Higher Education, Stakeholders and Collaborative Work for Entrepreneurial Learning

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Abstract: Institutions of Higher Education can provide, in their internal environment, entrepreneurial learning opportunities for students stimulating new attitudes and behaviours towards entrepreneurship. The Portuguese universities have diversified their strategies to promote formal, informal and non-formal entrepreneurial learning that can be encouraged in various strategies. The participation of key actors and stakeholders involved in awareness, mentoring and project implementation of the entrepreneurial learning process is crucial for collaborating work in a competitive world. Moreover, obtaining employment is increasingly dependent on not only the potentials of individuals, but also, and even more, the ability to build solid networks of partnerships in science and innovation and employment. Within the scope of the ongoing project "Entrepreneurial Learning, Cooperation and the Labour Market: Good Practice in Higher Education" this paper aims to highlight the importance of non-formal and informal learning and to contribute to the reflection regarding added value of inter-organizational cooperation and collaborative work.

Keywords: higher education; non-formal and informal entrepreneurial learning; stakeholders; collaborative work

1. Introduction

This paper intends to stress both the relevance of entrepreneurship programmes and experiences related to non-formal and informal learning processes place in higher education in order to develop entrepreneurial skills among (under/post) graduates. Besides this, the direct participation of the main academic stakeholders will be taken into account in the analysis of the collaborative work in entrepreneurial learning. Specifically, we intend to study to what extent they are involved in the process of design, implementation, monitoring and evaluation of those entrepreneurial experiences and programmes. It is well-known that the success or failure of entrepreneurial learning and obtaining employment are increasingly dependent on not only the potential of individuals, but also, and even more, the ability to build solid networks of partnerships in science and innovation and employment.

The recognition of this societal and cultural level underlining entrepreneurship education his been visible in the *Europe 2020 strategy* and in the *European Entrepreneurship Action Plan 2020* (EC 2006; EC 2012a), which highlights the importance of entrepreneurship education. Additionally, major results of an important study among alumni of Higher Education Institutions (HEI) in Europe (EC 2012b), related to the effects and impact of entrepreneurship programmes in higher education, have stated that entrepreneurship education has a positive impact on the entrepreneurial mind-set of young people, their intentions towards entrepreneurship, their employability and on their role in society and the economy.

Hence, entrepreneurship has been assumed as one of the possible, and alternative, ways of accessing the labour market, both visible by Community directives, as well as national policies, and program guidelines by training institutions, including HEI (Marques & Moreira 2013; Amaral & Magalhães 2002). Therefore, the institutions of higher education have been developing creative and entrepreneurial attitudes and skills in their students in order to promote their employability. Thus, they must adopt new models and methodologies to teach entrepreneurship that encourage suitable attitudes and behaviours in young entrepreneurs and new life skills (e.g., flexibility, creativity, problem solving, and dealing with uncertainty) regardless of their scientific area of study.

Although entrepreneurship education is relatively new and under-developed in many national contexts in the training of teaching professionals, some countries such as Belgium, Finland and Sweden have already recognised its importance and integrated this dimension into their school systems. This means that the acquisition of knowledge, skills and entrepreneurial attitudes can be developed in the context of educational institutions and articulated in various curricula. On the other hand, these attitudes, skills and values can be also encouraged in many other ways in terms of informal and non-formal strategies. This includes internships

and mobility experiences, participation in various civic associations and initiatives (e.g. workshops, "ideas competitions" and awards programmes), as well as other scientific, cultural and social events. These strategies can be important to enhance chances of success in the transition to the labour market: finding a job, pursuing a long-term career and realizing future professional potential. In this way, institutions of higher education can provide, in their internal environment, entrepreneurial learning opportunities for students stimulating new attitudes and behaviours towards entrepreneurship (Matlay 2009), with the involvement of various stakeholders (e.g. students, academics, researchers, technical staff and policy-makers).

