

Entrepreneurial university as innovation driver: the Salamanca Summer School case

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Abstract. The aim of this work is to analyse, by a mixed research method, the positive impact of innovative education actions, with a specific focus on the Salamanca Summer School case study. In addition to that, this contribution will further strengthen the literature which confirms the educational and professional impact of innovation-oriented practices, if placed at the core of research and didactics. We will show through different focus groups and questionnaires to a sample of students, teachers and entrepreneurs, how the Universities “third mission” entrepreneurial vocation and its relationship with didactics are well conveyed in the innovative educational experience held at University of Salamanca. A deeper insight is achieved both by using the above said instruments – before and after the experience – and by commenting the action impact. The answers provided are discussed in light of the need for an entrepreneurial paradigm implementation at the university level, as recommended by the “third mission”.

Keywords. entrepreneurship; intrapreneurship; innovation; education; third mission; Summer School

1. University and the ‘third mission’

Since Middle Ages, European universities have facilitated learning and training of students through teaching, thus fulfilling the educational function. Since then, members of academic communities have been involved in the creation of scholarships, a component of work linked to such communities that, with the emergence of the scientific method, is generally known as basic research, or “second mission”. Alongside these two fundamental objectives of training and research, contemporary university departments pursue a “third mission” (Varotto, 2012) linked to the university business model.

The third mission is the direct involvement of university in activities aiming at promoting the valorisation of research results so that these results can maximize the impact on economies and societies (Iacobucci, 2013). Valorisation subjects are the so-called “triple helix”: Universities, Industry, Government. In short, the third mission asks university structures to interact within the socio-economic context by enhancing knowledge valorised by researchers and academics.

Despite its more recent application, the locution “third mission” is not new in recent years: it appears already in the second half of the 1980s, referring to the science communication processes in the public arena and, on the other hand, the attractiveness of funding to be used in applied research and technology transfer activities aiming at marketing the results of the academic research projects. According to the different levels of interaction in the triple helix model (Kitagawa 2015), researchers can become entrepreneurs of their own innovations, but even entrepreneurs can enter into research groups for occasional collaborations or vice versa researchers can enter into companies or start-ups to realize joint venture projects. For over a decade (Shattock, 2005), international debate has contributed to the configuration of the reference field, reaching consensus on its definition, as well as introducing some points (Padfield, 2012) which deserve to be highlighted:

- the image of the relationship between university and enterprise is empowered by the acknowledgment of the social dimension of the third mission. The third mission has three dimensions: Knowledge Transfer and Innovation, Continuing Education and Lifelong Learning, Social Engagement;
- the third mission should not be considered as a mission separated by the academic field, but has to re-define the full range of university activities, differently orienting research and teaching activities;
- the third mission requires a careful evaluation of the criteria used for assessing university activity, tuning already existing indexes and qualitative parameters; this evaluation must bring to a specific result: strengthening the relationships between university activities and the wellbeing of societies.

Although the framework of the indicators and the evaluation methodologies have been drafted, there is not yet a clear identification of the activities to be monitored or indicators that take into account the positive impact of these activities. The direction, however, is clear: the legitimacy criterion no longer depends on the academic position in itself but on its social relevance and on the ability of the academic world to weave a dialogue with companies and non-academic stakeholders. In our country we start to see a general acceptance and greater availability towards academic entrepreneurship, with results that are already significant. Actually, Italian universities strengthen their ability to attract external funding; while a high number of them, into their own organization, structured units engaged with technology transfer, new spin-offs, patents and licensing. In this perspective, academic departments are asked to modify their traditional role from “[...] organizzazioni per la produzione di conoscenza a organizzazioni chiave per la diffusione e la valorizzazione della conoscenza a fini innovativi e imprenditoriali [...]” (Riviezzo, 2012, Napolitano, 2012), engaged in communication and in the dissemination of knowledge through a direct relationship with geographical contexts and stakeholders.

Nevertheless, in Italy, the valorisability of the Green Paper’s guidance is still at the beginning, according to the evaluation implemented by the ANVUR, the National Agency for the Evaluation of the University System and Research. The Green Paper is the result of a partnership made up by several European Universities, cooperating within the framework of the Lifelong Learning Programme, therefore specifically funded by the European Commission. The paper provides guidelines to define the principles and concrete aims of the “third mission”. Its exploitation is still at the theoretical phase, at the dissemination of information on measurable knowledge, innovation through

patents, business incubators, spin-off. This is the reason why a clarification of objectives and methods for evaluating activities is important. Objectives and methods have to go beyond the most easily quantifiable aspects.

