

## Entrepreneurial Learning in Higher Education: Perceptions, Realities and Collaborative Work from the Stakeholder Point of View

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### Abstract

*In recent years, Portuguese universities have diversified their strategies for the promotion of entrepreneurial education among (under/post) graduates, both through formal education and non-formal and informal activities. Indeed, Higher Education Institutions can provide entrepreneurial learning opportunities for students, stimulating new attitudes and behaviours towards entrepreneurship. In terms of non-formal and informal learning, various types of activity are of particular significance, and include entrepreneurship promotion and skills-based training, as well as monitoring of the development of ideas and projects. These activities are undertaken by various higher education stakeholders and key-actors, who contribute to the construction of an entrepreneurial ecosystem, and increase entrepreneurial spirit in (under/post) graduates. The research reported here is based on the main findings gathered from the ongoing project "Entrepreneurial Learning, Cooperation and the Labour Market: Good Practices in Higher Education (POAT-FSE)", focusing particularly on the results of a survey questionnaire completed by a diverse sample of entities linked to Portuguese public Higher Education Institutions (HEIs) and working to promote non-formal and informal entrepreneurial activities, as well as a set of case studies carried out regarding examples of best practice in Portuguese Higher Education. In doing so, this paper aims to highlight the importance of non-formal and informal learning, and to contribute to reflection on the added value of inter-organizational cooperation and collaborative work.*

**Keywords:** Higher Education; Labour Market; Non-formal and Informal Entrepreneurial Learning; Stakeholders; Cooperation and collaborative work.

### Introduction

This paper aims to explore the importance of non-formal/ informal entrepreneurial learning within an academic context. It also aims to understand the role of academic stakeholders in the process of designing, implementing, monitoring and assessing these entrepreneurship promotion experiences and initiatives, focusing on the collaborative dynamics created between them.

Today, stakeholders agree that the success of entrepreneurial learning depends not only on the learner's skillset, but also the ability to build solid partnership networks in fields such as innovation, technologies and employment. Recent studies on the impact of entrepreneurship training in the academic context underline the positive effects of entrepreneurship education on student and graduate mindsets, on their attitude towards entrepreneurship, their employability and their general role in society and the economy (EC, 2012).

Entrepreneurship is increasingly becoming an alternative means of entering the labour market. This increased significance and visibility is reflected in both European and Portuguese directives, particularly those aimed at Higher Education Institutions (HEIs) (Marques, Moreira, 2013; Amaral, Magalhães, 2002).

With this in mind, several Higher Education Institutions have placed an emphasis on programs, strategies and initiatives which aim to stimulate a creative attitude, as well as developing entrepreneurial skills among their students in order to improve their chances of finding employment. New entrepreneurial learning models and methodologies (as well as more general skills, such as flexibility, creativity and problem solving), have been adopted in order to foster the necessary attitude and behaviour among students. Such models and methodologies also take into account their field of study and training.

Although entrepreneurial learning is a new, underdeveloped trend in some areas, countries such as Belgium, Finland and Sweden have understood its importance, including it either in programs of study, or in teacher training. This enables HEIs to foster the acquisition of entrepreneurial knowledge, skills and attitudes, chiefly by integrating this into existing programs.

However, these attitudes and skills may also be encouraged in different ways, including informal and non-formal strategies to promote entrepreneurial learning. These include internships, international mobility experiences, participation in civic associations and numerous initiatives (such as workshops, idea contests, entrepreneurial prizes, etc.), as well as other cultural, social and scientific events. It is believed that these strategies could play an important role in increasing a student's prospect of making a successful transition to the labour market.

The latest studies in the field of entrepreneurial learning demonstrate that the involvement of several stakeholders has created a positive dynamic within the HEI context (Matlay, 2009). This dynamic means that entrepreneurial learning has been strengthened in terms of innovation, technology transfer and business creation. This direct stimulation was accompanied by the establishment of new academic structures and interfaces in the field of entrepreneurship/employment (for example, entrepreneurship offices, entrepreneurship centres, innovation and knowledge transfer centres, entrepreneurship clubs), which work in close collaboration with several stakeholders (e.g. business, industry associations, local communities, NGOs) to support entrepreneurial learning. This has led to increased provision of extracurricular activities and aid, providing students with knowledge acquired by these key players from practical experience and skills networks.

