Entrepreneurship Education in the United Kingdom

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Introduction

Entrepreneurship education (EE) has been present in some form in UK higher education since the early 1970s. Over the last 50 years, both its scope and prominence have increased with more emphasis on EE as a distinctive discipline. This is grounded in the belief and understanding that entrepreneurship, or at least certain facets of it, can be taught (Kuratko, 2005). Therefore, individuals who acquire both the right knowledge and skills are in an improved position to start, develop, and grow a successful business. Against this backdrop, successive governments have promoted entrepreneurship and EE within higher education. The UK Quality Assurance Agency for Higher Education (QAA), which supports, monitors, and checks quality standards within the UK, has issued guidelines about the aims and delivery of effective EE and sought to define some terms. However, the delivery and provision of EE largely lies at the institutional level, where individual institutions have the autonomy to tailor courses to suit their student cohorts. Institutions and educators adopt a range of methods and approaches for the delivery of EE, underpinned by different educational philosophies and theories to inform their pedagogic practice. Whilst the QAA (2018) guidelines make a distinction between entrepreneurship and EE, this chapter uses the term "EE" more generally in line with other parts of the world, so as not to confuse readers who may not be familiar with specific UK definitions. The distinction between enterprise and EE also remains somewhat contentious within existing literature (Bridge, 2017), which will be discussed later in the chapter.

The chapter will first explore the historical development of EE in the UK, before discussing the current guidelines. Following this, a range of current approaches to EE and the underpinning educational theory and philosophy are discussed. The penultimate section provides two cases of the delivery of EE in the UK, which are linked to the previous sections on guidelines and the underpinning educational theory and philosophy. Finally, the chapter concludes by discussing the challenges and future directions for EE in the UK.

Historical development of EE in the UK

The roots of EE in the UK can be traced back to business schools in the early 1970s. Traditionally, business schools within the UK were focused on management education and developing professional management competencies and skills. From the early 1970s, there was a gradual increase in entrepreneurship modules within degree programs, which were focused on entrepreneurship and small businesses. These modules were often isolated within curricula, and at this time in the UK there was limited distinction between EE and small-business education. In contrast, in the US, EE was targeted at high-growth new ventures and taught at more prestigious institutions whilst small-business education was targeted at running small businesses with only limited growth potential and was taught more widely (Watkins & Stone, 1999). Within the UK, the early development of small-business education and EE grew within both prestigious and vocational institutions, with representation at both "red brick" universities and polytechnic institutions. However, supporting enterprise and innovation was more challenging in the vocational and polytechnic settings due to more limited resources, which led to development in this area being stifled. EE and training were largely reserved for postgraduate and owner-manager audiences, rather than being open to all students (Watkins & Stone, 1999). This was based on the belief that undergraduates would have limited benefit from, and interest in, small-business and entrepreneurship education. Additionally, there were challenges in scaling up what at the time were specialist courses to wider audiences.

A major shift in the views on entrepreneurship and EE emerged in the second half of the 1970s. The Sterling Crisis of 1976, which pushed the value of the pound down and forced the UK government to borrow from the International Monetary Fund, led to an economic downturn and a growth in unemployment (Newman & Giles, 2005). To try and mitigate the rise in unemployment, the UK government invested in delivering entrepreneurship training and courses, which were called New Enterprise Programs, for managers who had worked in large organizations and found themselves unemployed. Whilst such initiatives are now commonplace, this represented the first time UK public funds were used in such a way (Watkins & Stone, 1999). These courses continued to develop, evolve, and grow through the 1980s and early 1990s to meet the changing economic needs. This led to some differentiation and funneling between courses and programs, depending on the growth potential of the entrepreneurial idea. Potential high-growth businesses were steered toward major business schools and less innovative potential ideas were steered toward polytechnics. Meanwhile, older and more prestigious universities often stayed out of entrepreneurial training and support, and instead only engaged from a research standpoint (Watkins & Stone, 1999). Eventually, in the

1990s, these courses, and programs were taken over by local enterprise partnerships and councils, allowing them to become more localized. During this time, higher education had also strengthened their EE and entrepreneurship support provision, with faculty, research, experience, and expertise growing in these areas.

Toward the end of the 1980s and 1990s, the UK saw a fast expansion and growth in higher education. This period also saw the dissolution of the binary divide between polytechnics and universities (Mayhew et al., 2004). As more students were entering UK higher education, there was an increased emphasis on the outcomes of higher education, including employability. To ensure value for money and future funding, institutions needed to demonstrate that they offered value for money in terms of developing skills and employability. Cranmer (2006) argued that ensuring the employability of graduates was central to contemporary UK higher education and that this focus on employability led to new teaching approaches and strategies as well as the introduction of new courses explicitly delivering employability skills. As students and graduates with enterprising skills and competencies were generally considered to be more employable (Rae, 2005), there was increased emphasis on developing these abilities through EE. The role of universities to support entrepreneurship was further crystallized by the National Committee of Inquiry into Higher Education's (1997) recommendation that universities consider the scope for encouraging entrepreneurship through innovative approaches to course and program design. Building on this, in 2000, Universities UK made business and entrepreneurial development one of the four strategic goals for universities. The emphasis on enterprise and EE continues to grow with the UK Higher Education Funding Council emphasizing that entrepreneurship should be incorporated and embedded throughout all disciplines of higher education (Higher Education Funding Council Executive, 2004). Such policies and provisions were introduced as it was perceived that higher education institutions (HEIs) were critical for the success of generating and developing entrepreneurial ideas and business talent (Robertson & Collins, 2003). At the same time, the requirement for EE was linked to and underpinned by the government's emphasis on graduate enterprise and its value and importance to the national economy (McKeown et al., 2006). Through higher education, it was expected that students and soon-to-be graduates would have access to the requisite knowledge-based resources for supporting sophisticated enterprises that could compete internationally (McMullan & Long, 1987). Several initiatives were implemented to support entrepreneurship and graduate entrepreneurship, including the establishment of 13 UK Science Enterprise Centres and consortia in 2001, funded by the UK Department for Trade and Industry. This consortium was later revised when the original funding concluded, with membership

