1 Introduction

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The growing entrepreneurship education literature demonstrates the need for additional and robust intellectual foundations, both at the theoretical and methodological levels (Fayolle, 2013; Pittaway and Cope, 2007). Worldwide, the interest in entrepreneurship ranges from macro-economic policy makers, who view entrepreneurship as a potential mechanism to create economic growth, to individuals who pursue entrepreneurial opportunities for their own purposes. Between these extremes, entrepreneurship is viewed as a way to increase the competitiveness of existing organizations (i.e. corporate innovation) (Miller, 1983; Lumpkin and Dess, 1996) as well as a potential method of addressing global social needs (Sarasvathy and Venkataraman, 2011). In response to this growing demand, schools and universities worldwide have emerged with courses, programmes, and fields of study. Incubators, accelerators, and regional ecosystems continue to emerge with the goal to support and increase entrepreneurial activity. Yet, from a theoretical and methodological perspective, a significant gap exists in our understanding of entrepreneurship education. What is it that we ‘know’ and how can we be certain that our knowledge is making a contribution? Specifically, we identify two key issues: (1) what are the current pedagogies and practices, and (2) what knowledge have we gathered regarding the appropriateness, relevancy, coherency, social usefulness, and efficiency of our initiatives and practices in entrepreneurship education (Fayolle, 2013)? The first issue is a call to link deeply and adequately in entrepreneurship education research the fields of education and entrepreneurship, while the second highlights the importance of being connected to the societal demand, in a broad sense, and improving our knowledge about the impact of entrepreneurship education on learning outcomes for both individuals and organizations.

Often in the entrepreneurship education literature, the pedagogies are described, but the papers lack conceptual and methodological foundations, inadequately describe the nature of intervention, and adopt a less-than-convincing critical perspective. Most of the studies focus on *a posteriori* contributions of teaching experiences. Instructor narratives are often based on implicit, taken-for-granted assumptions about learning theories with little reflection, theoretical and didactical knowledge, and time for practitioners’ reflexivity. For example, entrepreneurship educators’ experiences rarely relate to the Bloom or Anderson taxonomy – developed in education to promote higher forms of learning including application, analysis, evaluation, and creation – to define precise entrepreneurial learning objectives for their

programmes or courses. As a consequence, justification for learning activities and appropriate evaluation processes cannot be designed with a constructive alignment perspective (Biggs, 2003).

Considering the current state of knowledge in entrepreneurship education (see, for example, Bécharde and Grégoire, 2005; Edelman et al., 2008; Honig, 2004; Neck and Greene, 2011; and Pittaway and Cope, 2007), we call for a pragmatic and critical approach in the development of future perspectives on entrepreneurship education research (Fayolle, 2013). We highlight the need to develop research focusing on three main dimensions: target, connect and reflect. Target refers to building theoretical foundations. Connect and reflect refer to bridging disciplines and communities (research and practice) and increasing the critical thinking perspective respectively.

In this line of thought, this book is an attempt to promote innovative and to a certain extent provocative contributions aiming at producing knowledge on the three dimensions above. Our intention is to bring a significant value to entrepreneurship education researchers, policy makers and practitioners.

In the following sections, we present the different chapters of the book.

Part I Rethinking entrepreneurship education research

In line with the previous suggestion there is a need to rethink entrepreneurship education research (Fayolle, 2013). In this part of the book we have selected four chapters addressing key research issues and suggesting interesting research perspectives.

In Chapter 2, 'Toward rigour and relevance in entrepreneurship education research', Bruce Martin, Dirk De Clercq and Benson Honig address issues in research centered on the impact of entrepreneurship education. They highlight methodological weaknesses in research design and data analysis, underline a lack of theoretical grounding and use of inconsistent variables to examine the outcomes of entrepreneurship education over time. Based on this, they offer a plan and develop suggestions to improve the quality and usefulness of research in this area. To demonstrate the usefulness of their proposed model, based on the theory of planned behaviour, the authors use a sample and from the results discuss the benefits of the approach they are recommending.

Michela Loi, in Chapter 3, 'Dealing with the inconsistency of studies in entrepreneurship education effectiveness: a systemic approach to drive future research', examines the literature on training effectiveness which offers, from her point of view, a theoretical basis to address the inconsistent results from studies centered on the impact of entrepreneurship education. Based on this literature, the chapter proposes a systemic approach for entrepreneurship education assessment and a research agenda for future research in this area.

