

Stakeholders and Cooperation in Higher Education Institutions

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In the recent years, Portuguese universities have diversified their strategies to promote entrepreneurial education among (under/post) graduates either through formal education or non-formal and informal activities. These activities are undertaken by different higher education stakeholders and key actors that may contribute to the construction of an entrepreneurial ecosystem and to raising the entrepreneurial spirit in (under/post) graduates. Therefore, it is possible to assume that the success of entrepreneurial learning can be related to the establishment of solid links and partnerships between higher education institutions, the government and the current labour market. From the ongoing project "Link.EES – Entrepreneurial Learning, Cooperation and the Labour Market: Good Practices in Higher Education" (POAT – ESF) we intend to contribute to the reflection regarding the added value of inter-organizational cooperation between the different entrepreneurial stakeholders involved in non-formal and informal learning in Portuguese Higher Education and the their impact on regional and national development.

Keywords: Higher Education, Entrepreneurial Learning, Inter-organizational cooperation, regional and national development.

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W ostatnich latach uniwersytety w Portugalii zdywersyfikowały strategie propagowania nauki przedsiębiorczości wśród studentów studiów licencjackich i magisterskich – albo w ramach edukacji formalnej, albo w ramach zajęć pozaformalnych i nieformalnych. Działania te podejmują różne strony zainteresowane szkolnictwem wyższym i kluczowe podmioty, które mogą przyczyniać się do budowy ekosystemu przedsiębiorczości oraz pobudzania ducha przedsiębiorczości wśród studentów. Można zatem założyć, że powodzenie nauki przedsiębiorczości wiąże się z utworzeniem trwałych powiązań i partnerstw między instytucjami szkolnictwa wyższego, rządem i obecnym rynkiem pracy. Na podstawie bieżącego projektu "Link.EES – Entrepreneurial Learning, Cooperation and the Labour Market: Good Practices in Higher Education" (POAT – ESF) (Link.EES – Nauka przedsiębiorczości, współpraca i rynek pracy: dobre praktyki w szkolnictwie wyższym) zamierzamy przedstawić przemyślenia na temat wartości dodanej współpracy międzyorganizacyjnej między poszczególnymi podmiotami zaangażowanymi w pozaformalne i nieformalne uczenie się w ramach szkolnictwa wyższego w Portugalii oraz ich wpływu na rozwój regionalny i krajowy.

Słowa kluczowe: szkolnictwo wyższe, nauka przedsiębiorczości, współpraca międzyorganizacyjna, rozwój regionalny i krajowy.

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1. Introduction

This paper intends to highlight the importance of informal and non-formal learning related to entrepreneurship programmes which have been taking place in Higher Education Institutions (HEIs), in order to develop entrepreneurial skills and competencies among (under/post) graduate students. We have also taken into account the importance of the stakeholders' collaborative work in the building of an entrepreneurial ecosystem, focusing on the entrepreneurship process design (implementation, monitoring and evaluation). Given the current market crisis, it is well known that students need to find strategies to achieve professional success, which can be related to entrepreneurial activities. However, success depends not only on the potentials of individuals, it also depends on the capability to build solid networks and links between different partners. HEIs are crucial in the construction of an entrepreneurial ecosystem through the creation of synergies between the different academic stakeholders, the market and the government.

Entrepreneurship education is an evident and significant topic in the *Europe 2020 strategy* and in the *European Entrepreneurship Action Plan 2020* (EC, 2006, 2012a). The European Commission also states the positive effects of the implementation of entrepreneurship programmes in HEIs, which enable the creation of a new culture based on entrepreneurial activities and, consequently, raise employability rates and have a strong impact on the society and the economy. Therefore, it is necessary to create synergies and networks and, above all, HEIs play an important role in developing creative and entrepreneurial attitudes and skills in their students in order to promote their employability. Thus, it is important to adopt new models, programmes and methodologies to teach entrepreneurship that encourage suitable attitudes and both technical and transferable skills in young entrepreneurs. Today, the acquisition of soft and transferable skills is vital in the preparation of students for the labour market and, consequently, for their social and professional integration (Gonçalves, 2000; Rey, 2002). As a result, some European countries have already integrated specific programmes for the development of such skills in the *curricula*, which implies that the entrepreneurial mind-set can be taught in an academic context. However, it is also important to enhance non-formal and informal programmes and encourage activities such as internships, mobility experiences, and participation in various civic and cultural associations (Amaral & Magalhães, 2002; Marques & Moreira, 2013).