becoming open to all universities and the organization rebranded as Enterprise Educators UK (EEUK) in 2007 to reflect its wider remit and reach (EEUK, 2021). EEUK membership was opened beyond higher education to also include further education colleges and other organizations with a clear EE purpose in 2008. Membership continued to grow, reaching 100 members in 2014 (EEUK, 2021). In 2004, the government established the National Council for Graduate Entrepreneurship (NCGE), with the aim of raising the profile of entrepreneurship and promoting startups as a career choice amongst students and graduates. To achieve this, the NCGE sought to develop and promote a culture of entrepreneurship within higher education through research, education, and facilitation (Pittaway & Cope, 2007). NCGE later became known as the National Centre for Entrepreneurship Education (NCEE). The government support and intervention provided during this period to promote and support entrepreneurship and EE highlighted and reaffirmed the perceived value and role that higher education can play in encouraging graduates to start a business (Hannon, 2006).

Government calls continued for universities to develop as entrepreneurial institutions that could support the development of entrepreneurial ideas and exploit the creative potential, skills, and knowledge within higher education. Through the delivery of EE, it was expected that both students and faculty could be encouraged and would be more likely to set up new ventures and support continued growth in new businesses (UK DfES, 2003). The direction and focus on enterprise and EE led to UK universities moving toward the concept of "entrepreneurial university," where universities need to remain flexible to strategically adapt to opportunities to support and play a role in regional development (Gibb & Hannon, 2006). This challenge for universities to adapt was not only a UK challenge, but also one that universities in North America faced (Doutriaux & Barker, 1996; Schramm, 2006). This emerging role of universities has continued to be part of the dichotomous functions of modern universities in the UK, where universities are expected to be entrepreneurial and focus on both entrepreneurship and innovation to contribute to economic growth and competitiveness (Audretsch, 2014; Urbano & Guerrero, 2013). NCGE (2004) concluded that bringing entrepreneurship and EE into higher education led to a vibrant cultural shift and had a profound impact on HEIs.

Matlay and Carey (2007) conducted a 10-year longitudinal analysis of EE initiatives in the UK from 1995 to 2004. The study found that all 40 universities in the sample provided at least some small-business and EE courses. During the period of 1995–1999, EE provision was greater at new universities, but the gap between EE provision at new and old universities was reduced during the second five-year period of 2000–2004. In the latter period, the overall amount of EE provision grew considerably. By the end of the 2004 academic year, most of the

sample universities were offering EE at both the undergraduate and postgraduate levels. The audience to which EE was delivered also extended substantially during the period of the research, with most of the offerings provided to business school students in the 1995–2000 period, and the provision of EE extended outside of the business school in over half of the sample during 2000–2004. Where EE was not offered to all students both fulltime and parttime and undergraduate and postgraduate, a lack of demand from students was cited as the most common reason, followed by a lack of interest amongst staff, and a shortage of funding. As EE is not mandatory in UK higher education, it is driven by student demand and the capacity of HEIs to staff and resource the delivery of such modules. In Matlay and Carey's (2007) research on the nature of EE delivered, they found that there were no significant commonalities in the conceptual approach to EE. In effect, each university decided upon and used its own definition as to what constituted EE. This meant that there was "pragmatic fluidity" in terms of both the concept of EE and how it was delivered. It was determined that EE had commonly transitioned from being dominated by a variety of traditional courses borrowed or adapted from general business education to more specific, tailored EE. In the majority of the cases in the sample, the assessment in EE courses still followed traditional assessment patterns, i.e., subject coursework and end-of-term exams.

Despite the development and integration of new EE and support programs into UK higher education, some questions remained and became more pertinent, such as the operational definitions of enterprise and entrepreneurship, the underpinning pedagogy to effectively teach EE, and how EE learning should be assessed (Pittaway & Cope, 2007). The next section will explore the current guidelines and policies relating to EE in the UK.

Current EE guidance and policies

In common with most developed countries, the fine details of enterprise and EE policy in the UK tend to change with each new government. However, the emphasis on EE in general has remained relatively consistent, possibly demonstrating the recognition that EE has social and economic benefits (Henry, 2013). Policymakers in the UK and Europe have posited that EE can produce skilled graduates who can positively influence society and economic growth by creating jobs and value for society, through applying creativity, problem solving, innovating, and identifying business opportunities (Department for Business Enterprise and Regulatory Reform, 2008; European Commission Enterprise and Industry Directorate-General, 2008; QAA, 2018). However, critical questions have emerged within the literature as to whether

policymakers are expecting too much for EE and whether it has been wrongly perceived as a panacea for solving wider societal and economic challenges (Henry, 2013).

Entrepreneurship has been supported through numerous streams including the general promotion of entrepreneurship, educational and training initiatives, and making startup funding available for entrepreneurs. The general promotion of entrepreneurship has been conducted through initiatives such as enterprise week and annual global entrepreneurship week, which acquaint people with the concept of entrepreneurship and positively adjust their perceptions of entrepreneurship. Enterprise and entrepreneurship have been promoted in both general education and subject-specific curricula such as science, engineering, and technology to highlight the value of entrepreneurship and entrepreneurial opportunities. Advance HE and its precursor, the Higher Education Academy, which promotes and advocates quality evidencebased teaching methods and developed the UK Professional Standards Framework for higher education practitioners, has supported the introduction and development of entrepreneurship into higher education curricular. Jones (2014) suggests that entrepreneurship and enterprise had gradually found their way into the UK higher education curricula, and this was achieved with an increasing focus on embedding entrepreneurship within nonbusiness disciplines including vocational and professional programs. This was based on the premise that every student, regardless of their intended career path, should have the opportunity and be encouraged to engage with entrepreneurship, which could help create and foster an enterprise culture in new graduates (Henry, 2013). As a result, entrepreneurship is increasingly being viewed within higher education as relevant to everybody rather than a select few with the best ideas (Bell & Bell, 2016a; O'Brien et al., 2019).