The third mission is oriented to the maximum dissemination and accessibility of university production and of knowledge. The new social orientation of research and the IT revolution have given rise to a deep analysis of the meaning of the terms “accessibility” and “diffusion”. The issue involves the debate on transparency and on the free use of research products – especially if research is funded by public funds –, on the transfer of copyright, on the difficulties existing in the dissemination processes of research and teaching products. A few universities disseminate the results of their research. Researchers, on their part, increasingly choose to make the results of their work available online; it is a growing phenomenon, due to personal initiatives and not encouraged by academies. More straightforwardly, the question is how to make the results of university research really “public”, effectively and pervasively.

In fact, according to Farr (1993), the promotion of the public understanding of science is based on the interest of the scientist itself, who in this sense can promote the transmission of knowledge as closely as possible to a faithful representation of the theories originally used. A deeper reflection focuses on considering moving from sharing knowledge outcomes to sharing research: Open Web Science supporters (Nielsen, 2012) think at a research less linked to isolated scholars, in favour of groups that share their work online, gaining vision, power and speed of results.

From this first crucial knot, the third mission should lead to the valorisation of the concept of “technology transfer”, extended to the various activities through which knowledge produced by universities is made available to societies and economic systems, from local to global. The Green Paper itself refers to a “social ecosystem” composed by cities, regions, national communities, supranational institutions. The third mission calls for reconsidering not only the reference target of training proposals, but also the measuring levels of their implementation, with parameters consistent with the reference context. Such an approach is welcomed by ANVUR, which invites each institution, structure, research group, all single academics, to define a profile of commitment at the personal, disciplinary and academic level, depending on national contexts and international references. On this aspect also the area of didactics depends; its international formative contents currently prefer opportunities such as the Erasmus Mundus programme and Summer Schools, at the expense of targeted and coordinated formative courses on a regional or national scale. The third mission calls upon university departments to restore their role of “creators” of territorial knowledge, whose products can be different: from activities implemented with local authorities to sectoral policies at the local, regional or national levels; from education and training projects to educational initiatives in cooperation with schools; from products transferable via technologies to all those products denominated by ANVUR as “community services”.

One of the most recurring terms in the Green Paper is engagement. It highlights that it is necessary to identify the existing social needs and move to a dual process of shared creation and mutual learning. Academics should behave according to the values of inclusion, participation and reciprocity in solving the public questions of a democratic society. The final objectives ask to prepare educated and committed citizens, to strengthen

democratic values and civic responsibility, to address themes of social interest and contribute to public wellbeing. Therefore: engagement means to share and extend the values of teaching activity even outside the academic world. The concerned literature defines different engagement profiles, all desirable: from a more individual and voluntary model to an institutionally structured one (Hazelkorn & Ward, 2012). In the didactic field, “engagement” must be translated into “going beyond the current interaction with social stakeholders”, in other words, going beyond bureaucratic formalities and implementing observational actions on student’s employment opportunities. Engagement requires dialogue, interactions, processes aiming at sharing ideas, analyses, opportunities; it is a journey that requires vision, commitment, leadership, balanced relationships.

One last point, the integrated assessment of academic activity, aims at encouraging the respect of the above outlined principles in each disciplinary field, not only in each university. Differences in terms of objectives, organization and governance systems, with regard to enterprises, require careful consideration of the criteria and actions that should be assessed to verify the entrepreneurial orientation of universities. Currently, the complexity that academic activity produces is not adequately evaluated yet: there is lack of reasonable measuring instruments for both research and teaching. Starting from the assumption that the third mission is not supposed to be additional and subordinate to the first two missions, a review of the evaluation parameters is necessary. This at least implies, on the research side, the careful consideration of the presence of mixed partnerships and of the social impact of projects. On the side of education and training, it implies the qualitative recognition of different and significant values: non-institutional roles with a wider public, such as continuing education and professional training courses, forms of involvement and dialogue with the territories.

Therefore, the third mission cannot simply be understood as a third and ancillary set of unspecified activities; the risk exists of only emphasizing the “utilitarian” dimension and of forgetting the social aspiration highlighted by the European Commission.

2. A case study: “Salamanca Summer School”

The “Summer School” program, which was held in Spain in July 2015 at the University of Salamanca, was born from a common idea of teachers and entrepreneurs, joined by a common denominator, that is to trigger a change in the participants and make a shared and innovative approach to learning, an expression of a model close to that of the “entrepreneurial university” (Audretsch, 2012 & Clark, 2004). On the participants’ side, the motivation to participate is instead supported by the aim of improving skills. It is a five-day training programme, within a seven-day social programme lasted from 18 to 24 July, entirely implemented at the Faculty of Psychology of the University of Salamanca.