## **1. Link EES research project: general lines of investigation, objectives and methodological design**

### *1.1. General lines of investigation and objectives*

Although numerous initiatives and entrepreneurship programs exist, to our knowledge, no study carried out in Portugal has placed a focus on the analysis of non-formal and informal learning, in order to understand its potential for entrepreneurial skill development - something which could make a difference to the daily lives of young people, in terms of their access to, and growth within, the job market, or, alternatively enable them to build a career based on self-employment, or found their own company.

The overarching aim of the Link.EES research project is to help give non-formal and informal learning renewed visibility and relevance, based upon paradigm of lifelong entrepreneurial education. It is understood that non-formal and informal learning takes place alongside education and training systems (EC, 2000). In practice, this type of learning is dynamic and, as such, covers a wide range of initiatives to enable personal and professional development. These may encompass various rationales and objectives in terms of student/graduate training, including awareness raising (for example, through participation in internships or other professional experiences, extracurricular activities, youth associations, mobility programs, events organization and volunteering, among others); specific training for self-employment/ starting a business (courses or training modules); and mentoring and monitoring of the execution of projects (for example, incubation, mentoring, technical and expert advice).

The study presented in this paper was the result of extensive mapping of non-formal and informal experiences and entrepreneurial learning initiatives between 2007 and 2013. It is based on a dual approach, looking at: (i) non-formal and informal entrepreneurial learning within existing HEI entrepreneurship programs and their ability to generate the relevant entrepreneurial skills sought by the labour market; (ii) the collaborative dynamics of the various key actors and stakeholders in the three planned phases of the entrepreneurial learning process, and their degree of involvement in entrepreneurship programs from their design and implementation, to the monitoring and evaluation of entrepreneurial experiences, in order to understand the main constraining factors and the inter-organizational capacity for collaboration. Once the mapping phase was complete, an online survey was sent to stakeholders in Portuguese public HEIs, preceded by the selection of twelve case studies to be analysed in-depth through a series of interviews. Finally, using the Delphi technique, we attempted to establish a set of skills considered relevant by the stakeholders for graduates entering the labour market, whether as employees or self-employed/starting their own business.

The principal objective of the study was to underline the importance of non-formal and informal entrepreneurial learning within the higher education context. This general objective was subdivided into a set of more specific objectives such as (i) mapping the non-formal and informal entrepreneurial learning experiences taking place in Portuguese HEIs (2007-2013); (ii) identifying a set of best practices in higher education, i.e. projects/initiatives to promote non-formal and informal learning of entrepreneurship; (iii) compiling a list of entrepreneurial skills from the stakeholder point of view; and (iv) encouraging broader reflection on the added value of the dynamics of cooperation and partnerships between the actors involved.

### *1.2. Methodological design*

The methodological design established in order to fulfil the study objectives was based on triangulation of sources, observational plans and a combination of different investigative techniques over four distinct, but complimentary stages of research.

In an initial exploratory phase, the methodology focused on exhaustive research regarding non-formal and informal entrepreneurial experiences and initiatives taking place within Portuguese higher education institutions, using information available online and on the respective websites of these institutions. This preliminary stage was particularly important in this study, first of all because there was no organized data regarding the main stakeholders involved in the academic context. For example, information regarding the number of institutions, their legal status, mission statement, practical approach with regards non-formal entrepreneurship education, partnerships, etc. was not available. Having completed this initial research, the study currently includes 57 entities, all of which belong to the Portuguese (university and polytechnic) public higher education system. This mapping was also essential at the later stage, when analysing the operational and organizational methods of these stakeholders in the field of entrepreneurial learning.