In Chapter 4, 'The future of entrepreneurship education: educating for economic and social impact', Patricia G. Greene, Michael L. Feters, Richard Bliss and Anne Donnellon consider that until now academics have focused too much on improving their offerings to degree candidates while business people and particularly those starting and running their own businesses were looking elsewhere for entrepreneurship education. From this point, the authors suggest that academic business educators have much to learn from what is occurring outside of the university and business school walls. To illustrate the learning path of business educators in such context and demonstrate their ability to have a social impact and bring a contribution to economic development, Greene and her colleagues focus on one programme, Goldman Sachs *10,000 Small Businesses*.

Jeffrey J. McNally, Benson Honig and Bruce Martin in Chapter 5, 'Does entrepreneurship education develop wisdom? An exploration', claim that though the development of wisdom is a primary goal of higher education, it has received little empirical attention in entrepreneurship education. They conduct an exploratory investigation into the teaching of wisdom in entrepreneurship education, studying the syllabi of 50 university entrepreneurship courses and examining whether entrepreneurship courses deliver on the potential of wisdom development. They also examine the contents of the most influential entrepreneurship textbooks used in entrepreneurship education classrooms. From their findings, they discuss theoretical and practical implications for developing wisdom through entrepreneurship education.

Part II Learning from European exemplary contributions

The first entrepreneurship courses were offered in the US (Katz, 2003; Kuratko, 2005) from the middle of the twentieth century and the development of entrepreneurship education in Europe came a couple of decades later. However, European researchers have made significant contributions to entrepreneurship education research. The main goal of this part of the book is to illustrate such impact to our knowledge through the role of the European Entrepreneurship Education Award that recognizes individual contributions to entrepreneurship education.

In Chapter 6, 'Exemplary contributions from Europe to entrepreneurship education research and practice', Jonas Gabrielsson, Hans Landström, Diamanto Politis and Gustav Hägg discuss first the evolution of entrepreneurship education, as a new scholarly field, notably by examining its historical and social infrastructure as well as its cognitive development. Then, they present and review the scholarly work and practical contributions of the Award Laureates of the European Entrepreneurship Education Award. Finally, they conclude the chapter with a discussion of their analysis and findings.

In Chapter 7, 'Personal views on the future of entrepreneurship education', Alain Fayolle shares his thoughts regarding the development and future of

entrepreneurship education. He argues that despite the growth of entrepreneurship education worldwide, certain key issues have not been discussed. He develops his two-level argument in three literature reviews on entrepreneurship education: (1) the philosophical level and (2) the didactical level. On the philosophical level, Fayolle argues that entrepreneurship education is rarely defined and conceptualized, and the ontological, epistemological and ethical issues in entrepreneurship education are rarely addressed. On the didactical level, he maintains that entrepreneurship education exhibits too much variation as far as its targeted audiences, its objectives and contents, pedagogic methods, and evaluations of programmes and courses. Fayolle makes two main recommendations for the development of entrepreneurship education. He recommends that the field develop a stronger intellectual and conceptual foundation based in the field of entrepreneurship. He also recommends that researchers and educators take a more critical view of 'taken-for-granted' assumptions about education and reflect more on their practice.¹

In Chapter 8, 'Limits to and prospects of entrepreneurship education in the academic context', Bengt Johannisson assumes entrepreneurship is a processual phenomenon, which he labels 'entrepreneurising'. Given this perspective, he recommends that entrepreneurship education take a different approach to knowledge. Traditionally, management education has focused on universal scientific knowledge that Aristotle addressed as *episteme* and *techne* (i.e., accumulative and generalizable knowledge). However, because entrepreneurs use tacit and situated knowledge, entrepreneurship education should apply competencies in terms of *metis* (i.e., alertness and shrewdness) and *phronesis* (i.e., prudence in action). Johannisson argues that entrepreneurship education in academia can only provide these competencies by encouraging students to travel across university boundaries.²

In Chapter 9, 'The conceptual contribution of education to research on entrepreneurship education', Paula Kyrö develops the issue that Gibb raised in the late 1980s. This is the concern that entrepreneurship education research, practices and policies lack a shared framework to guide related activities (see also Fayolle in Chapter 7). Kyrö argues that we lack a shared framework because of the tendency to draw our ideas from the field of entrepreneurship rather than from the science of education. She argues that entrepreneurship education scholars can learn much from education science and thereby can contribute to the current debate on entrepreneurship education. Her aim is to build a bridge between the conceptual discussion of education science and entrepreneurship. In addition, she wants to bridge the cultural differences in the field, particularly the differences between the Continental (Central European) and the Anglo-American traditions. She argues that this discussion will lead to a clarification of the concepts of 'pedagogy' and 'didactics'.³

Part III Focusing on key outcomes and innovative pedagogies

Pedagogies have often been considered as powerful means to facilitate entrepreneurial learning and a number of studies report on the appropriateness of learning

by doing or experiential pedagogies in entrepreneurship education. The chapters in this part of the book focus mainly on entrepreneurship education from this perspective.

