrepreneurship and/or innovation, incubators, and business plan competitions”.

5.2. FUTURE RESEARCH

Since the conclusion of this thesis was that ESOs and HEIs should work together in the promotion of entrepreneurship education, it would be relevant to understand how greater is the impact on the mindset and attitudes of individuals of ESOs and HEIs working together than

other institutions developing actions by themselves. The conclusions of such research would serve to strengthen the conclusion of the present thesis.

We saw there has been a focus on separating the education for SMEs and for high growth startups. The second type is the one that the European commission is seeking in order to achieve higher levels of economic growth. However, it has been proved that traditionally ESOs in Europe promote education for SMEs, not for high growth startups, and during this thesis we did not made a distinction between these two different education goals. Therefore, this comprises an opportunity for further research, trying to understand the difference of impact between ESOs promoting education for gazelles and for SMEs. Also, since education for SMEs has already been developed in Europe, it would be relevant to understand the impact of this education in the mindset and attitudes of individuals in comparison with education for gazelles.

It is urgent to address the questions that remain unanswered due to the fact that the European Commission is presenting entrepreneurship as a solution for economic growth, and entrepreneurship education as a means to achieve higher levels of entrepreneurship arguing that “new and young enterprises represent a key ingredient in creating a job-rich recovery in Europe” (European Commission, 2013:27)

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7. APPENDIXES

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Appendix A – Survey

As perguntas que se seguem têm como objetivo uma resposta fechada, isto é, ou Sim ou Não. De forma, a que o resultado desta investigação chegue a conclusões fidedignas é pedido total sinceridade nas respostas. Queremos desde já agradecer a sua disponibilidade.

1. Desenvolve algum tipo de atividades que promovam o mind-set empreendedor, desde competições, programas escolares ou workshops públicos tendo em vista a educação? (S/N)
 - 1.1. Se sim, têm algum tipo de público-alvo específico como;
 - 1.1.1. Pré-universitário; (S/N)
 - 1.1.2. Universitário; (S/N)
 - 1.1.3. pessoas em geral; (S/N)
 - 1.1.4. capacitar professores (S/N)
2. Desenvolvem atividades (excluindo a incubadora) que promovem a troca de experiências de diferentes áreas de conhecimento; ou plataformas que têm como objetivo cruzarem pessoas com diferentes áreas de conhecimento. (S/N)
3. Desenvolver qualquer tipo de atividades em que o objetivo único seja o networking? Como por exemplo: Jantares; conferencias; eventos que promovem o ambiente de network a vários players. (S/N)
4. Têm um Espaço físico para empreendedores com acesso a infraestruturas que possa ser sede fiscal da empresa (sala de reunião; sede; laboratórios) tipicamente uma incubadora (S/N)
5. Estabelecem a ligações entre as startups e possíveis clientes; fornecedores; ajuda a encontrar linhas de distribuição; ou apoiam à internacionalização; (S/N)
6. Fornecem todo o tipo de apoio legal ou apoio de proteção de propriedade intelectual com pessoas da organização ou através de parcerias com escritórios de advogados (S/N)

7. Fornecem serviços gerais de mentoring estratégico às startups através de pessoas com elevada experiencia numa determinada industria ou área, normalmente mentores externos (S/N)
8. Fornecem serviços com elevado nível de especialização e suporte em cada projeto ;normalmente pertencem à organização e assistem o dia-a-dia das startups. (S/N)
9. Têm um programa estruturado e planeado em que o principal objetivo é fornecer uma ferramenta aos empreendedores, desde o desenvolvimento do plano de negocio; a planos de comunicação, planeamento de custos, etc. (S/N)
10. Realizam workshops específicos para promover conhecimento em áreas específicas; marketing digital; como fazer um bom pitch, etc. (S/N)
11. Utilizam uma metodologia que foi desenvolvida internamente? (S/N)
 - 11.1. Caso tenham adotado uma metodologia externa por favor esclarece-nos qual.
12. Desenvolvem atividades que têm como principal objetivo atrair os investigadores e o seu conhecimento para o Mercado. Nomeadamente alunos de Doutoramento (PhD) que trabalham em centros de investigação. (S/N)
13. Facilitam a ligação com os investidores e empreendedores; através de concursos onde o júri é um potencial investidor; facilitam o processo de candidatura aos programas de financiamento do estado. (S/N)
14. Trabalham em parceria com investidores com o objectivo de melhorar as startups para que estas cumpram os requisitos dos investidores normais; isto é, têm uma relação muito próxima com os investidores. (S/N)
15. São especializados numa industria; tecnologia; musica; turismo; saude; ou numa fase de desenvolvimento; seed; pre-seed; Por favor especifique.
16. Pretendem ter um impacto na economia a que nível?
 - 16.1.1. Local (S/N)
 - 16.1.2. Global (S/N)
17. Têm programas de apoio a instituições sociais ou a promoção de organizações de carácter social? (S/N)
18. São principalmente parceiros de comunicação das outras organizações de empreendedorismo? Cooperação na comunicação conjunta de eventos. (S/N)

19. Trabalham em parceria com outras Organizações de empreendedorismo no qual fazem incubação de projetos oriundos de outras organizações ou fornecem mentores para eventos, ou criam eventos em parceria? (S/N)

20. Têm algum tipo de apoio de organizações públicas? Desde Governo, Universidades Publicas ou Camaras Municipais. Qualquer tipo de apoio. (S/N)

Muito Obrigado

Appendix B – Policy Recommendations

The ten essential policy recommendations are the following:

1. Make a clear distinction between programs focused on growth entrepreneurship and SME management, and establish that only growth entrepreneurship programs should receive public funds. According to this policy recommendation, growth programs should have initiatives that target the following three points:
 - Exposure to entrepreneurship in order to change mindset and attitudes
 - Functionally oriented courses
 - High-growth-oriented entrepreneurship, focusing on the three main stages of companies development: build, financing and growth.
2. Develop appropriate measurement and evaluation of the impact, not just outputs, of entrepreneurship programs.
3. Integrate entrepreneurship into the curriculum and build towards a multidisciplinary learning environment, which comprises building projects and programs across disciplines.
4. Set high-quality standards for entrepreneurship curricula and research, in which encourage the development of research-oriented entrepreneurship centers, and focus research and teaching on all of the entrepreneurial growth phases and not just the start-up phase are the recommendations that should be taken into account by ESOs.
5. Build a strong pipeline of European Entrepreneurship professors and teachers, which comprises supporting workshops and training programs for teachers of entrepreneurship; and providing training for entrepreneurs and other practitioners to become effective educators.
6. Encourage the use of interactive teaching methods, which means to promote the application of learning by doing through project based learning, and to involve entrepreneurs and local companies in entrepreneurship activities.
7. Ensure a consistent and adequate level of funding for entrepreneurship education, which means to seek private sector resources to help fund and provide expertise to entrepreneurship teaching, and to encourage the development of local angel and venture capital funds.
8. Encourage cross-border entrepreneurship faculty and research collaborations; which mean to facilitate the sharing of good practice across borders, and to provide support for European-wide and international mobility and exchanges of educators and researchers.

9. Facilitate spin-outs from technical and scientific institutions, which comprise accelerating the application of science and technology to market through well developed technology transfer offices, establishing strong links between academia, business and entrepreneurs, and facilitating the provision of direct training and/or support programs for entrepreneurs in the process of starting companies.

10. Profile European role models that mean more public recognition vehicles for high-growth entrepreneurs through the media, awards, etc.