Within the scope of the ongoing project "Entrepreneurial Learning, Cooperation and the Labour Market: Good Practice in Higher Education" financed by POAT – ESF, this paper aims to pursue the following objectives: 1) to systematize the main stakeholders and key actors responsible for entrepreneurship and support existing infrastructures in HEIs in recent years; 2) to characterize their modes of organization, operation and scope of collaboration/partnership network activities in order to examine their dominant modus operandi; 3) to assess the level of their involvement in all stages of design, implementation, monitoring and evaluation of entrepreneurial programs in order to identify the main constraining factors and potential for inter-organizational collaboration. Therefore, we intend to contribute to the reflection regarding the added value of inter-organizational cooperation in the development of public policies in education and training, networks of circulation and transfer of knowledge, support and, supporting the transition to the labour market.

This paper is structured into three main topics of discussion. As for the first topic, the differences between formal, non-formal and informal entrepreneurial learning are briefly presented. This discussion emphasizes the importance of assuming a comprehensive meaning of "entrepreneurial spirit" in order to build an academic entrepreneurial ecosystem. In the second topic, we emphasize the collaborative work between the key actors and the various stakeholders, their forms of organization and scope of collaboration. The third topic, we present the ongoing research project and its objectives (main and specific ones). Some considerations regarding the methodological design will be also pointed out. Finally, in the fourth topic, some preliminary findings of collaborative work performed by main academic stakeholders are discussed.

2. Formal, non-formal and informal learning

This paper focuses only on non-formal and informal learning in an academic context and we assume that learning, acquired through previous work experience, participation in social networks and mentoring schemes can have positive implications for the development of the entrepreneurial potential of students and graduates (EC 2012b). This perspective is based on the concepts of "Learning Society" and "Lifelong Education" and it is closely linked with the development of a new educational paradigm aiming to enhance learning opportunities and new applications of knowledge in organizations of all types and in all spheres of life (Gibb 2005).

The recent literature highlights a range of programmes/ experiences as well as infrastructures and services related to entrepreneurial learning yet involving formal, informal and non-formal strategies (Marques et al. 2014; Werquin 2007; Werquin 2012; Ferreira 2011; Gibb 2002; Gibb 2005; Greene & Rice 2002). However, it is important to point out the differences between these expressions because their meaning and applications are diverse and, in a certain way, controversial.

On the one hand, there is a variation between countries in defining goals and outcomes for these types of learning which has contributed to some controversies on this subject as well as conferring great complexity regarding its implementation in the educational context. On the other hand, the prevailing explanations are closely related to theoretical debates about the nature of formal, non-formal and informal learning which, despite sharing common aspects, reveal many differences regarding the conceptualization, limitation and use of these terms. For instance, formal learning is organized by the school or university. It is intentional from the learner's point of view; provides a certificate. Usually, this kind of learning is organized into curricula content and linked to an academic degree. In contrast, informal learning is not organized, has no learning objectives and is not intentional. According to Werquin (2012) informal learning results from daily activities of individuals at work, in the family or in the community, usually unintended, and therefore called "experiments".

Non-formal learning is located somewhere in a continuum between formal and informal learning. In other words, non-formal learning takes place alongside the education and training systems and does not necessarily lead to formalized certificates (EC 2000). Therefore, we might include a wide range of personal and

professional development that occurs through participation in internships or work experience, extracurricular activities, youth associations, mobility programs, organizing events, volunteering, among others. Therefore, a comprehensive meaning of entrepreneurial learning of "entrepreneurial spirit" is assumed throughout this paper, namely: *i*) by highlighting skills, attitudes and behaviour of creativity, innovation, and risk taking which are applied in all areas of professional and private life; ii) by underlining social and cultural dimensions of entrepreneurial learning in order to transcend both economic/ managerial and psychological/ individual perspectives only focused on business opportunities/ business creation; *iii*) and by fostering entrepreneurial education in the broadest sense.

Furthermore, the recognition of non-formal and informal entrepreneurial learning of (under/ post) graduates has been observed in various projects and good practices developed in the context of European higher education. Initiatives such as *Education Unlimited! Youth and Unemployment*, *Young Enterprise project* and the *Junior Achievement young Enterprise*, among others, have contributed to providing visibility to the positive impact of non-formal learning as a useful strategy for transition to the labour market.