Whilst there have been, and currently are, numerous initiatives to support and encourage EE in higher and further education, it is not a formally mandated part of the curriculum. However, guidance on EE in the UK is provided by the Quality Assurance Agency for Higher Education (QAA)—an independent body that checks quality standards, conducts quality reviews, and develops and provides reference points and guidance for institutions. The QAA's (2018) *Enterprise and Entrepreneurship Education: Guidance for UK Higher Education Providers* provides guidelines and a benchmark for educators and institutions around which to build their EE provision. This document was an enhancement of the guidelines provided in the previous iteration in 2012. The QAA (2018) guidelines address some of the questions previously raised and issues identified around the value and role of EE, the operational definitions of enterprise and entrepreneurship, how EE can be effectively delivered, and how

learning should be assessed (Pittaway & Cope, 2007). The guidance on these areas will now be discussed and summarized.

The value and role of EE

The guidance provided by the QAA (2018) posits that enterprise and EE offer the opportunity to support the development of behaviors, attributes, and competencies that are likely to have a positive impact on students' careers. This in turn can have a positive effect in terms of economic, social, and cultural value. It recognizes that enterprise and EE can be an effective tool to prepare students for the changing and potentially challenging environments that they will face in their careers. This view of enterprise and EE is not solely focused on employment, but acknowledges that the skills and competencies gained from EE can support students and graduates to live rewarding and self-determined professional lives.

The view of enterprise and EE adopted by the QAA (2018) espouses the value of enterprise and EE for all students, not only those currently with entrepreneurial ideas and interest in setting up a business (Bell & Bell, 2016a; O'Brien et al., 2019). Instead, developing entrepreneurial competencies in graduates can offer value to the organizations they work for in the future by supporting them to be innovative and to remain competitive, thus bringing economic and social benefits. This view also recognizes that enterprise and EE can support not only graduates in developing new ventures, but also support them in their career prospects. This is underpinned by previous research that has found that entrepreneurial skills and competencies support an increased chance of employment in a professional or managerial job after graduation (Bell, 2016). The UK government has encouraged HEIs to develop entrepreneurial, innovative, and highly employable graduates. This has led to enterprise and EE being placed high on the agenda of HEIs (Sewell & Pool, 2010).

The QAA (2018) also highlights the wider benefits that engaging with enterprise and EE can bring to HEIs. Beyond teaching and learning, activities such as research and knowledge exchange can help universities engage with industry and communities. Therefore, enterprise and EE are an important element of the higher education landscape for developing entrepreneurial expertise and closer links with industry. This views HEIs as a potential catalyst for regional development by educating people and attracting well-educated people, facilitating knowledge transfer, and contributing to the development of new ventures and maintaining the competitiveness of existing businesses (Klofsten et al., 2019).

Tensions within the conceptualization of EE and what it should aim to achieve and cover have arisen from a lack of definition, so the following section explores the definitions presented in the QAA (2018) guidelines.

Defining enterprise and entrepreneurship

The term "entrepreneurship" is commonly used in a generic and interchangeable fashion, in a variety of contexts and for explaining many things (Matlay & Carey, 2007). The diversity in the definition has been identified within existing literature, but the search for conceptual and contextual convergence has only resulted in increasingly complex discussions across numerous disciplines that offer different definitions, rather than a simple unification. Bridge (2017) highlights that even within EE there are different understandings and interpretations of the term, which leads to considerable confusion. Such confusion and lack of distinction can lead to issues of a lack of clarity about course aims and objectives as well as an inappropriate borrowing of course content (Bridge, 2017). If all enterprise and EE are labelled the same, despite potential differences in the course content, learning outcomes, and objectives, there risks a danger of misunderstanding about the course purpose. Similarly, an "entrepreneurship course" could encourage the borrowing of course material and assessment based on the assumption that all courses are similar, which might not always be the case given the different understandings and interpretations of the term. To try and mitigate potential issues around the different understandings of enterprise and entrepreneurship and harmonize how these terms are utilized in higher education, the QAA (2018) guidelines clearly define the terms "enterprise and entrepreneurship", "enterprise education," and "entrepreneurship education".

Enterprise and Enterprise Education

The QAA (2018, p. 7) guidelines define "enterprise" as "the generation and application of ideas, which are set within practical situations during a project or undertaking." This situates enterprise as a generic concept that can be applied to all areas of education and professional life, as the ability to generate and apply ideas in practice is important for all members of the workforce and individuals' personal lives. In order to achieve this, it is identified that a combination of "creativity, originality, initiative, idea generation, design thinking, adaptability and reflexivity with problem identification, problem solving, innovation, expression, communication and practical action" is required. Enterprise education seeks to develop these skills and behaviors and is therefore defined by as "the process of developing students in a manner that provides them with an enhanced capacity to generate ideas, and the behaviors,

attributes, and competencies to make them happen" (QAA, 2018, p. 9). To achieve this, enterprise education extends beyond knowledge acquisition, but also includes the development of "emotional, intellectual, social, cultural and practical behaviors, attributes and competences." This gives enterprise education a more practical nature, as it is not solely focused on the transmission of knowledge, but a more holistic development of students to enable them to be enterprising. This holistic development is seen to enhance the students' employability. Enterprise education does this by laying the groundwork of developing students and graduates with an "awareness, mindset and capability to generate original ideas in response to identified needs, opportunities and shortfalls, and the ability to act on them, even if circumstances are changing and ambiguous; in short, having an idea and making it happen" (QAA, 2018, p. 9). Enterprise education seeks to develop a range of enterprise behaviors, attributes, and competences, which are summarized in Table 8.1.