Students came from different countries with different profiles. The presence of lecturers, students and teachers from different countries such as Mexico, Italy, Argentina, Spain has allowed us to integrate students into a multicultural framework. The three pillars of the training program were innovation, inspiration and action. The aim was to motivate, encourage reflection, leadership, and improve the skills needed for students and essential to business, to design a training based on technology, creativity, innovation, entrepreneurship. The different kinds of activities aimed at active involvement and

dynamic participation: conferences, workshops, project-works have been designed to produce actual and constant synergies. The approach was to gain the best in terms of development of those skills that catalyse change, optimizing the resources themselves, thanks to tools, games, laboratories, and through the interconnection of all elements, subjects and people.

3. Objective and procedure

The purpose of our activities is to assess and evaluate participants' expectations and satisfaction on the training experience that took place during the "Salamanca Summer School", through a quantitative methodology. The analysis of results allows us to identify the strengths that are essential to the program, to highlight the skills, in a dynamic and engaging training.

In this regard, two different focus groups were conducted, one before the program started, involving university students participating in the Summer School. Among the participants were both students who had previously benefited from entrepreneurial training, and those who had not yet been able to benefit from it. Participants, during the focus group, shared their expectations publicly.

The tool developed with the aim of identifying participants' views was the questionnaire, divided into two time-grids for deepening respectively at a first pre-test stage, and at a final post-test stage. The questionnaires were compiled individually by the participants and online through "SurveyMonkey" software, before and after the Summer School experience.

3.1 Pre-Test phase

40 university students took part in our research and fill in the questionnaire (N = 40, 30 women, 10 men). The age was between 22 and 57 years (Mage = 27.2). At the opening of the program a pre-test was carried out to analyse participants' expectations.

Most of the respondents were women, accounting for 75% of the sample. The questionnaire showed that participants think that self-esteem is the most important competence, followed by communication skills, responsibility, cooperation and organization. Less considered are other important entrepreneurial skills, such as: risk taking, innovation, decision making and learning ability. 68.8% believe that adaptation skills are their most developed competence, followed by teamwork, responsibility and perseverance. Over 43% of respondents hope to develop entrepreneurial skills, including conflict resolution, capacity for innovation, leadership, and decision making. Among the most important competencies that participants want to acquire: with 62.5% decisions making, followed by flexibility and innovation; as before, other skills, including entrepreneurship, are less considered. Based on the answers, the best way to develop skills is to share a space where to share knowledge, followed by specific training through informal learning. 62.5% of respondents think at themselves as entrepreneurs. 56.3% would like to "do business", but 25% believe they lack economic availability. 56% did not work or participate in any business venture. Almost all participants think that the program will have a positive impact on their current position and will help them to develop the skills they

consider to be “key-drivers”. Ten people (62.5%) had never participated in other similar programs, the rest did.

3.2 Post-Test phase

At the completion of the “Salamanca Summer School 2015” program, a post-test with multiple responses was carried out to analyse participants’ impressions at the end of the course. Results, here briefly commented, will be resumed, coupled with those emerging in the pre-test phase, in the conclusions; below the questions addressed to the participants.

1. Which skills did you acquire with this program?

All participants believe that they improved both their ability to cooperate and their openness to the idea of entrepreneurship and self-esteem, but the answers also reveal the poor reception of some of the key entrepreneurial skills. Among the main references, 100% mentioned cooperation, 75% entrepreneurship, self-esteem 68%, communicational skills 56%, leadership 43%.

2. Which skills would you like to acquire by working?

In this case entrepreneurship got all positive remarks, followed at a distance by cooperation and self-esteem. Consistently with the previous responses, there is a disagreement between the concept of entrepreneurship and the skills required for its acquisition.

3. Do you think this course helped you improving your skills?

All respondents, except one, responded affirmatively.

4. Which classes did you find most interesting?

Innovation, entrepreneurship and happiness gained the greatest interest.

5. Do you think the course has had a positive impact on the moment you are living?

All the students state yes.

6. What did you like?

Practical experiences, in-depth topics and community sense gained the most significant appreciation.

7. Would you recommend this course?

All users answered affirmatively and considered significant the usefulness of this type of meeting.

8. Whom would you recommend this course?

It is interesting to point out how the course was properly perceived as appropriate for both entrepreneurs and educators.