In the case of higher education, the *Bologna process* places particular emphasis on non-formal learning by encouraging the validation and recognition of skills (Europass); the flexibility of the curricula (e.g., internship, studying in part-time, training courses); and the academic mobility (Erasmus). Also, it is important to draw attention to the increasing involvement of universities in innovation activities and knowledge transfer. Indeed, recent developments in the entrepreneurial education have demonstrated that the involvement of various stakeholders has created a positive dynamic in the context of HEI. This dynamic may be observed at two levels: firstly, by strengthening entrepreneurship linked to innovation, technology transfer and entrepreneurship which implied the creation of new academic structures and entrepreneurship/ employment interfaces (e.g., offices of entrepreneurship/ integration into active life; centres of entrepreneurship, innovation centres transferring knowledge of entrepreneurship, entrepreneurship clubs), in close coordination with various stakeholders to support entrepreneurial learning (e.g. business, trade and industry associations, local communities, NGOs). Secondly, by increasing supply of extracurricular activities providing support and knowledge resulting from practical experience and networking skills of different key actors.

3. Collaborative work in higher education

In the last decades the OECD (2000) have referred to the significant and vital role of the collaborative work between the market and HEI, in stimulating the creation of new industries, as well as retention of skilled human/ social capital. In addition, Pinho and Sá (2013) corroborate these strategies and argue that entrepreneurship has been seen by the EU, and by the national and local governments as one of the key factors to promote employment, growth and competitiveness. According to these authors, these concerns are related to their financial sustainability; thereby, they have implemented various plans and strategies directed to the production of scientific knowledge through inter-institutional cooperation in three dimensions: institutions of higher education, government and private entities.

Although HEI and market dynamics are at different stages and with different management models, government policies have supported and backed the potentials of HEI in the transformation and growth of knowledgeable societies (Etzkowitz et al. 2000). In order to explain the dynamics between these three key factors, these authors have developed the triple helix model - university, industry and government - that overcomes the above institutional dynamics, trying to reconfigure their relationship and inherent forces. These three helixes interlink increasingly their practices and actions in different stages of innovation, entrepreneurship and knowledge production. The increasing transformation of the role of HEI is based on two trends: 1) the production of knowledge as an engine that promotes growth and socio-economic progress; 2) the ability to predict and project future trends and their consequent implications for society. As Marques, Caraça and Diz (2006) state the triple helix is founded on a new configuration model which consists in the integration of several forces at the heart of innovative systems. These authors assume the triple helix as a spiral model, characterized by close and meaningful relationships between three inter-institutional key actors, giving relevance also to the role that HEI play in the current societal progress. Etzkowitz et al. (2000) stress the important role of each entity, on filling gaps and / or other deviations and vice versa. It is important to have an integrated view of this triple alliance, and especially recognize the inherent cooperation, the community impact and the stimulation of social and economic capital, which in turn also facilitates the process of entrepreneurship (Carvalho et al. 2010).

The HEI have adopted an entrepreneurial and business mind set, reformulating goals for the creation and commercialization of knowledge and intellectual properties (Etzkowitz et al. 2000). Therefore, for these authors, HEI also encompass a third mission related to economic development in addition to teaching and research. The redefinition of the role of HEI stems not only from the internal needs but also from external influences, such as the surrounding socio-economic movements and reinstatement of a knowledge-based society. These authors argue that the entrepreneurial activities of HEI promote regional and national development and, more specifically, improve the performance of the institution and its members. It is also important to point out that the emergence of entrepreneurial HEI arises both as a response to social and economic challenges, as well as the growing importance of knowledge and regional / national development through innovative systems. HEI present themselves effectively as a profitable value grounded in innovation and the transfer of knowledge and technology.

