Guest editorial

Under-researched domains in entrepreneurship and enterprise education: primary school, community colleges and vocational education and training programs

Introduction

Entrepreneurship in education has grown exponentially in popularity since the first entrepreneurship class was offered at Harvard in 1947. Over the last 70+ years, the field has grown from one course to more than 5,000 spanning more than 3,000 institutions (Morris and Liguori, 2016). This explosive growth of entrepreneurship in education is not surprising, given entrepreneurship drives economic growth (Naudé, 2010), improves public health (Rhodes, 2012), helps shatter glass ceilings (Belcourt, 1991) and fosters the commercialization of academic research (Charney and Libecap, 2000; Lackéus and Williams Middleton, 2015).

As many would expect, the rapid growth of entrepreneurship in education spurred an equally rapid increase in entrepreneurship education research. Scholars have investigated entrepreneurship education across a wide variety of populations, including children (Athayde, 2009; Dwerryhouse, 2001), graduate students (Nabi *et al.*, 2006), women (Wilson *et al.*, 2007), and veterans (Collins *et al.*, 2014), in addition to studying entrepreneurship education across a wide array of geographies (cf. Ibrahim and Soufani, 2002; Jesselyn Co and Mitchell, 2006; Hytti and O'Gorman, 2004; Mitra and Matlay, 2004; Matlay and Carey, 2007). The dominant body of entrepreneurship education research has revolved around entrepreneurship education at the four-year university level (e.g. Kuratko, 2005; Solomon *et al.*, 2002; Vanevenhoven and Liguori, 2013). The current fixation on four-year university programs allows a subset of educational contexts to dominate the global conversation about entrepreneurship education, thereby limiting the generalizability of the findings and implications.

This narrow focus of entrepreneurship education research has led to several populations being neglected. One such population is two-year community colleges (CCs), a major component of the American education system, representing 1,123 campuses across the nation (National Center for Education Statistics, 2015) and serving over 7m for-credit students annually. Put into context, CCs educate over one-third of the postsecondary student market in the USA. Vocational education and training (VET) programs, which educate a similarly large percentage of the global population, fall into this same research void.

Another neglected population is primary schools, where entrepreneurship is increasingly being integrated, aiming to get an early start in the development of students' entrepreneurial skills. Pioneering work has been conducted in the UK (Jamieson, 1984; Gibb, 1998; Deuchar, 2004), in the Nordic countries (Johannisson *et al.*, 1997; Erkkilä, 2000; Gunnarsdóttir, 2001; Hytti, 2002; Leffler and Svedberg, 2005) and on policy level by the OECD and the European Union (OECD, 1989; European Commission, 2004; Mahieu, 2006). Northern Europe is currently leading the field's development (Eurydice, 2016). In the USA, the last decade has seen an emergence of entrepreneurship-themed high schools (e.g. the Patino School of Entrepreneurship in Fresno, CA). Common practical entrepreneurial activities include creation of mini-companies, idea generation exercises, project work, challenges and collaboration with the surrounding community (Eurydice, 2016; Sagar, 2013; Moberg, 2014; Young, 2014). Given the early stage of both practice and theory in the field, definitions and key terms are dispersed. Currently, the literature is muddled in regard to what constitutes

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entrepreneurship in primary education, what effects it can have, why it is deemed desirable, how to do it successfully and even how to label it (Lackéus, 2015). Educators around the globe are increasingly using the key term "enterprise education," which originates from the UK. Enterprise education leans on a broad definition of entrepreneurship, and aims to develop students' creativity, innovativeness, initiative taking, proactiveness, uncertainty tolerance and perseverance (Bacigalupo *et al.*, 2016; QAA, 2018).

A third neglected population is entrepreneurship residing within programs and courses that fall outside of the traditional business school (e.g. Bodnar *et al.*, 2015; Elert *et al.*, 2015), though efforts such as these remain scarce.

Given the impact of entrepreneurial activity on both economic and non-economic outcomes, the potential impact CC, VET, primary schools and other sources of entrepreneurial training have through providing broader access to quality entrepreneurship and enterprise education may offer economists and policy makers much promise. New entrepreneurship related initiatives are appearing every semester on campuses, in schools and in communities to fill demand. Despite the increase in both demand and subsequent supply, researchers have lagged in their efforts to examine these offerings and their effectiveness. Thus, the purpose of the present special issue is to shed light upon CC, VET or other under-researched entrepreneurship education spaces. We hope that this special issue helps to jumpstart conversations regarding the wealth of diverse entrepreneurship programs, as such conversations are needed to move the field beyond serving the primary sectional interest of traditional four-year university programs.

Entrepreneurship and enterprise education research

Although the majority of entrepreneurship education research is situated within the context of the traditional university setting, researchers have conducted a great number of impactful studies illuminating entrepreneurship and enterprise education in CCs, VET and primary schools. Prior research may provide an initial roadmap for future scholars in flushing out the boundary conditions of entrepreneurial pedagogy across contexts.