In Chapter 10, 'The reflective novice entrepreneur: from habitual action to intelligent action using experience-based pedagogy as a vehicle for change', Gustav Hägg shares with us his conviction that entrepreneurship requires a pedagogical approach which is action-oriented and experiential. His chapter through a qualitative study provides evidence of the necessity to develop abilities of reflective thinking for developing entrepreneurial knowledge when adopting an experience-based pedagogy. The study acknowledges a pattern, which articulates in a comprehensive way conceptual understanding in the learning process, reflective thinking and the development of skills from the entrepreneurial experiences. Hägg suggests this pattern can help students to increase their abilities in becoming intelligent actors in future uncertain situations.

Thomas Lans, Yvette Baggen and Lisa Ploum in Chapter 11, 'Towards more synergy in entrepreneurial competence research in entrepreneurship education', focus on the concept of entrepreneurial competence and suggest avenues for future research. They develop a discussion of two important questions associated with the concept of entrepreneurial competence, the 'what' and the 'how' questions. Strangely, these basic questions and their theoretical fundamentals receive so far limited attention in the entrepreneurship education literature. Lans and his colleagues show the necessity for designing and doing interesting and useful research on entrepreneurial competence to move from current assumptions and positions to new ones based on modern educational competence and learning theory.

In Chapter 12, 'Learning fictions or facts? Moving from case studies to the impact-based method', Sylvain Bureau notices that a growing number of innovations in entrepreneurship education enable teaching without the case-study method. He argues that some of these innovations not only address recurrent criticism made against business schools but also form a new pedagogical model. He proposes to describe this model as the impact-based method. The impact-based method refers to the ways in which learning is developed by taking steps to change practices and habits existing outside the academic arena. Bureau describes how this approach transforms the traditional business school: the students from heteronomous become autonomous, the knowledge from abstract becomes grounded, the culture from homogeneous becomes heterogeneous and the institution from global becomes local. He finally discusses implications for the organizational model of the business schools.

Antonio Bernal and Francisco Liñán, in Chapter 13, 'The personal dimension of an entrepreneurial competence: an approach from the Spanish basic education context', focus on the concept of entrepreneurial competence and pay a great attention to how it may be developed within the educational system. They propose a tripartite model of entrepreneurial competence and link entrepreneurial competence to entrepreneurial identity. Bernal and Liñán consider entrepreneurial identity as

a necessary mechanism leading to the development of individuals' entrepreneurial self-concept. To illustrate the key role of entrepreneurial identity in the construction of entrepreneurial personalities, the chapter authors analyze and discuss a case based on an entrepreneurship education experience.

In Chapter 14, 'Approaches to entrepreneurship education: a qualitative review and comparison of the US and Canada', Ravi S. Ramani, George T. Solomon and Nawaf Alabduljader present a qualitative review of the state of the field of entrepreneurship education in North America. They examine notably the growth of the field, its attempts to differentiate itself from traditional business education and current learning approaches and methodologies used in the classroom. They also analyze the results of a cross-country survey of over 200 entrepreneurship education programmes in the US and Canada. The results reveal similarities and differences in terms of course content, pedagogies and learning materials used, sources of funding and measures of the impact of entrepreneurship education. Solomon and his colleagues discuss implications of these results and outline future directions for the field of entrepreneurship education.

Conclusion: towards a greater use of critical approaches in entrepreneurship education research

In addition to what the chapters presented above bring to entrepreneurship education research I would like to conclude this introduction by highlighting the necessity for scholars in the field to be more critical in their research.