Table 8.1 Enterprise behaviors, attributes, and competencies

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Enterprise Behaviors	Enterprise Attributes	Enterprise Competencies
Taking the initiative	Open mindedness	• Intuitive decision
Making things happen	• Proactivity	making
• Reflecting	• Curiosity	• Identifying
Communicating	Self-efficacy	opportunities
Pivoting and adapting	Flexibility	• Creative problem
Storytelling	Adaptability	solving
Taking responsibility	• Determination	• Innovating
• Networking	• Resilience	Strategic thinking
Personal effectiveness		Design thinking
Managed risk taking		Negotiation
		Communicating
		• Influencing
		Leadership
		• Financial, business, and
		digital literacy

Source: Adapted from the QAA (2018) guidelines

Entrepreneurship and EE

Within the QAA (2018) guidelines, entrepreneurship and EE are identified and defined as distinct from enterprise and enterprise education, with EE building on from enterprise education. Entrepreneurship is defined as "the application of enterprise behaviors, attributes and competencies into the creation of cultural, social or economic value" (QAA, 2018, p. 7). Value can be created by entrepreneurs in a range of settings, including the private, public and third sectors, and such value can be economic, social, cultural, ecological, or emotional (Hindle, 2010). The focus on entrepreneurship as creating value aligns with the perspective that entrepreneurs act on opportunities and ideas to transform them into value for others (Vestergaard et al., 2012). Such value creation can be achieved through the application of entrepreneurs' existing competencies to create something, preferably novel, of value to at least one external stakeholder (Lackéus et al., 2016). It is identified that the creation of value does not necessarily lead exclusively to venture creation, which acknowledges that entrepreneurship can take place in a range of settings and contexts. For example, Pinchot (1985) suggests that entrepreneurs and entrepreneurial-thinking people are crucial within existing firms, as they can think across boundaries and organizational units. Entrepreneurial employees within organizations, often termed "intrapreneurs," have been identified as playing a crucial role in supporting innovation and providing a competitive advantage in established organizations (Blanka, 2019; Guerrero & Peña-Legazkue, 2013).

EE seeks to support students to apply enterprising competencies to create cultural, social, or economic value. "Entrepreneurship Education aims to build upon the enterprising competencies of students who are capable of identifying opportunities and developing ventures, through becoming self-employed, setting up new businesses or developing and growing part of an existing venture" (QAA, 2018, p. 9). To support and achieve this, EE extends the learning environment to focus on students' application of enterprising competencies in a realistic environment. Such a provision allows students to experience entrepreneurship in a practical and hands-on fashion in a safe and scaffolded environment (Bell & Bell, 2020). This allows for the realization of ideas through application in context, thus enhancing students' understanding of business and entrepreneurship processes. It is posited that some overlap exists between the broad set of skills, attributes, and competencies that support graduates' employability, and the characteristics of enterprise and entrepreneurship. Therefore, enterprise and entrepreneurship can help prepare students and graduates for a rewarding professional life. In addition, they are a significant vehicle for delivering the institutional aims of graduate employment, employability, and future success (QAA, 2018).

Continued definition and conceptualization challenges

Despite the QAA guidelines providing clear definitions of enterprise and entrepreneurship, and enterprise education, and entrepreneurship education in 2012 as well as a further update in 2018, there remains some challenges and inconsistencies in their application. Jones (2019) suggests that despite the proactive management of definitions by the QAA (2018), enterprise education and EE exist on a continuum. This makes it difficult in some cases to explicitly classify all courses as either enterprise education or EE. Nabi and Holden (2008) suggest that it might be helpful to consider and reconceptualize enterprise education and EE as being on a spectrum, where enterprise education provides the broad and generic skills relevant to most students, whilst EE imparts more specialized skills important for entrepreneurs interested in new venture creation. The skills and competencies located at the enterprise end of the spectrum are particularly suitable for employability, whilst those on the extreme entrepreneurship end of the spectrum, for example, a willingness to take risk, may not be valued by all employers (Sewell & Pool, 2010). It has been suggested that enterprise activities have often been considered as synonymous with entrepreneurship in higher education, with more focused activities aimed at the establishment of new businesses and the less focused targeted at the promotion of more diverse achievements that improve success in the labor market (Moreland, 2006).

Whilst the distinction between enterprise and entrepreneurship might have been implicit within UK higher education, Bridge (2017) suggests that attempts to limit the term "entrepreneurship" to some courses and the term "enterprise" for others often fail as they are only partially done, and the two words are still commonly used interchangeably. The close affinity between enterprise and entrepreneurship has also caused some confusion as to its purpose and remit, as an independent entity from entrepreneurship (Bridge, 2017; Jones & Iredale, 2010). This challenge in identity and distinction, has made defining the contours and boundaries of EE a challenge (Pepin, 2012). Hytti and Kuopusjärvi (2004) suggest that, in practice, EE courses and programs fulfil different roles, depending on their aim and purpose. This highlights the need to not treat entrepreneurship courses and programs as one entity that is comparable across UK higher education, but rather to dig deeper to understand the aim and purpose of individual entrepreneurship courses and programs. As the UK does not have any centrally mandated EE, the QAA guidelines help make a distinction between enterprise and EE, but the distinction is somewhat fluid in practice as HEIs are free to design and develop their own educational provisions. This flexibility allows individual institutions and educators to design programs that they think will be most effective and popular in their specific contexts.