From the ongoing project "Link.EES – Entrepreneurial Learning, Cooperation and the Labour Market: Good Practices in Higher Education" (POAT – ESF) we intend to contribute to the reflection regarding the added value of inter-organizational cooperation between the different entrepreneurial stakeholders involved in non-formal and informal learning

in Portuguese Higher Education and the their impact on regional and national development.

This article is structured taking into account four essential aspects for the theme discussion. Regarding the first topic, we intend to differentiate the formal, informal and non-formal learning processes and correlate the last two with the construction of an entrepreneurial mind-set. The second topic refers to the cooperation and social networks between Higher Education Institutes and the other stakeholders, such the government and market. We have based this on the triple helix theory to explain how the dynamics are assumed by the three interested parties. The last two topics concern the presentation of an ongoing research project, its objectives (main and specific ones), some considerations regarding the methodological design and finally, some preliminary findings of collaborative work performed by main academic stakeholders are discussed.

2. Formal, Non-Formal and Informal Learning

In this paper, we focus 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 potentials of students and graduates (EC, 2012b). This perspective is related to a new educational paradigm currently existing in Europe, based on the “Learning Society” and “Lifelong Education” concepts that aim to enhance the learning opportunities through all spheres and moments of life (Gibb, 2005; Werquin, 2007).

According to various authors (Ferreira, 2011; Gibb, 2002, 2005; Greene & Rice, 2002; Marques, Moreira, Cairns, & Veloso, 2014; Werquin, 2007, 2012) there are a range of guidelines and programmes as well as infrastructures and services associated with entrepreneurial learning, involving the three types of learning. However, it is important to differentiate formal, non-formal and informal learning because their significance and applications are diverse and, in a certain way, debateable. The inexistence of a unique conceptualization of these learning types and the variation between countries in defining goals and outcomes have given rise to some controversies in this subject as well as conferring great complexities regarding their implementation in the educational context.

In effect, the theoretical debates regarding the definition and characterization of formal, non-formal and informal learning highlight common aspects but also reveal many differences and limitations. For instance, formal learning is organized by the established education system, from elementary school to university, and is characterized by being structured into predetermined curriculum programmes and linked to an

academic degree. It is intentional from the learner's point of view and provides a certificate. On the other hand, informal learning is not organized or structured, thus it does not have any learning objectives or specific programmes. Werquin (2012) refers to informal learning as results from the daily activities of individuals at work, in the family or in the community. Usually, informal learning is unintended and unrecognized by the individuals as a learning process; therefore, it is called "experiments" and is processed in a "natural" form. Non-formal learning is located somewhere in a continuum between formal and informal learning. This type of learning takes place alongside the formal education systems and informal processes, thus it does not lead to a formalized certificate (EC, 2000). It can be included in non-formal learning, in an extensive range of personal and professional development that occurs in a variety of activities, such as internships or work experience, extracurricular activities, youth and civic associations, mobility programmes, the organization of events and volunteer work.

Furthermore, the European Commission, through diverse programmes and guidelines, has been emphasising the recognition and application of non-formal/ informal entrepreneurial learning of (under/ post) graduates through various projects and exchange/ implementation of good practices. These European alignments have contributed to providing visibility to the positive impact of non-formal learning as a useful strategy for the transition to the labour market.

One of the most important measures that have been carried out to emphasize non-formal learning in Europe was the *Bologna Process* which encourages the validation and recognition of skills; the flexibility of the curricula (e.g., internship, part-time studying, training courses); and academic mobility (Erasmus). In the last year, the European policy frameworks and, consequently, the educational systems have paid greater attention to innovation, entrepreneurship activities and the transferring of knowledge through non-formal and informal activities.