The rest of the study's methodology is divided into three basic stages, and in this paper only results from the first two steps will be employed. The sequence of the study design is as follows: Stage I - completion of an online survey, enabling the collection of detailed and consistent information about stakeholder contexts; Stage II - conduction of twelve case studies, i.e., selection of entities/experiences considered to be models of the promotion of non-formal and informal entrepreneurial learning and in-depth interviews with their respective key actors; Stage III - compiling of a list of entrepreneurial skills and validation by academic stakeholders.

## **2. Entrepreneurial Learning: cooperation and the labour market - key findings**

### *2.1 Main results of the quantitative component: the online survey*

The study of the quantitative component began with the identification of the heads of existing entrepreneurship programs and support organizations within Portuguese public HEIs (university and polytechnic). At this first stage, 57 agencies were contacted to complete the online survey and a 70.7% participation rate was achieved.

The entrepreneurial ecosystem within Portuguese public higher education was described according to a set of variables: geographical distribution, year of foundation, organizational designation, legal status, existing services, geographic focus of activity, size of the entities (human resources) and evaluation of the autonomy and degree of commitment in relation to the HEIs.

Using the survey data we were able to identify a higher concentration of key players in the North, Centre and Lisbon regions. This concentration profile is consistent with the highest population density, highest density of businesses and HEIs, and greater economic development on a national scale.

In terms of how the actors view their role within the organizational setup, we found that almost half define themselves as an interface/S&T transfer unit (24.4%) or centre/office for innovation and/or entrepreneurship (24.4%). In contrast, only a minority define themselves as an incubator for companies (2.4%), revealing the low level of attention these entities afford to the third stage of the entrepreneurial learning (mentoring and monitoring).

Regarding legal status, more than half are either a school or department of a HEI (university/polytechnic) (51.2%). This is followed by private, non-profit associations (31.7%). These entities are mostly of micro-size when we consider their human resources: 73.2% of these organizations has less than 10 employees.

With regard to the age of the entities responsible for entrepreneurship programs and support infrastructures within HEIs, it was found that more than half of these entities were established in the 2000s. We are, therefore, looking at relatively young entities, whose first year of activity was between 2001 and 2010. It is worth noting here that just 4.9% of these entities came into existence before the 1980s.

Of the principal services provided by these key players, the most important are as follows: firstly, provision of information on funding, programs and initiatives; secondly, development of entrepreneurship training activities (courses, workshops, e-learning); thirdly, support in submitting formal applications for projects and developing business plans; and, fourthly, conducting awareness raising and information sessions (seminars and conferences).

The data also reveals that in terms of key stakeholders perceptions regarding the functioning and performance of the HEI in which they are employed, most respondents consider their degree of autonomy from the university or polytechnic as being partial (56.1%). Furthermore, 31.7% report that they have little (19.5%) or no (12.2%) autonomy from the HEI to which they are connected, practical and operational terms.

This low level of organizational autonomy goes hand in hand with the high degree of commitment of these entities to designing and carrying out activities in accordance with the mission of the university/polytechnic within which they operate, 70.7% stating that their level of commitment is total.

In this study, we considered it relevant to distinguish the positioning of the entities with regards the three stages of entrepreneurial learning, namely: (i) awareness raising; (ii) training; (iii) mentoring and monitoring (incubators). Information gathered as to how the entities positioned themselves within the three-phase approach to entrepreneurial learning does not follow a clear line. However, there was a greater concentration of positive responses for activities such as (i) organization of information and awareness raising sessions dedicated to the topic of entrepreneurship (92.7%), (ii) organization of entrepreneurship training activities (courses, workshops, e-learning, etc.) (87.8%) and (iii) promotion and/or participation in the organization of idea competitions (85.4%).

That is to say that many of these organizations centre their activity on the awareness raising and training phases, although some activities related to mentoring and monitoring do exist. This finding is hardly surprising, since the activities included in this latter phase are more complex, both in organizational and financial terms, and are often not yet provided by these entities, in part due to their short time in existence.

Three participant profiles were identified in terms of the development of entrepreneurship initiatives: students, graduates and teachers. This finding reveals that there is strong participation from those directly related to the HEIs, with a low number of participants from outside these institutions, particularly those who fall into the category of "professionals".