The delivery of EE

The QAA (2018) guidelines encourage individual educators to decide on the delivery and pedagogy underpinning EE based on the behaviors, attributes, and competencies that they seek to develop. This approach allows flexibility and for educators to take into account students' prior knowledge, experience, and learning. The QAA (2018) guidelines also have a series of suggestions and recommendations to maximize the learning experience. It is suggested that students should have the opportunity to engage with enterprise and entrepreneurship within their own subject and discipline in order to develop entrepreneurial competencies relating to their own field and specialization. To achieve this, the delivery of EE should encourage students to "do" their subject in an entrepreneurial manner, allowing them to identify and solve problems with the goal of developing value propositions for others. To support this, EE can be embedded into various disciplines or take a cross-disciplinary approach where students from different fields of study can be brought together. For example, business, computing, and creative arts students can work together as a team to pool their expertise, which provides the experience of cross-disciplinary working. When students can create value in their own contexts, this allows them to apply their individual unique skillsets and capabilities to their areas of interest, which provides a more tailored learning experience. This has the potential to help students understand what entrepreneurs do in their field and how they can be entrepreneurial in their contexts (Bell, 2020a). Aldianto et al. (2018) argue that it is vital for students to understand value creation and the value creation process, while Lackéus (2018) suggests that learning and teaching approaches focusing on value creation are gaining traction.

To support the development of enterprising and entrepreneurial skills and capabilities, learning activities that are realistic, relevant, highly engaging, and impactful should be utilized. Experiential learning strategies, simulations, and venture programs that link theory and practice, along with the encouragement of reflection after engaging in such activities, are identified as useful means to achieve this. Previous research has suggested that experiential learning is particularly efficacious in EE (Fuchs et al., 2008; Honig, 2004). Experiential learning approaches have been increasingly adopted in UK business schools to supplement traditional teaching (Piercy, 2013). As such, there is a shift away from a purely didactic process-driven approach to teaching entrepreneurship, which is focused on knowledge transmission, to an approach that emphasizes learning from experiences. Experiential approaches to EE offer more opportunities for students to develop the entrepreneurial skills, competencies and mindsets required for entrepreneurship (Bell & Bell, 2020). Macht and Ball (2016) highlight the value of authentic entrepreneurial learning, where students engage in learning activities that provide

an authentic experience, imitating what entrepreneurs do in the field. Therefore, whilst experiential learning can take many forms, experiences that are more authentic can promote deeper learning and engagement, and effectively prepare students. Indeed, Ramsgaard and Christensen (2018) argue that working with realistic and authentic projects is vital in EE. To support students' direct engagement with entrepreneurship, the QAA (2018) guidelines suggest that students should be enabled to start and run a business as an integral part of their program. This can be achieved through offering opportunities for students to run small-scale businesses in a scaffolded manner, or through larger-scale venture creation programs. In venture creation programs, the creation and development of an active real-life venture is the primary vessel for learning (Lackéus & Middleton, 2015). The authentic real-life consequences of creating a venture as part of the learning experience can be an emotional ride for students. The challenging and rewarding nature of the experience can support the development of entrepreneurial competencies (Barr et al., 2009; Lackéus, 2014; Meyer et al., 2011).

The QAA (2018) guidelines emphasize the value of engagement with industry and the local community through the delivery of EE. Providing action-based practical activities and challenges set by the community, businesses, and other stakeholders is suggested as an effective way to engage students in enterprise and entrepreneurial activities. This can be achieved through "live" cases studies where local businesses or social enterprises provide briefs for tasks, for example, consultancy, design, or research services. Such engagement with local businesses and stakeholders can provide authentic enterprising and entrepreneurial experiences, allowing students to create value for the community around them. Bringing entrepreneurs, business specialists, and former alumni into the classroom and learning environment is also promoted to link students with industry and the local community. This can be achieved through guest lectures, mentoring, and providing guidance and feedback (Bell & Bell, 2016b). Ensuring the link between practice and theory, and supporting reflection, is important when bringing external expertise into the classroom to maximize learning. Developing links between universities and industry to support meaningful exchange has long been understood to be mutually beneficial (Katz, 1991). It has been suggested that networks provide an essential link between an entrepreneurial idea and successful business creation for nascent entrepreneurs (Adler & Kwon, 2002; Blundel, 2002). In addition to networks, hearing about other peoples' experiences and mentoring can also aid and support nascent entrepreneurs to overcome potential problems and challenges (Ragins et al., 2000; Sullivan, 2000). The sharing of experiences and mentoring can take many forms. This can potentially be delivered

by entrepreneurs, business, legal and finance specialists, faculty, and other outside experts, depending on their experience and background (Bell & Bell, 2016b).

Finally, the QAA (2018) guidelines recommend making a distinction between learning *about* entrepreneurship, learning *for* entrepreneurship, and learning *through* entrepreneurship. Making these distinctions can help clarify the purpose of the course and whether it is more focused on the theoretical or practical components of EE. The next section discusses in detail the value of differentiating between the three approaches to the delivery of EE, and their differences and underpinnings.

"About," "For," and "Through" EE

The QAA (2018) guidelines identify and distinguish three ways in which enterprise and EE can be delivered. Each of these three types of EE targets a different type of learning. They encompass a wide range of educational goals and objectives (Bell, 2021), rooted in contrasting and conflicting beliefs as to its value and purpose (Hannon, 2006). Therefore, understanding the distinction between these three forms of EE delivery can help inform learning and assessment strategies, as each type of delivery should be aligned with relevant educational goals and in turn appropriate assessment to ensure constructive alignment. The learning outcomes, teaching content, and learning assessment should all be constructively aligned (Biggs, 2012). This ensures that what is taught and how it is taught can achieve the learning outcomes and goals, and in turn the assessment of learning can measure the learning outcomes. Ensuring effective constructive alignment can motivate students to engage with the teaching and learning, as they can understand how doing so will help them achieve the learning objectives and do well in the assessment. This has been found to be an important part of entrepreneurship curriculum design, particularly when educators seek practical engagement from students (Morselli, 2018).

It has been identified that entrepreneurial knowledge, skills and ability, and experience all play a role in entrepreneurial learning (Bell & Bell, 2020; Bell, 2021), and the three types of EE delivery target these areas. "About" EE focuses on imparting knowledge and theory underpinning entrepreneurship; "for" EE focuses on learning how to be entrepreneurial by developing entrepreneurial skills and ability; and "through" EE emphasizes on providing experience through the application of practical entrepreneurial activity. Whilst all three approaches to EE are valid, the distinction is important when the program or curriculum is being evaluated and new programs are being developed.