In this context, the HEI fulfil an important role in contemporary societies by creating strategies to confront the constant socioeconomic changes and the expectations of its citizens. In order to improve the quality of HEI, the institutions seek to satisfy three stages: 1) teach and educate; 2) research and innovate; 3) knowledge transfer and serving the needs of the community. The last topic includes knowledge management, cooperation with different community entities and questions the position that HEI hold in societal development. Therefore, the mission of HEI goes further than just teaching and researching, to reinforce their position in knowledge transfer to the labour market and in the service to the community. These new functions can simply be introduced and conducted through the establishment of a partnership and a network (Maric 2013).

For Carvalho et al. (2010), HEI should identically promote in their internal environment, the establishment and maintenance of an entrepreneurial ecosystem between the different stakeholders involved. HEI should therefore consider three essential dimensions to promote entrepreneurship: 1) curriculum units presented in formal courses and educational backgrounds; 2) extracurricular activities at regional, national and international levels, involving various stakeholders and, seek to enhance entrepreneurial culture; 3) structures to support entrepreneurs, to transfer knowledge to the market and promote local/ national development initiatives. In this way, the collaborative dynamics of HEI may be observed at two levels: firstly, by strengthening entrepreneurship linked to innovation, technology transfer and entrepreneurship which implies the creation of new academic structures and entrepreneurship/ employment interfaces (e.g., offices of entrepreneurship/ integration into active life; centres of entrepreneurship, innovation centres transferring knowledge of entrepreneurship, entrepreneurship clubs), in close coordination with various stakeholders to support entrepreneurial learning (e.g. business, trade and industry associations, local communities, NGOs); secondly, increasing the supply of extracurricular activities which provide support and knowledge resulting from practical experience and also, the networking skills of different key actors.

4. Presentation of project Link.EES: Objectives and methodological design

4.1 Objectives

The ongoing project "Link.EES **-** Entrepreneurial Learning, Cooperation and the Labour Market: Good Practice in Higher Education" is funded by The Operational Programme of Technical Assistance and by the European Social Fund (OPTA – ESF). This project has been developed in the Research Centre for the Social Sciences (CICS/UM) and the academic spin**-**off, MeIntegra Lab (cf. site www.meintegra.uminho.pt), whose main mission is to provide scientific research on professional transition and entrepreneurship policy related to students and graduates from HEI. Besides this, some services related to specific training, consulting and mentoring/ coaching are also provided.

This ongoing research project is based on a dual focus. On the one hand, the extensive mapping of programmes and experiences of entrepreneurial learning carried out in the academic context aims to support the identification of a set of good practices and a repertoire of entrepreneurial skills that will be the subject of more detailed studies with the direct participation of key stakeholders. On the other hand, we intend to assess collaborative work of the direct participation of key stakeholders in entrepreneurial learning. Specifically, we intend to analyse to what extent they are involved in the process of design, implementation, monitoring and evaluation of those entrepreneurial experiences and programmes.

The main goal of this project is to set out the importance of non-formal/ informal entrepreneurial learning in the academic context. The specific objectives are: 1) to map the experiences of non-formal/ informal entrepreneurial learning undertaken from 2007 to 2013 in public higher education in Portugal; 2) to characterize the graduates' profile (e.g. gender, age, social backgrounds, scientific area of study) who have participated in these experiences; 3) to identify a set of best practices in higher education; 4) to present a repertoire of entrepreneurial skills; 5) to reflect on the added value of cooperation and collaborative work of key stakeholders (e.g. transfer and knowledge circulation, network mentoring, supporting the transition to the labour market).

4.2 Methodology design

In the first phase, the methodology used in the present study focused on the exhaustive search of experiments and entrepreneurial initiatives of non-formal and informal learning of Portuguese HEI, through the information available on the Internet. This preliminary step is of particular importance in this study, firstly because so far there has not been a systematization of the major stakeholders involved in the academic context, regarding, for example, the number of entities, the statute assumed, the continuous mission, the focus of intervention regarding non-formal learning for entrepreneurship, existing partnerships, among others. Then, using this mapping it is possible to prepare the subsequent phase of analysis of operating modes and organization of these stakeholders in the field of entrepreneurial learning. Finally, it will be possible to deepen our knowledge of the main privileged areas of intervention with regard to programs and entrepreneurial experiences that contribute to non-formal and informal learning in academic context.