As for the participant fields of study, there was a clear predominance of participants from engineering, computer science and technology-related areas (30.5%), as well as economics and business studies (19.0%). In other words, we are dealing with study fields which appear to be more aware of the question of entrepreneurship, and which are traditionally seen as the most "entrepreneurial".

We also considered a wide range of organizational factors related to entrepreneurship initiatives, paying particular attention to assessing the adequacy of existing resources for the development of these initiatives, their main funding sources, the degree of participation of the target groups in the various initiatives and, finally, the perception of the entities with regards the impact of the initiatives in place.

In terms of assessing the adequacy of existing resources for the development of current activities, it was concluded that the respondents consider the resources (human, financial, logistics/materials, infrastructure and means of dissemination/disclosure) to be "adequate" or "very adequate". However, this perceived level of adequacy was noted to be lower with regards financial resources and advertising.

Focusing in detail at the area of financial resources, the main sources of funding for the initiatives in question were their own revenues (32.9%), and patronage or sponsorship from private entities (22.0%). Only 7.3% of respondents stated

"transfer of funds from the HEI" to within which they operate as their main source of funding. This figure is curious, especially if we consider the low degree of autonomy from HEIs. Such findings reveal that the high degree of commitment indicated may not be strictly a question of finance, maybe instead relating to other issues, including legal ones.

The entities consider the participation rates of the target-groups to be moderate (58.5%). This assessment may indicate that there is a need for investment in this area, in order to bring about an increase in this rate.

The main problems identified by the key players when implementing these initiatives mainly concern issues such as the management of extended teams, coordination of timings and agendas within the partnerships and collaborations with other organizations, lack of motivation for the subject of entrepreneurship among students and faculty, low rates of student participation in extracurricular activities (partly due to their already high workload), difficulties in mobilizing/involving others, difficulties when advertising initiatives, shortage of resources, including human, financial and material, the complexity of the processes for securing funding for these initiatives, as well as the presence of some resistance to the subject of entrepreneurship.

In terms of the way in which entities perceive the impact of the initiatives in place, they note a significant impact on the following factors: (i) stimulation of a creative and entrepreneurial mindset, (ii) development of entrepreneurial skills and (iii) raising of awareness about support and funding available for entrepreneurship. In contrast, they believe that the impact on the following factors is minor: (i) creation of entrepreneurial support networks, (ii) stimulation of R&D activities and (iii) the emergence of social enterprise/3rd sector.

With regards the main partners, we found that the majority of respondents work in dynamic collaboration with similar units within other institutions/HEIs, with business/commercial/industrial associations and public authorities promoting entrepreneurship, as well as with economic agents/entrepreneurs.

The main advantages of these collaborative dynamics, as perceived by the actors, concern access to broader and more diverse information, improved awareness/marketing of the activities offered by the entities, gathering of knowledge regarding new practices and working methods, and optimization of the available resources and facilities.

Although the benefits of establishing collaborative dynamics are recognized, some difficulties and obstacles concerning cooperation activities were noted. Indeed, 48.8% of academic stakeholder respondents reported having faced difficulties when developing cooperation activities. These included problems regarding communication, management of intellectual property and competitiveness, as well as differing levels of motivation and expectations, different working methods, the different financial capacities of the collaborating entities, different organizational models (time management, schedules, scheduling of activities, institutional goals and mission statements, administrative and bureaucratic procedures), legal, and cultural differences in the case of international cooperation.

## *2.2 Main results of the qualitative component of the study: case studies*

In the second stage of the project, twelve case studies were carried out. The initial selection criteria for case studies were: (i) potential for transferability to other people/ contexts, i.e., demonstrating a "multiplier effect" applicable to different social groups and socio-economic environments; (ii) uniqueness of the initiative, examples demonstrating new forms of innovation (social and technological innovation and services); (iii) examples demonstrating good practice in terms of their ability to rejuvenate more traditional industries, providing added value and/or highlighting new market niches; diversity of "legal/organizational entities" and actor profiles (entrepreneurship club, support office, etc.); (iv) cases in which activities carried out demonstrate the three phases of entrepreneurial learning as established in this study.