"About" EE aims to provide students with an understanding of the theory and knowledge that underpins entrepreneurship. It emphasizes the accumulation of knowledge about entrepreneurship and the entrepreneurship process (Kakouris & Liargovas, 2021). Such teaching can explore a range of topics and themes such as venture creation, business growth strategies, innovation, and social enterprise. This type of EE normally draws upon more traditional pedagogy, such as lectures, set texts, and discussions, to support learning, assimilation, and reflection. As the delivery of "about" EE is focused on teaching the theory behind entrepreneurship, assessment of students' understanding of the theory is often appropriate. For example, assessment through exams or essays, where students can demonstrate what they know about entrepreneurship and its theory, should be aligned with the learning objectives.

"For" EE seeks to develop learners' entrepreneurial skills and competencies to prepare them for potential entrepreneurial endeavors. It provides insight into what it means to be enterprising and being an entrepreneur. In order to develop practical skills and competencies, the delivery of such teaching normally moves away from a focus on traditional didactic teaching methods toward engaging students through active learning. In such an approach, students participate in activities and experiences where they can develop their enterprising and entrepreneurial skills and competencies in a meaningful and relevant context. Such activities and experiences should challenge students to visualize opportunities through the application of creativity and innovation. Students are also encouraged to develop business plans, and then pitch and present their ideas to develop their presentation and persuasion skills (Kakouris & Liargovas, 2021). As learning "for" entrepreneurship is focused on developing practical, enterprising, and entrepreneurial skills and competencies, the requisite learning objectives and assessment should be constructively aligned. Assessment should focus on determining whether students have developed the entrepreneurial skills sought in the learning objectives. To assess this type of learning, practical activities where students can demonstrate their development are required. Practical forms of assessment are more efficacious in determining students' practical skills, so assessment "for" entrepreneurship typically involves presentations or coursework, rather than the testing of knowledge and understanding through tests or exams. The development of business models and pitches relating to the students' own contexts and aspirations can be effective in supporting them to become entrepreneurial. At the same time, it provides insight into the development of new business and potential entrepreneurial opportunities. To mimic the real entrepreneurial process, groupwork and collaboration can be used to develop effective leadership, responsibility, teamwork, and coordination skills. The

development of such skills will also support employability. The learning in "for" EE can take many forms and levels or practicality, ranging from the simple generation of ideas to the enactment of some parts of the entrepreneurial process, such as pitching, planning, or selling. This means that there is potentially some crossover between "for" and "through" EE, as both involve undertaking parts of the entrepreneurial process. However, "through" EE represents a more holistic engagement with entrepreneurship and the entrepreneurial process.

Teaching "through" EE seeks to develop entrepreneurial capabilities by providing students with the experience of engaging in entrepreneurship. This gives students the opportunity to draw on and apply their knowledge of entrepreneurship as well as their enterprising and entrepreneurial skills and competencies. This allows the exploration and transformation of knowledge through experience (Bell & Bell, 2020; Kakouris & Liargovas, 2021). In this type of teaching, students learn from their experiences and should be encouraged to reflect on them. They may experience entrepreneurship in groups or individually, depending on the type of course and what is most appropriate in the learning environment. Working in groups supports the development of important employability skills, and delegation within a group provides opportunities to divide and share tasks and responsibilities. Learning "through" entrepreneurship is often supported by dedicated facilitators or mentors who can sit alongside business incubation and accelerator schemes. This potentially allows for "through" EE to be a gateway to entrepreneurship. As the focus of "through" EE is learning from experience, it is primarily a reflective process where after engaging in entrepreneurship or entrepreneurial activities, students map their own learning and progression. As a result, assessment is commonly in the form of reflections on business decisions including pivots or iterations and business outcomes. Failure forms part of the entrepreneurial learning process, and it can be used to support the learning and development of resilience (Kauppinen et al., 2019). Assessment may not focus solely on entrepreneurial success, but rather how challenging situations were, or could be, addressed and the business pivots made. Reflecting in this way supports the realization of failure and learning from it.

The concepts of "about," "for," and "through" EE build on one another and can be supplementary. As is common with most educational disciplines, practice should be underpinned by theory. Therefore, before students move onto developing entrepreneurial skills and competencies and engaging in entrepreneurial practice, they should understand the knowledge and theory that underpin entrepreneurship (Bell & Bell, 2020). This can be achieved by blending the delivery of knowledge and theory alongside practice within a module, or by

structuring EE to first deliver modules focused on theory and then modules focused on building entrepreneurial skills and competencies as well as providing entrepreneurial opportunities.

Bloom's taxonomy has widely been used to guide curriculum design and development in higher education in the UK and other parts of the Western world. As a result, it has become the most widely used framework for instructional design and evaluation (Kakouris & Liargovas, 2021). A common use of Bloom's taxonomy is to classify curriculum objectives and assess them to ensure the breadth (or lack of) of objectives across the six categories in the taxonomy (Amer, 2006). The taxonomy provides definitions for each of the six major categories in the cognitive domain. The categories are ordered from the simplest to the more complex and from the concrete to the more abstract (Krathwohl, 2002). The taxonomy represents a "cumulative hierarchy" in which each previous simpler category is a prerequisite to the mastery of the next, more complex category (Krietzer & Madaus, 1994). The six levels in the hierarchy represent essential skills for students to become critical thinkers (Murphy, 2007). For many, Bloom's taxonomy serves as a basis for the so-called "higher order" thinking skills. The taxonomy was revised and updated in 2001 (Anderson et al., 2001) to provide a more dynamic classification, using verbs rather than nouns. These revised levels within the taxonomy going from the most basic are: remember, understand, apply, analyze, evaluate, and create. They encourage movement beyond knowledge comprehension and toward the higher-order skills of analysis, evaluation, and synthesis (creation) (Bloom, 1956). "About" EE focuses on achieving and demonstrating the lower levels of Bloom's taxonomy: remembering and understanding the theory behind EE. Exams and essays can be used to assess students' ability to recall, summarize, and explain the theory. "About" EE can also be used to encourage students to apply theory, concepts, and knowledge to case studies for analysis and coursework. Compared to traditional teaching commonly found in "about" EE, "for" and "through" EE is centered on the core principles of active learning: student activity and engagement in the learning process (Prince, 2004). The active and experiential learning that forms part of the learning "for" and "through" EE requires the higher-order thinking skills of analysis, evaluation, and synthesis (creativity) (Bell, 2015). "For" and "through" EE moves away from knowledge retention to knowledge harvesting, which requires students to synthesize knowledge critically to create something new. When preparing students "for" entrepreneurship, it is important to develop their critical thinking skills and analytical judgement to make entrepreneurial decisions based on the analysis and evaluation of information and context. "For" EE can also encourage students to synthesize information to create business models and plans that can be pitched to an audience. Similarly, "through" EE requires students to undertake analysis and evaluation via the