Hence, having already identified the eligible entities, a telephone contact was made in order to deepen and obtain complementary information, create links and involve actively stakeholders in the construction and development of the project. These collaborative dynamics enabled also the identification of other entities that had not been mapped through the first online review and assess the level of involvement of the various key actors.

Thus, the universe of study so far comprises 57 entities, referring both to higher university education and Portuguese polytechnic institutes, from the public sector.

The subsequent study methodology will be divided in three fundamental steps:

Step 1 – application of an online survey that will allow the collection of detailed and consistent information on the universe of stakeholders;

Step 2 **-** selecting 12 case studies of good practices in the institutions of higher education and, consequently, analyse them by conducting in-depth interviews;

Step 3 - building a repertoire of best practices in entrepreneurial skills and their subsequent validation by key actors and academic stakeholders.

5. Entrepreneurial ecosystem of the Portuguese higher education: Preliminary results

5.1 Location of academic stakeholders

The database has been divided by regions according to the Nomenclature of Territorial Units for Statistical Purposes – NUTS II, allowing a first viewing of their location and most significant presence of academic stakeholders.

We can assess that the Lisbon region holds the largest number of stakeholders, being followed by the North and the Centre of Portugal, with 17 and 13, respectively. There is a relationship between these data and the location of the largest number of universities and polytechnics in the country, as well as the dimensions of each structure. This information is supported by a study of (Parreira et al. 2011) referring that the entrepreneurship support structures are located mostly near the major urban centres and have been focused on development of ideas and knowledge transfer of technological basis.

Source: Project Link.EES (2014)

Figure 1: Division of stakeholders by NUTS II regions

5.2 Intervention profile of stakeholders

From the analysis of the information, available on the internet, of the various key actors involved in the entrepreneurial ecosystem of HEI, we assume the existence of three stakeholder profiles. This first approach to stakeholder profiles will be submitted to a further process of deepening and stabilization of its "identity" when carrying out the subsequent phase which concerns the application of an online survey to the universe, which is scheduled for May 2014 (see Step 1 of the project).

To a first set of key actors, the designation of academic profile has been assigned because they integrate organizational structures of HEI and, as such, tend to occupy the physical graphic space of the institutions to which they belong. In this case, it is possible to find a diversity of names and organizational models: offices, units, academies, associations, and centres, divisions of students, junior companies, and clubs. The areas of intervention are equally diverse: insertion into active life, employment and employability, entrepreneurship, research for development, support to innovation, intellectual property rights, and transfer of knowledge.

As for the second set, designated participated profile, it incorporates private-law entities that coexist with the participation of the institutions of higher education, through stocks or capital. The participating entities take the form of non-profit associations, limited liability companies, and cooperatives of services of public interest or foundations. In this context of actors of participated profile there are specific designations already, brand names that somehow impart identity and autonomy from HEI. In this profile we can find designations that reflect different organization models, including parks, centres, institutes, workshops, endowed with autonomy and localized, generally, outside of the immediate vicinity of the academic campuses. The areas of expertise are far more comprehensive, more institutional and less individual than the academic profile, in particular regarding regional development, transfer of technology and science knowledge.

In the third set, which includes the profile of interface, it is possible to verify that the activities of stakeholders focus, above all, on the area of the transfer of knowledge and technology-based knowledge, research centres

for the market specifying the action in the innovation of products and processes. Interface structures promote a dynamic interconnection between HEI and the corporate/industrial tissue, with the aim of bringing the supply to existing needs and fostering economic and social development. The designations do not exhibit great variability, such as: Centre of Valorisation and Enhancement of Knowledge, Study Centre, knowledge and technology transfer workshop, transfer units, start-up and spin-off.

5.3 Stages of non-formal and informal learning: awareness, Training, Mentoring and monitoring

Although the approaches to entrepreneurship in higher education are very diverse, consensually the following regularities in the context of non-formal and informal learning are identified:

In awareness activities we can include the national and international programs agency, or the dissemination of initiatives, promoting events, such as lectures, workshops and seminars, provision of documentation and guides to entrepreneurship, coordination with other actors and creating synergies, promotion of contests of ideas (with recognition by the award of prizes), interface with private entities.