In order to prepare a general characterization of case studies, a number of dimensions have been taken into account, including geographical distribution, the main impetus for the creation of these entities/initiatives, the focus of activity, and the operating models of the organizations – as for the quantitative aspects.

In geographical terms, the case studies are again concentrated in the North, Centre and Lisbon regions, confirming the trend revealed in the previous component. As for the motivations for creating such entities/initiatives, respondents suggest that the principal reasons are the need to create an interface between academia, industry and the community; the need to strengthen formal entrepreneurial learning; the need to aid the integration of graduates into the labour market, by developing

skills such as creativity, innovation and entrepreneurship. In some cases, there was also an impetus to reinforce the economic and social potential of regions through the knowledge transfer and technology, and by encouraging the student population to remain in the area after completing their degrees. Another factor was the need to encourage more sustained monitoring and support for companies, ideas and projects originating in HEIs; and to provide alternatives to standard employment.

In some cases, participants also mentioned that entities/initiatives came into being as the result of a favourable political climate, in particular incentives provided by the National Institute of Industrial Property (INPI) to create Support Offices for the Promotion of Industrial Property/Technology and Innovation and Knowledge Transfer Offices (GAPI / OTIC).

In terms of the way in which entities categorize the focus of their activity in relation to the different stages of entrepreneurial learning, we once again noted that they found it difficult to align themselves exclusively with a specific phase. Six of the twelve cases studied consider their activity to be focused on all three stages (awareness raising, training, mentoring and monitoring), and three of the twelve cases consider that the focus of their activities is mainly on the awareness raising and training stages.

In terms of the main forms of organizational operation, specifically the employment structure of these organizations/initiatives, a variety of different situations were identified with regards predominant contractual relationship. On the one hand, in some entities, activities are carried out by permanent full-time employees. On the other hand, according to the annual activity plan, some entities have a low number of employees, which varies over time. In some, personnel carry out their work through research grants and training courses. It is also worth highlighting that many of these organizations stated that their human resources have no direct contractual relationship with the entity, but with the HEIs to which they belong. This is the case with many teachers, researchers and technical specialists who also take on tasks related to these organizations in addition to their core activities. Finally, in some cases, it was noted that activities carried out by these entities relied on the voluntary cooperation of students.

In terms of the size of these bodies, we noticed a great deal of variation. In the case studies, we observed the existence of structures with a minimum of two employees and a maximum of over ninety, which ultimately reveals the different capacities for promoting activity to stimulate entrepreneurship within the HEI context.

As regards internal organizational factors inhibiting more efficient operation, the following, referred to by the key actors, stand out as examples: the dependency relationship with the HEIs (funding and recruitment of personnel); the vulnerability to strategic visions and the centrality given to this issue by the governing bodies of the entities; the lack of technical specialists dedicated exclusively to these organizations/initiatives (strong dependency on the voluntary work of teachers); low budgets for the implementation of activities; and few or no existing examples of the informal monitoring of activities.

Regarding collaborative dynamics, the question of formality when establishing partnerships was raised. Based on the twelve interviews conducted with the heads of the entities, we reached the conclusion that these dynamics are the very essence of their activity. This means, by definition, that their mission statement is based on the creation and establishment of collaborative networks and partnerships.

Such collaboration tends to survive on the basis of a small number of formal agreements and partnerships, with more emphasis being placed on the establishment of informal partnerships, thus highlighting the importance given to informal social relations, which are essential in such dynamics. Likewise, it was concluded that the formalization of these partnerships, either through the establishment of protocols, or through explicit partnership fostering strategy within the organizations, is not a priority for these entities. Furthermore, some difficulties concerning collaborative work were pointed out. These were mainly in relation to the size of networks, i.e., the larger the network of partners involved (within the dynamics of a given initiative, for example), the greater the difficulties associated with the management of time and work schedules, and the management of (differing) expectations and motivations.