entrepreneurial process and create value within an entrepreneurial venture. Therefore, "for" and "through" EE focus on achieving and demonstrating higher levels of thinking within Bloom's taxonomy of learning. However, as previously mentioned, it is important to provide a grounding to the theory underpinning entrepreneurship, and this aligns with the concept of moving students up through the levels of Bloom's taxonomy (Lord & Baviskar, 2007). This transition moves students through the process of receiving, understanding, and applying entrepreneurship theory, analyzing, and evaluating entrepreneurial decisions and opportunities, and finally creating something new.

EE approaches and characteristics

Different educational philosophies and theory underpin the educational approaches of "about" entrepreneurship, which teaches the theory behind entrepreneurship; "for" entrepreneurship, which develops learners' entrepreneurial skills and competencies so that they are ready for potential entrepreneurial practice; and "through" entrepreneurship, which supports learning by practising entrepreneurship (Bell, 2021; Hannon, 2005). To achieve the different goals of these three types of EE requires different forms of pedagogy. These are underpinned by a range, and potentially a mixture, of educational philosophies and theories. Understanding how different educational philosophies and theories inform and support the type of EE helps inform educators as to the most effective delivery of teaching and assessment of learning (Hannon, 2006). Thus, educational philosophies and theories guide educators through the contrasting landscapes of educational approaches to EE (Ramsgaard, 2018). As the chosen educational philosophy guides teaching and pedagogic practice, it can be a differentiator between educators who are, and those who are not, aware of what they are doing and why (Merriam, 1982). Whilst educators may not always be able to explicitly articulate their philosophical orientation, nevertheless an implicit educational philosophy, or mix of, will still be underpin, direct, and drive their teaching and pedagogic practice (Darkenwald & Merriam, 1982). Educators may not always explicitly choose or identify with a particular educational philosophy or theory of learning to guide their practice and may follow the path of least resistance, or might subconsciously adopt one, but this will still impact how they teach and assess learning.

Within the delivery of EE, it is possible to mix and integrate several educational philosophies and theories that guide the teaching and assessment. Given the potentially diverse and multifaceted aims of EE and the diverse pedagogic approaches, it is suggested that no single philosophy or learning theory can effectively guide EE (Ramsgaard, 2018). Robinson et

al. (2016) suggest that when delivering student-centered EE, it is beneficial to bring together different learning theories, philosophies, and approaches to EE, as this could encourage the development of entrepreneurial awareness. This is supported by Brieger et al. (2020), who posit that there is no single adult learning theory, but many philosophies and theories that need to be interwoven. Therefore, it is beneficial for educators to understand the interlinking nature of the different educational philosophies and theories that inform the learning process and pedagogic practice; doing so can help educators maximize the effectiveness of their teaching (Bell & Bell, 2020).

The behaviorist approach to teaching leads to the transfer of objectivist knowledge and the assessment of students' ability to reproduce the knowledge taught. This approach involves the didactic transfer of knowledge, which leads to the efficient and functional mechanical processes (Löbler, 2006). Repetition, reinforcement, and assessment through testing are the central features in this approach to teaching and learning. It has been argued that a system based solely on providing objectivist knowledge does not support and encourage the creativity of learning (Freire, 2006). It has also been argued that this passive approach to learning can result in the disengagement of students and superficial learning as students are only expected to repeat the information that they have been taught (Bennet, 2006). In this approach, the quantity and quality of the information and knowledge transferred are paramount, as opposed to the learning experience and the value that they offer (Dierksmeier, 2020). The information and knowledge transferred in this way can lack context and not relate to students' past knowledge and experiences. The educator's role in this approach is to manage, predict, and direct the outcome of the learning; in this way, they can meet the perceived needs and requirements of the students in the curriculum, which should be aligned with societal and industry requirements (Hannon, 2006). This approach, whilst commonplace in EE curriculum, is increasingly viewed as being dated and of value only for the transmission and transfer of theoretical and instructional information (Gedeon, 2014). However, education through the passive delivery of objectivist knowledge may be adopted for expediency, in which case it is not philosophically or pedagogically informed (Bell, 2021). The behaviorist approach based on the didactic tradition of objectivist knowledge has been regarded as a potentially suitable approach for the delivery of "about" entrepreneurship. This approach can be underpinned by the focus and emphasis in "about" EE on the accumulation of knowledge, the theory about entrepreneurship, and the entrepreneurship process. However, the delivery of "about" EE using only a behaviorist approach may limit the depth of learning, with the learning of knowledge and theory not translating into understanding and application. Whilst "for" and "through" EE seek to develop

more practical outcomes in terms of entrepreneurial skills, competencies, and capabilities, it is important that theory underpins practice. The behaviorist approach can inform students of the underpinning theory and frameworks that they can then use to analyze their own experiences (Peltier & Scovotti, 2010). In addition, the didactic approaches adopted within behaviorist teaching can be effective at providing instructional information for the practical learning activities and experiences included in "for" and "through" EE. In more practical and hands-on teaching, there is still a need for students to understand the learning objectives, what they must do, and how they will be assessed (Béchard & Toulouse, 1998; Bell & Bell, 2020). Therefore, the behaviorist learning approach can act as a prerequisite stage for "for" and "through" EE.