3. Collaborative Work in HEIs

The term stakeholder has been commonly used with several designations and conceptualizations, which can imply an inadequate perception and ambiguity (Fontaine, Haarman, & Schmid, 2006). Friedman and Miles (2002) state that an effective study has not yet been made regarding the relationship between the organization and its constituents (stakeholders), focusing on the specific characteristics of each part in a unique conceptual framework. According to Freeman (1984) the traditional definition of a stakeholder is any individual or group who can affect and/or be affected by the mission, values and goals of the organization. Later, Friedman and Miles (2006) argue that the organization is established by several constituents and that the main purpose of the organization should be the creation of value for

their stakeholders, taking into account their needs and interests. Freeman (2004) reshaped his first definition referring to stakeholders as groups that are vital to the survival and success of an organization. Thereby, stakeholders constitute an integral and permanent part of the organization. As a result, with their absence, the organizations would cease their activities. From the perspective of Fontaine *et al.* (2006) this definition, used in 2004 by Freeman, is directed to organizations with commercial purposes. Therefore, academic circles have elected the 1984 definition, which also focuses on the existence and influence of the individual. For these authors this definition aggregates a set of individuals that uphold a relationship with the organization. As Harrison, Bosse & Phillips (2010) stated, the concept of the stakeholder should be extended to incorporate the various stakeholders which affect and constrain the actions and goals of the organization, from mere customers to potential partners. The stakeholders view the organization as the core of a network of actors and key elements and act according to a complex system of exchange and the sharing of services, goods, information, technologies, among others (Freeman, 1984).

HEIs fulfil an important role in contemporary societies by creating strategies to confront the constant socioeconomic changes and the expectations of their citizens. In order to improve the quality of HEIs, the institutions seek to operate at three stages: 1) teach and educate; 2) research and innovate; 3) transfer knowledge and serve the needs of the community. The last topic includes knowledge management, cooperation with different community entities and questions concerning the position that HEIs hold in societal development. In this sense, the mission of HEIs 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). The OECD (2000) have reformulated their strategies and political-legal measures taking into account the growing importance of innovation and the impact of knowledge production in the socio-economic stimulation. Both national governments and local public bodies have sought to offer a wide range of incentives for entrepreneurship programmes at various levels: financial and technical support, training and empowerment programs. The OECD (2000) refer to the significant and vital role of the collaborative work between the market and HEIs 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 consider that entrepreneurship has been seen by the EU as one of the key factors to promote employment, growth and competitiveness. According to these authors, in the last years of the 20th century, most public entities were concerned about their economic and financial sustainability, thereby implementing various guidelines directed to the production of scientific

knowledge through inter-institutional cooperation in three dimensions: institutions of higher education, government and private entities. Also, from Montalvo's perspective (2003) higher education and the market should create a close liaison and appropriate cooperation. This author stresses that enterprises have advantages when approaching the academic world, with the creation of synergies and minimizing the communication gaps between the two sectors. Thus, enterprises should seek to establish connections and get involved in the training of students based on a reoriented vision. Consequently, enterprises play an active part in vocational orientation and should understand that training is not only restricted to technical skills but the development of soft/ transferable skills. From a benefit perspective, when enterprises support this collaborative dynamic they are also maximizing the development of their (future) employees and increasing their competitive advantage and the consequential economic results. Also, Pinho and Sá (2013) argue that the majority of the knowledge has been produced in an academic environment, promoting different initiatives of collaboration and partnership between universities and the market.

For Etzkowitz, Webster, Gebhardt & Terra (2000) HEIs have adopted an entrepreneurial and business attitude in the last decades, reformulating goals for the creation and commercialization of knowledge and intellectual property. The creation of strategic alliances between the various entities instigated the rejection of institutional models based on liberalism and socialism. Therefore, for these authors HEIs also encompass a third mission related to economic development in addition to teaching and research. The redefinition of the role of HEIs 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 HEIs 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 HEIs arises as a response both to social and economic challenges and to the growing importance of knowledge and regional / national development through innovative systems. HEIs present themselves effectively as a profitable value grounded in innovation and the transfer of knowledge and technology.