A key development of entrepreneurial pedagogy was initiated in the 1980s by Allan Gibb and his colleagues at Durham University's Small Business Centre. Margaret Thatcher's initiative to spur an enterprise culture among British citizens inspired this intiative (Gibb, 1987; Keat and Abercrombie, 1991). Gibb argued for a broader approach to entrepreneurship in education termed "enterprise education." This approach is similar to progressive (or constructivist) pedagogical principles such as action-based, self-directed, team-based and socially situated experiential learning (Kyrö, 2005; Löbler, 2006; Pepin, 2012). Enterprise education was claimed to have been liberated from a limiting business context, deemed to be the main problem behind numerous failed attempts to mainstream entrepreneurship in education (Gibb, 2002). Gibb's broadening of entrepreneurial pedagogy toward entrepreneurial individuals creating value in all walks of life has inspired many other key contributions of relevance to this Special Issue, primarily in Europe and Australia (Hytti and O'Gorman, 2004; Hannon, 2006; Jones and Iredale, 2010; Jones *et al.*, 2012; Rosendahl Huber *et al.*, 2012; Moberg, 2014). Most US-based scholars have instead chosen to keep a narrower business-oriented focus on venture creation as the key defining characteristic of entrepreneurship in education. One argument put forward is that such a focus must remain in order for the field not to be diluted into progressive education (Neck and Corbett, 2018).

Endeavors to understand entrepreneurship and enterprise education across a diverse arena of contexts will not only serve to build our pedagogical knowledge base in regard to other important (nevertheless under-researched) educational settings, but also move the field toward a more complete understanding of a general model of entrepreneurship and enterprise education. In a seminal essay on the topic of context, Johns (2006) remarks upon how context can change the strength and directionality of a statistical relationship. As such, research situated in a variety of educational settings can help to illuminate when and how

the context may play an important role in affecting the utility of pedagogical practices. In addition to contextual effects, building upon our understanding of different types of educational programs is important to elaborating upon our general knowledge because of possible temporal effects upon later education programs. For example, in a meta-analysis of 73 studies that covers an individual sample of 37,285 students – researchers found a positive and significant relationship between university level entrepreneurship education and entrepreneurial intentions (Bae *et al.*, 2014). However, controlling for pre-educational intentions produces an insignificant relationship between university education and entrepreneurial intentions. These meta-analytic findings then beg the question, "where did the pre-educational intentions come from?" One possible answer is that the university students had already been exposed to some type of entrepreneurial training in primary school, CC or through informal means (e.g. working at the family business), and this led them to self-select into the field of entrepreneurship at their universities. With rising costs of tuition, we see more and more students opting to take introductory classes for credit at more affordable CCs and then transferring the credits back to their university. How then might the blending of educational context and timing affect student outcomes? The effects of context and timing are certainly important pieces of the overall model of entrepreneurship and enterprise education, and we cannot fully explore their impact without systematic investigations of all types of entrepreneurship programs (e.g. CC, VET, primary school, non-degree classes and informal training).

About the special issue

This special issue presents six peer reviewed papers designed to broaden our collective knowledge base regarding entrepreneurship and enterprise education throughout diverse programs such as CCs, VETs, primary schools and other under-researched domains. Similar to the field and nature of entrepreneurship, this special issue is interdisciplinary and broad in scope. The six papers contribute with a diverse set of perspectives on entrepreneurial pedagogy from a truly global group of scholars from Australia, Belgium, Canada, China, Iceland, South Africa, the UK and the USA. Collectively, these papers illustrate a dispersed under-researched field, consisting of multiple subfields. Many context-specific and overlapping education related terms are used by the authors, such as preschool, primary school, elementary school, high school, middle education, K-12 education, secondary education, vocational education, CC, university education and higher education. This terminological disparity is mirrored in a definitional disparity. What we mean with a collection of five common "ent-terms" (i.e. entrepreneur, entrepreneurial, entrepreneurship, enterprise, enterprising) in relation to education is a key source of confusion perhaps significantly hampering scholarly progress.

Despite the diversity that the six papers illustrate, there are nevertheless some common themes worth mentioning. Four of the six papers mention constructivist pedagogy, and more or less explicitly argue for its importance in entrepreneurship and enterprise education. Both US-based papers echo a predominantly narrow view of entrepreneurship in education as being about business start-ups, whereas the four non-US papers rely on a broader view of entrepreneurship in education similar to Gibb's (2002) enterprise education principles. A theme that instead unites US and non-US contributions is the divide between in-curricular and extra-curricular activities, illustrating empirically how constructivist pedagogical approaches often end up outside the formal credit-giving in-curricular parts of education. This is a pattern that transcends the issue of whether one has chosen to take a broad or narrow approach to entrepreneurship, as well as the issue of whether one teaches young kids or prepares young adults for a profession. The Chinese case study by Bell and Liu illustrates how this is fundamentally an assessment challenge for teachers. Assessment is a general theme found more or less explicitly treated in all six papers, adding to previous

scholars highlighting the importance of assessment for advancing entrepreneurship and enterprise education (Vesper and Gartner, 1997; Draycott *et al.*, 2011; Pittaway and Edwards, 2012; Moberg, 2014; Lackéus, 2015). All six papers also illustrate in various ways that infusing entrepreneurship into all types and levels of education is a topic being given significant attention worldwide by educators and policy makers. While the subfields in focus here might be characterized as under-researched, they thus do not seem to be as under-prioritized in practice as the low scholarly attention might lead us to expect.