The training activities focus on providing/offering tools necessary for the development of an entrepreneurial idea, business plan, such as specific training, workshops, seminars and conferences aimed at obtaining specific skills.

The mentoring and monitoring are related to the creation of an area of incubation and acceleration, as well as in monitoring, consulting and coaching of ideas and projects. These stakeholders promote interconnection between the academic space, students/graduates and business/work.

Table 1: Phases of entrepreneurial learning by stakeholders

Phases	Nº
Training	1
Awareness + Mentoring and Monitoring	4
Awareness + Training	6
Training + Mentoring and Monitoring	6
Awareness	9
Mentoring and Monitoring	13
Awareness + Training + Mentoring and Monitoring	14

Source: Project Link.EES (2014)

Of stakeholders present in the universe of the study we can ascertain that 14 direct their attention to focus their action in the promotion of entrepreneurship, the formation of entrepreneurial skills and monitoring the development of ideas and projects. There are also 13 stakeholders related solely with the mentoring and monitoring and 9 with awareness. It has not been possible to obtain concrete information about 4 entities.

Therefore, it is assumed there is a growing focus on training activities, which are aimed at providing students and graduates with tools and resources essential for the construction of entrepreneurial ideas and projects, as well as on monitoring and in building bridges with the market. Portuguese stakeholders seek also to direct the goals for the implementation of awareness-raising activities and promotion of entrepreneurship, in order to contribute to the change of mentalities and to the livelihoods of a culture and an entrepreneurial spirit.

Some final remarks

The non-formal and informal education has been stimulated by the EU, being seen as a crucial learning for the development of personal, social and professional competences and attitudes of the (under/post) graduates, namely in the entrepreneurial areas. The non-formal and informal learning can enhance the entrepreneurial spirit of the (under/post) graduates, and consequently, motivate them to participate in entrepreneurial activities.

In Portugal, the academy has sought, according to European and national policy guidelines, to enhance entrepreneurship among students and graduates, as an instrument to fight the problems associated with the economic situation, in particular, unemployment of young graduates. Therefore, it denotes an effort of the

academic community deans, presidents, professors, students and alumni) to spread, form and generate entrepreneurial initiatives that produce and transfer to the market a greater knowledge and promote the construction of favourable business climates, both for economic development and social well-being. This entrepreneurial ecosystem has not been built only with the insertion of curricular units in training plans but we can notice a growing importance of non-formal and informal dynamics in HEI. These non-formal and informal learning methods are enhanced through the participation of the community and with the construction of strategic alliances. The Etzkowitz & Leydesdorff (2000) triple helix thesis shows the importance of a strategic alliance between the state, the market/ industry and the academia. These authors, confirm that *"the university can play an enhanced role in innovation in increasingly knowledge-based societies*" (Etzkowitz & Leydesdorff 2000, p.109).

Nowadays, the effectiveness of the creation and production of knowledge, as well as in building entrepreneurial ecosystems depend significantly on the performance of inter-institutional cooperation systems (Marques et al. 2006). It is also important to point out that this triple helix can be sustained in an entrepreneurial ecosystem, focused on the alliance and cooperation between the entities, in order to foster an entrepreneurial culture and mind-set.

The creation of cooperation networks and strategic alliances among the various key stakeholders can increase the competitive advantage of each entity and, especially, spread the knowledge produced locally and nationally to the market. To develop the collaborative work between the various stakeholders it is important to build an entrepreneurial ecosystem that requires a joint effort of all stakeholders and interested parts. Neither the top-down government measures / guidelines nor bottom-up enterprises / academic initiatives can by themselves create an effective and efficiency ecosystem.

Thus, we can conclude that all the parts of the entrepreneurial ecosystem are important for the definition of an entrepreneurial mind-set and culture between the (under/post) graduates and their involvement in the non-formal and informal activities enabling them to have a major capability and possibility to integrate the labour market and fight the social exclusion.

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