Despite HEIs and market dynamics being at different stages and with different management models, governments have supported and backed the potentials of HEIs in the transformation and growth of knowledgeable societies (Etzkowitz et al., 2000). In order to explain the dynamics between these three key factors, the authors have developed a triple helix model – university, industry and government – that overcomes the above institutional dynamics, trying to reconfigure their relationship and inherent forces.

In the knowledge-based society, HEIs have become the fundamental element for innovation and the market systems, with the configuration

of new businesses, as well as for the development of human capital. As a result, universities, industry and government interlink increasingly their practices and actions at different stages of innovation, entrepreneurship and knowledge production. The increasing transformation of the role of HEIs 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 the society.

Briefly, the triple helix is founded on a new configuration model which consists in the integration of several forces at the heart of innovative systems (Marques, Caraça, & Diz, 2006). The triple helix is considered by these authors as a spiral model, characterized by close and meaningful relationships between three inter-institutional key actors, giving relevance also to the role that HEIs play in the current societal progress. For Etzkowitz *et al.* (2000) each entity fills gaps and / or eliminates 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, Costa, & Dominginhos, 2010).

Today, the effectiveness of the creation and production of knowledge as well as building entrepreneurial ecosystems depends significantly on the performance of inter-institutional cooperation systems (Marques, Caraça & Diz, 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 mindset. For Carvalho, Costa & Dominginhos (2010), HEIs should identically promote in their internal environment the establishment and maintenance of an entrepreneurial ecosystem among the different stakeholders involved. HEIs 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 enhancement of entrepreneurial culture; 3) structures to support entrepreneurs, transfer knowledge to the market and promote local / national development initiatives. In this sense, the collaborative dynamics of HEIs may be observed at two levels: firstly, 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 The Project Link.EES: Objectives and Methodological Framework

4.1. Objectives

The ongoing project “Link.EES - Entrepreneurial Learning, Cooperation and the Labour Market: Good Practices in Higher Education” is funded by the Operational Programme of Technical Assistance and by the European Social Fund (OPTA – ESF). This project was 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 goal is to provide scientific research on professional transition and entrepreneurship policies related to students and graduates of HEIs. Besides this, some services related to specific training, consulting and mentoring/ coaching are also provided.

The Link.EES project is based on a dual focus. On the one hand, it will create an extensive cross-mapping of programmes and initiatives of entrepreneurial learning regarding non-formal and informal experiences carried out in the academic context. This mapping will support the identification of a set of good practices and enable the construction of a repertoire of entrepreneurial skills with the direct involvement of key stakeholders. On the other hand, we expect to perceive and identify the cooperation and links created in the Portuguese entrepreneurial ecosystem. 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 profile (e.g. gender, age, social backgrounds, scientific area of study) of graduates 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 the collaborative work of key stakeholders (e.g. knowledge transfer and circulation, network mentoring, supporting transition to the labour market).

4.2. Methodology Framework

The methodology used in the present study focuses on both quantitative and qualitative methods, combining them in order to obtain specific and factual information. At the beginning of the project, an exhaustive research of experiments and entrepreneurial initiatives of non-formal and informal learning of Portuguese HEIs was carried out through the information

available on the Internet. This preliminary step was of particular importance, 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 statutes assumed, the continuous goals, the focus of intervention regarding non-formal learning for entrepreneurship and existing partnerships, among others. Therefore, by 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 the academic context.

Hence, having already identified the eligible entities, by way of telephone contacts we sought to deepen and obtain complementary information, create links and actively involve stakeholders in the construction and development of the project. These collaborative dynamics also enabled the identification of other entities that had not been mapped in the first online review and an assessment of existing involvement of the various key actors.

The universe of study comprises 57 entities, referring both to higher university education and Portuguese polytechnic institutes from the public sector. At this moment, we are using an online survey that will allow the assemblage of detailed and consistent information about the stakeholders. The second step of this project is to select 12 case studies of good practices in the institutions of higher education and, consequently, analyse them by conducting in-depth interviews. The final step is building a repertoire of best practices in entrepreneurial skills and their subsequent validation by key actors and academic stakeholders.