The first paper, by Bernard, Pittz and Vanevenhoven, presents a rich narrative review spanning 66 manuscripts on the topic of CC-based entrepreneurship programs. It represents a much-needed overview of literature on entrepreneurship in CCs. The review is organized around a framework consisting of four areas; effectiveness issues, different educational approaches, non-credit programs and for-credit programs. Some conclusions are that much of the literature on CCs is practitioner-based and that CC-based entrepreneurship programs are shorter and more focused on functional training than their four-year university counterparts. The second paper, by Bell and Liu, provides a qualitative analysis of the challenges faced by Chinese educators in developing experiential entrepreneurship activities in vocational education. The predominantly objectivist view of knowledge held by many Chinese teachers and students makes the challenge of introducing constructivist entrepreneurial pedagogy particularly visible. It is rare to see the clash between traditional and progressive pedagogy as clearly on display as in this paper. This clarity is a good backdrop to the authors' attempts to articulate remedial actions such as innovative assessment, constructive alignment (Biggs and Tang, 2011), authenticity and new technologies. The third paper, by Dominik and Banerji, quantitatively explores the relationships between course mode (e.g. online, face to face, hybrid), instructor attitudes, and student outcomes across 270 US CCs. It contributes with empirical evidence for the predominantly traditional approach that entrepreneurship educators still take in their in-curricular teaching practice, despite repeated calls for progressive entrepreneurial pedagogy in the field. Whereas online resources are increasingly being used, teachers still rely predominantly on textbooks, videos and case studies. The trend toward digitalization of entrepreneurship and enterprise education thus does not necessarily mean that constructivist principles are becoming more common. The fourth paper, by Jones, takes on the conceptual task of identifying the essential kernel of entrepreneurship education, so we may develop signature pedagogies to spread among all levels of entrepreneurship and enterprise training and education. While it is the only attempt among the six papers to bridge between broad and narrow approaches to entrepreneurship in education, it highlights such bridging as a difficult but necessary endeavor that needs to rely on philosophy rather than on science. It also highlights entrepreneurial agency, defined as self-negotiated action, as an overarching key goal of entrepreneurship and enterprise education. The fifth paper, by Jonsdottir and Macdonald, examines what fosters and hampers enterprise education initiatives in primary education. They show that contextual factors on multiple levels impact the development of an entire school's ability and willingness to apply entrepreneurial pedagogy. A rubric is empirically derived, constituting a practical tool that school developers can use to assess readiness for entrepreneurial pedagogy on different levels. Supportive factors can be identified and assessed on levels of individual teachers, teams of teachers, school leadership, regional culture and national policies. The sixth paper, by Pepin and St Jean, uses a quasi-experimental design to assess the impact of entrepreneurial pedagogy at the primary school level. The study indicates that constructivist pedagogy without any explicit mention of "ent-words" seems to be capable of producing much stronger effects on students' entrepreneurial attitudes than single entrepreneurial activities do, also when such activities are provided repeatedly. Based on this, Pepin and St Jean ask an intriguing question: is "progressive pedagogy […] more important in developing an entrepreneurial potential than some specific entrepreneurial activities[?]"

Conclusion

As a set, these six manuscripts help advance our knowledge of entrepreneurial pedagogy, and may plant the seeds of further discussion. They also illustrate key areas of consensus and divergence in an emerging global scholarly community. The papers illustrate relative consensus around the importance of constructivist pedagogy, developed assessment practices and curricular integration of entrepreneurship in education. The set of papers also highlight divergence around broad vs narrow interpretations of entrepreneurship, terms used and their corresponding definitions. These topics all constitute important and promising avenues for further research. Relations between constructivist and entrepreneurial pedagogy can be explored more instead of avoided through narrowing our definitions. Practitioners can develop student assessment approaches further, and scholars can concurrently study such assessments. Researchers should evaluate viable ways to integrate entrepreneurship into the core curriculum of education. Last, but certainly not least, definitional work around five often-used but poorly defined "ent-terms" is much needed. What do we mean when we use the terms entrepreneur, entrepreneurship, entrepreneurial, enterprise and enterprising in relation to education and pedagogy? Scholarly work on these identified key issues could constitute a response to recent calls for more research geared toward furthering our understanding of entrepreneurial pedagogy (Kassean *et al.*, 2015).

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