To me, entrepreneurship education would benefit a great deal in terms of its qualitative development from critical approaches that aim to question the many received ideas and beliefs, sometimes peddled by teachers themselves, as well as the dominant pedagogical approaches whose effectiveness hasn't been scientifically proven. Teaching and training practices could and should be based on what researchers call 'evidence-based education' or 'evidence-based entrepreneurship' – that's to say, on results that have been carefully established from research in education and entrepreneurship. Training and support for entrepreneurs and entrepreneurial candidates could also benefit from the results of this research. In previous works (Fayolle, 2013; Fayolle et al., 2016), we attempted to show the challenges and difficulties facing researchers and practitioners in the field of entrepreneurship teaching. We return to two of them here. The first concerns the lack of theorization in teaching content. Any teaching in the field should clearly be based on knowledge and should aim to teach theoretical content relating to the effects and impacts of entrepreneurship, entrepreneurial processes or any other related issues. For example, psychosocial theories and models of intention could be useful in shedding light on the process of the emergence of intention and commitment in individuals or teams engaged in the entrepreneurial process. Another example might be the use of Prospect theory (Kahneman and Tversky, 1979), which can give a better understanding of the importance of psychological bias, heuristics and the process of

decision-making when faced with uncertainty, and Effectuation theory (Sarasvathy, 2001), which can help students and novice entrepreneurs to break away from the rationality and prediction that generally guide their behaviour. The second challenge (which also corresponds to a widely shared belief) is the exaggeration of the usefulness of certain experience-based pedagogy (learning by doing, project-based learning, etc.) in teaching models, often to the detriment of the theoretical content of a syllabus. The choice of teaching method corresponds to the 'How' in pedagogical questions and should logically be dealt with after the 'Why' – the objectives, and the 'What' – the content. It's clear that teaching is not an end in itself, although teachers often tend to spontaneously promote it as such. Teaching is about achieving objectives. The method can be chosen once the objectives have been chosen and the limitations of the teaching situations have been identified. In the field of entrepreneurship education, there is a wide variety of methods, approaches and pedagogical techniques (Hindle, 2007; Fayolle and Verzat, 2009). A few we might mention here by way of example include students drawing up or evaluating a business plan, developing a business start-up project, supporting young entrepreneurs and carrying out missions to help with their initiatives, interviewing entrepreneurs, simulations with IT, using film and video, behavioural simulations, case studies, problem-solving methods, and lastly, classical lessons.

In our opinion, there is no one perfect method for teaching in the field of entrepreneurship. The choice of technique and methods depends firstly on the objectives, syllabi and limitations imposed by the institutional context. Learning by doing is very often praised by teachers in the field and suits certain pedagogical situations well but can be inappropriate or ineffective for others.⁴ Care should therefore always be taken and all the more so given that researchers are rarely interested in taking a deeper look at evaluations of entrepreneurship education (Fayolle, 2007). There is still no scientific evidence that one pedagogical method is more effective than another. This, without doubt, remains a challenge for coming years. The one thing that we can promote is the usefulness of active pedagogy in entrepreneurship (Fayolle and Verzat, 2009). Problem-based learning in particular, if correctly used (Dolmans et al., 2005), appears to be a very pertinent approach, since the entrepreneur is faced with many dilemmas and problems throughout the entrepreneurial process and must resolve them as quickly and effectively as possible. In each and every case, the choice of method should be supported by or refer to an educational theory. From this point of view, we suggest that entrepreneurship education would do well to look to the works of Piaget (for example, see Honig, 2004) or Freire (1970).

Entrepreneurship is indeed a necessary behaviour critical to economic and social development, and can allow inclusion of marginalized groups (the unemployed, disabled, immigrants, etc.). Yes, it opens the door to individual fulfilment, a feeling of freedom and gives room to consider personal aspirations, preferences, values and objectives, whilst being the key to organizational and institutional transformation and regeneration. But entrepreneurship is not a panacea for all of society's ills (weak growth, rising unemployment, exclusion, transformation of employer/

employee relations, etc.). Entrepreneurship certainly has its good points, but it also has hidden depths and our understanding of it can only really be general and systemic.

Entrepreneurship carries such importance that we must finally and urgently ask ourselves the real questions. In so doing, and through consideration of all the factors that determine the behaviour and success of the people and communities involved in entrepreneurship, we can find collective answers. We can then move away from the prismatic approaches and partisan bias that lead to just one way of thinking – one way, amongst many possible ways, of seeing and acting.

NOTES

- 1 This summary comes from Gabrielsson et al. (Chapter 6, p. 118).
- 2 This summary comes from Gabrielsson et al. (Chapter 6, p. 120).
- 3 This summary comes from Gabrielsson et al. (Chapter 6, p. 119).
- 4 *Learning by doing* seems to be one of a number of active methods (see Fayolle and Verzat, 2009), and in our view, it is the contrast between active and passive methods that deserves further attention in the field of entrepreneurship. Similarly, the question of the degree of autonomy/dependence in the courses offered seems to be of interest. The role of new IT and Communication technologies in giving autonomy to learners is also relevant here.

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