5. Entrepreneurial Ecosystem of Portuguese Higher Education: Preliminary Results

5.1. Academic Stakeholders Location

We have decided on a more comprehensive national dynamic to divide the entrepreneurial ecosystem by regions, according to the Nomenclature of Territorial Units for Statistical Purposes – NUTS II. The division allowed an initial viewing of their location and the most significant presence of academic stakeholders.

From this map, we can see 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 this data and the location of the largest number of universities and polytechnics in the country on the one hand and the size of each structure on the other hand. The authors Parreira, Pereira and Brito (2011) express the

view that entrepreneurial activities and entrepreneurship support structures are located mostly near major urban centres, and, especially, that the support structures are related to the development of ideas and transfer of technological knowledge. It will also be our goal to analyze the social networks of these stakeholders in the subsequent phase of our research.



Figure 1. Division of stakeholders by NUTS II regions. Source: Project Link.EES (2014).

5.2. Intervention Profile of Stakeholders

With the collected information available on the internet on the various key actors involved in the entrepreneurial ecosystem of HEIs, we can distinguish three stakeholder profiles. The three types that we are assuming require a validation based on facts that will be gathered and identified when carrying out the subsequent phase which concerns analyses of the data survey.

The first set of key actors has been assigned the designation of an academic profile because they integrate organizational structures of HEIs 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 for innovation, intellectual property rights and the transfer of knowledge.

As for the second set, designated participated profiles incorporate private-law entities that coexist with the participation of the institutions

of higher education, through stocks or capital. These 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 profiles there are already specific designations and brand names that somehow impart identity and autonomy from HEIs. Here we can find designations that reflect different organization models, including parks, centres, institutes, workshops, endowed with autonomy and localized generally outside the immediate vicinity of the academic campuses. The areas of expertise are far more comprehensive, more institutional and less individual than the academic profile, particularly regarding regional development, transfer of technology and scientific 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, and actions in the innovation of products and processes. Interface structures promote a dynamic interconnection between HEIs 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 and include: Centre of Valorisation and Enhancement of Knowledge, Study Centre, knowledge and technology transfer workshops, transfer units, start-ups and spin-offs.

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 programmes 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 way of awards or prizes) and interface with private entities.

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

Of the stakeholders present in the universe of the study, we can ascertain that 14 focus their action on 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

mentoring and monitoring and 9 with awareness. It has not been possible to obtain concrete information about 4 entities.

| Phases | Stakeholders |
|---|--------------|
| 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 |

Table 1. The phases of entrepreneurial learning by stakeholders. Source: Project Link. EES (2014).

Therefore, it is assumed that 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 building bridges with the current labour market. Portuguese stakeholders also seek to direct their goals to the implementation of awareness-raising activities and promotion of entrepreneurship in order to contribute to the change of mentalities and the livelihood of a culture and an entrepreneurial spirit.

6. Final Remarks

Various studies demonstrate the importance of the collaborative work between the different stakeholders and the vital role of these networks in the development of entrepreneurial education programmes. The positive dynamic created in the context of HEIs can potentiate not only the social and professional inclusion of (under /post) graduates but also economic development. This strategic alliance and network act in a dynamic environment of cooperation, and establish a multiplicity of links which often involve several key players. It is also significant to note that those countries that encourage the creation of cooperation networks and strategic alliances among the various key stakeholders can increase their competitive advantage and, especially, spread the knowledge produced locally and nationally. However, developing an entrepreneurial ecosystem requires a joint effort of all stakeholders. Neither the top-down government measures/ guidelines nor bottom-up enterprises/ academic initiatives can by themselves create an effective and efficient ecosystem.

As already stated, entrepreneurship has been assumed by all stakeholders as one of the possible and alternative ways of accessing the labour market and achieving professional success. These strategies are visible and implemented by community directives, national policies and training programme guidelines (Amaral & Magalhães, 2002; Marques & Moreira, 2013). Thus, it is imperative not to forget the importance of non-formal and informal learning in building an entrepreneurial mind-set and culture. As Vogel (2013) stated, it is also important to build an entrepreneurial culture and mind-set to successfully develop an entrepreneurial ecosystem. Therefore, besides the insertion of some units in the formal academic curriculum, HEIs can potentiate other forms based on non-formal/ informal learning and thereby play a central role in social and economic dynamics.

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