Plus, taking into account the intrinsic heterogeneity which has been revealed in terms of organizations, the greater the diversity of partners, the greater the degree of variation there will be between the financial capacities of the entities involved. A final aspect stated as a complicating factor in partnership work relates to competition between peers. In some cases, it was noted that the fact that these entrepreneurship promotion entities have similar aims results in competition, particularly in terms of access to funding and other forms of support services.

In terms of the main partners in collaboration/partnership networks, respondents mainly cited public sector institutions, such as local authorities, the Institute of Employment and Vocational Training (IEFP), the Institute for Support to Small and Medium Enterprises and Innovation (IAPMEI) and the Agency for Innovation (AdI). As for private sector partnerships, the most commonly mentioned were the business community and other private entities aiming to promote entrepreneurship.

With the in-depth component of the study, we aimed to understand the attitudes of the key stakeholders interviewed towards non-formal and informal experience (as opposed to formal). On the whole, it was concluded that the entities studied believe this type of experience to be highly important, arguing that there is a need for investment in the development of this form of learning, in order to address specific weaknesses identified in the training of students and graduates, especially with regards sustained and empirical knowledge of entrepreneurship and entrepreneurial activity in Portugal.

Regarding the role of the HEIs in promoting initiatives/strategies to arouse interest in entrepreneurship among students/graduates, taking place within the academic context, key actors highlight the need to improve communication channels between actors within the university, and between the university and the outside world; greater involvement with companies, notably by incorporating enterprise projects at Secondary School level; the need to promote an entrepreneurial mindset among the faculty; the need to foster greater proximity to the real world, putting students and graduates in contact with entrepreneurs and entrepreneurial networks as well as those who have had less successful experiences, in order to promote better management of frustration and failure; and the introduction of more activities that encourage creativity and idea generation. Finally, they also referred to the importance of "formality", that is, the need to initially encourage HEIs to include courses on entrepreneurship in the curriculum.

### **Concluding remarks**

From the results of this study, we were able to corroborate the importance of involving various academic stakeholders both in the implementation and the promotion of non-formal and informal entrepreneurial learning within the HEI context.

Within what we have identified as the Portuguese entrepreneurial ecosystem in public higher education, these key stakeholders have contributed to the creation of an environment favouring a culture of innovation and entrepreneurship. This is evidenced in the present study by the way they position themselves in relation to the three-phase approach to entrepreneurial learning, namely: (i) in awareness raising; (ii) in specific training; (iii) in mentoring and monitoring of business ideas/self-employment (incubators). From the results produced by our extensive research, it is not possible to speak of an alignment in the positioning of these key actors with regards entrepreneurial learning, given the great number of learning activities put in place between 2007 and 2013. Activities tended mainly to focus on the organization of support sessions; entrepreneurial training sessions (courses, workshops, e-learning, etc.); promotion or participation in the organization of idea contests. Less attention appears to have been given to activities such as mentoring and monitoring of business ideas, which may be explained by the lack of complexity within these entities, both on the organizational and the financial level, (however, such lack of complexity can also be explained by their youth as companies).

Further investigation of a set of 12 examples of "best practices" allowed us to note the increasing transfer of technology and knowledge between universities and R&D centres and the economy and society, as well as increasingly dynamic cooperation between various entities. From the interviews conducted with institutional leaders in the case studies, it was possible to corroborate the existence of inter-institutional networks, mainly with other public institutions such as local authorities, the Institute of Employment and Vocational Training (IEFP), the Institute for Support to Small and Medium Enterprises and Innovation (IAPMEI) and the Agency for Innovation (AdI). As for the private sector, partnerships with the business community and other private entities to promote entrepreneurship were also mentioned.

We believe that this study has the ability to expand our knowledge of non-formal and informal entrepreneurial learning in higher education, and can contribute to new reflection on the actions and initiatives undertaken so far. What's more, it could provide useful information on the enhancement of links between institutions, and the development of new models of governance based on networks of inter-institutional partnerships. Such an approach would be more compatible with future development of Intelligent Strategies (RIS3), based on enhanced collective knowledge, innovation and global, market-oriented skill transfer.

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