9. What issues do you consider useful to improve the program and your stay in Salamanca?

The brevity of the course is absolutely felt as the greatest limit of the experience. This means that there is a further potential for important development.

10. In general, would you say that the Summer School programme met your expectations?

Even in the light of previous answers, the total number of respondents answered positively.

11. Define with three words the “Summer School” experience.

Entrepreneurship, team-work, innovation and happiness are perceived as the source of inspiration.

4. Conclusions: entrepreneurship education and its implementation in the university context

Even though we are aware of the strong limitations imposed on our research, depending from the small sample analysed and from the short duration of the course, the scenario that emerges from the global analysis of responses to both phases allows us to immediately share the assumption that entrepreneurship is a value in itself, a complex competence to be promoted in trained subjects, as it not only fosters the ability to conceive and develop an independent production activity, but above all it fosters the competence to enhance an autonomous, creative, original, courageous approach to life project. It is, as well, clear that the perceived definition of entrepreneurship is still ambiguous, sometimes inconsistent, in the overall set of answers. Despite the difficulties that emerged, it is possible to identify it, declare it and contain it within three main areas of interest: business tools; self-empowerment; “entrepreneurial spirit”. It is clear that the participants were unaware about the ability to identify those “tools” that we define in a peculiar way as the essence of the concept of entrepreneurship. But what instruments are we talking about? As we already stated on several occasions, entrepreneurship is concerned with the development of new or already existing and consolidated business initiatives, but it is the entrepreneurial orientation to define the way in which the entrepreneurial approach is pursued. Entrepreneurial orientation is the way in which entrepreneurship can be seen in its actual “reality”, or in its essence. In this regard, the research of Lumpkin and Dess (1996) identified five dimensions of the concept of entrepreneurial orientation that should be summarized:

- innovation: it covers not only products, services, experiences and markets, but also technologies, administrative systems and strategies.
- Risk propensity: the will to devote resources to projects that are uncertain and manage risk, closely linked to the pursuit of new opportunities.
- Proactivity: the need to anticipate customer needs to achieve a competitive advantage over the competition.
- Autonomy: the ability of an individual or group to act independently in order to achieve an idea or vision.
- Competitive aggression: the company’s propensity to face its competitors directly, even through the adoption of unconventional tools.

We can easily ascertain how these dimensions, while desired in the pre-test phase, appear to be the most neglected in the post-test responses. Although more than 93% of participants believe that they have improved their skills through the participation in the course, in the answer to the question: “Which skills did you acquire with this program?” the ability to innovate, to be proactive, to analyse, and to use trading techniques never exceed 12% of consensus, while risk propensity stands at 0%.

But it is not enough. Referring to the next question “Which skills would you like to acquire by working?”, and excluding innovation that reaches an almost acceptable consensus of 31%, all the other skills range from 0 to 6%. An easy explanation for these results can be obtained by rethinking those temporal and structural “limits” imposed by the course format, that we already mentioned; surely this cannot be an exhaustive answer. Indeed, the absence of “entrepreneurial attitudes”, where by “attitude” we mean that com-

plex of skills that design entrepreneurial orientation, derives largely from the current boundaries of the educational system and – not least – of the university itself; however, more than 60% of the participants have the perception of being an entrepreneur.

Moreover, in relation to learning processes, entrepreneurship refers not only to a profession or career, but even to a cognitive and affective process that aim to increase value of people. It is clear that one of the essential vocations of the Summer School is the psychological dimension, in the sense of personal opening and enrichment: self-esteem, team-work, co-operation, communicative skills. They are all strongly accentuated by sharing an experience, so intense because it's short, multicultural and multidisciplinary. When we asked to define the skills acquired during the program, the participants generally found team-work, self-esteem and communicative skills the areas which they received the best benefits from these skills were considered as primary among the skills they must acquire when entering in the work world. This vision is so acute that we can find it again in the answer to the question "Which classes did you find most interesting?". 75% of respondents answered "entrepreneurial training in its broader sense of teaching to happiness" while, conversely, no participant considered essential to have "the need for an entrepreneur teacher" to learn entrepreneurial talent. The further confirmation we find is where the participants indicated in "happiness" 87.5% of the preferences.

From the dialogue between the two above-highlighted areas, the theme of "entrepreneurial spirit" is clearly expressed as a result of a new and different definition of entrepreneurship education, in which a wider declination must be founded with relation to education and training concepts. Results confirm the need to focus on anti-formality, de-structuring entrepreneurship courses using techniques such as role playing, simulations, exercises and practical projects; enabling students to acquire cross-disciplinary skills such as the ability to think critically, the availability to initiative, the ability in solving problems and actively interacting in team-work, integrating experience in the actual world, through problem-based learning, interaction and links with external actors and businesses. The aim is to come up with a reflection on entrepreneurship as a value, rather than just as an education topic. More than 81% of participants said that "innovative experiences in education" was the most interesting lesson, while the "laboratories" the most engaging activity. Results therefore underline the importance of being committed with a methodology not only based on theoretical knowledge but even suited to the development of an "entrepreneurial spirit". It's important to understand in what direction these efforts should be oriented. Entrepreneurship education should imply the development of certain personal qualities, an expression of "entrepreneurial spirit", even when it is not directly aimed at the creation of entrepreneurs or new businesses.

Thus, the objectives of entrepreneurship training must be concerned with promoting the development of qualities related to entrepreneurship, such as creativity, initiative, risk taking, leadership, accountability. The complexity of contemporary world requires didactic and educational processes that foster new skills, knowledge and values essential to further promote the development of a business potential, not only in an utilitarian sense, but thinking about human being, with particular attention to an education that aims to promote students' autonomy in thinking, evaluating, acting reasonably and analytically, as citizens able to build their own life. As to this specific issue, it is important not to forget the problems faced by the Italian specific situation and the character-

ristics of its universities: «[...] la terza missione stenta a farsi strada ed è penalizzata da tradizioni ideologiche e strutture di governance che sacrificano lo spirito innovativo e imprenditoriale degli ambienti più aperti e dinamici» (Varaldo, 2010).

As already stated, the European Commission should foster convergent approaches to entrepreneurship education, avoid hesitation in supporting the modernization of the university systems, to rethink University in the light of the role that it should fulfil with relation to markets and companies. The Commission refers to the need to bring students' knowledge and skills to cover highly professional employment opportunities and it criticises University for its slowness in responding to the need for change and for the inability to anticipate job market needs. The University seems to be as an "ivory tower" that is poorly integrated with the rest of society and, in particular, with the economic sphere (Gherardini, 2016). Employers and labour market institutions must be closer and closer, work together to the design and implementation of programmes, introduce practical experience in courses, support the integration of educational and training programmes also to the needs of the labour market, promote employability and entrepreneurial skills actually twined with at least knowledge and analytical, synthetical, representational competences, with cognitive and problem-solving-processes.

However, as is well known, the transformation of the University towards the entrepreneurial model is slow and it develops through three distinct phases. At the beginning of this process, the University begins to consider strategically the opportunity to be more involved with the environment and begin to get qualified in this direction. Subsequently, it plays an active role in the marketing of patents resulting from his own research and seeks to promote the creation of spin-offs; in the most advanced stage, it takes a proactive role in improving local innovation systems, often in collaboration with public administration. It seems that the Italian universities have passed the first phase and are concerned, in the majority, with the second; the achievement of the third stage, as well, still appears *in itinere*. At the same time, a significant contribution to the marginal role of university policies and of policies for universities is due to the limited commitment of universities in the third mission. In some cases where significant entrepreneurial results are found, research activities are concentrated in small specialized organizational units or in the actions of individuals. As a result, there is the perception that such policies do not facilitate research enhancement activities.

University is recognised as an agent for economic and social growth. However, the question remains about how the University can effectively improve and support entrepreneurship and participating in creative research activities, in innovative actions and in risk-taking. The reason why the University's contribution to entrepreneurship weakens is in the fact that its programmes focus on entrepreneurial activities rather than on education to entrepreneurship, to creative thinking, to the analysis for innovation. So far, its perception and idea of entrepreneurship education only integrates with and supports a vision linked to the lifelong learning principles. That perception and that idea consider entrepreneurship values as secondary, assume that the market is the only reference point. This way, the entrepreneurship education is exposed to the risk of representing the orthodox expression of a utilitarian system, and of neglecting the social impact and consequences on people's life and education. Considering that University works with a higher number of students than the number of those who actually create businesses, it

would be important to understand what contributions academics can provide and which is the role of entrepreneurship education within the context of universities' mission.

In conclusion, the uncertainty about the significance of entrepreneurship education, the lack of proper preparation of academics, the problematic involvement of entrepreneurs in training courses, the traditional academic assessment of pure knowledge rather than critical thinking and formal / non-formal / informal competences, are only some of the obstacles. Although the demand for more education to entrepreneurship within training courses grows, its absence is visible within the research and teaching fields, within the actual perception of the meaning of human capital.

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