Cognitivism moves away from behaviorism in that it involves the processing of knowledge rather than just the memorization of it (Brieger et al., 2020). In this approach, the student plays a more active role in the process of learning. The cognitivist paradigm postulates that students can develop objective knowledge to reach new understanding through reasoning or intellectual intuition (Kyrö, 2015). In this case, learning is an internal process that involves memorization, thinking, reflecting, and abstraction of the information (Ally, 2004). Cognitivism is thus based on the individual's cognitive processes and the level of an individual's cognitive development (Bandura, 1977). Learning is the product of the student's critical thinking to process the information to create new knowledge (Bell, 2021). The cognitive approach focuses on the student's development by changing the way they think and view information. Within such learning the educator's role is to promote and facilitate learning, rather than directing it (Hannon, 2006). Cognitivist teaching approaches can include the use of case studies where students apply knowledge and theory to critically analyze a particular case. Learning from case studies has been highlighted as a commonly utilized approach that is grounded within cognitivism, and which allows students to develop critical insights that can then promote theoretical understanding (Kantar, 2013). Such activities can promote the development of critical thinking skills through the application of knowledge and theory to a particular context. The cognitive paradigm drawn from rationalism posits that objectivist knowledge gained through reasoning or intellectual intuition, once taught and understood, can then be transferred into other situations. The cognitivist approach is particularly efficacious in supporting the development and nurturing of critical thinking and reasoning skills. This makes the cognitivist approach suitable for "about" EE as it supports moving beyond remembering knowledge to furthering students' understanding as well as supporting application to context. Through application to context, knowledge and theory are critically applied to support analysis and evaluation. This makes cognitivism a critical and essential tool for inquiry (Facione, 1990).

Like behaviorism, cognitivism can be supplementary and a prerequisite for both "for" and "through" EE. Entrepreneurship requires the development of reasoning and critical thinking skills that can support "thinking that is purposeful, reasoned and goal directed—the kind of thinking involved in solving problems, formulating inferences, calculating likelihood, and making decisions" (Halpern, 1996, p. 5). Cognitivist learning allows the structuring and storing of knowledge and theory, which can be retrieved and applied when required during hands-on learning and the entrepreneurial process. Therefore, cognitivism can be a complementary part of "for" and "through" EE. Cognitivism, however, does not consider the arguably experiential nature of entrepreneurial learning (Rae, 2005). This ensues from learning by doing and reflecting on the process (Cope, 2005). As a result, the cognitive approach is limited since it does not take into consideration the importance of developing reflexivity and self-awareness (Ferreira, 2020).

Behaviorism and cognitivism are based on the premise that knowledge is an objective phenomenon. This has been increasingly challenged by constructivism and constructivist approaches to learning. As a theory of knowledge constructivism emphasizes the part played by the individual in creating their own individual meaning from knowledge based on their own context and experience (Mueller & Anderson, 2014). Knowledge construction is an active and interpretive process, and therefore based on the subjective understanding of the individual where meaning is derived from past and present knowledge (Merriam et al., 2007). Educators adopting a constructivist approach ground their teaching in active participation, which involves the creation and development of active learning in realistic contexts where students think independently and question their experience in the process of discovery (Mathews, 2007). In the learning process, the role of the educator is to guide students to construct their own meaning and understanding of the world around them, and not to simply mirror the educators teaching (Jonassen, 1991). Constructivism can be used to underpin a wide range of active learning approaches. These can problem-based learning, inquiry learning, and experiential learning (Kirschner et al., 2006). The construction of meaning from new knowledge created through new experiences and problem-solving can reflect the knowledge creation and decision-making within the dynamic context of entrepreneurship (Bell, 2021). This type of approach to learning prepares learners for entrepreneurship by meeting challenges and problems. To ensure an effective learning process, the educator should design it to be constructively aligned (Biggs, 2012). To ensure this, students should understand the learning process and their role within it, what they are expected to achieve, and how they will be assessed. The educator should ensure that the learning experience is scaffolded, if required, to enable students to engage in the learning process. Reflection is vital in the constructivist learning approach to enable students to create meaning and sense from their experience and its application to the real world. Whilst the constructivist approach is not well aligned with the goals and focus of "about" EE, as it seeks to develop subjective knowledge and understanding in relation to a student's individual context, it can be of value in both "for" and "through" EE. Constructivism underpins a range of hands-on and active learning pedagogic approaches that are effective at developing skills and ability through reflection. As "for" EE seeks to develop entrepreneurial skills and competencies and "through" EE the skills to develop entrepreneurial capabilities, active and experiential learning where students can practice, reflect, and develop their abilities is essential. One distinction between the learning in "for" and "through" EE is the nature and context of the activity or experience. The learning experience within a "for" EE approach will generally be less focused on actual entrepreneurship and new venture creation, but will instead encourage students to engage in the entrepreneurial process so as to provide them with insight into how to be enterprising and being an entrepreneur. A "through" EE experience will allow students to engage in the full entrepreneurship process and experience to support the development of their entrepreneurial capabilities.

As EE moves away from the didactic transmission of knowledge to developing more practical entrepreneurial skills and competencies, the roles of the teacher and student in the educational process changes. As learning shifts from behaviorist, cognitivist, and constructivist approaches, the emphasis moves from the teacher to the student. The constructivist approach is student-centered: students take the lead, and take responsibility for their learning and be selfdirected, while the teacher acts as a guide or facilitator (Seikkula-Leino et al., 2015). This is in contrast to the behaviorist approach where the teacher acts as the purveyor of knowledge and takes the lead in the learning process. It is increasingly recognized that students, rather than teachers, are the primary agents in the EE process (Aparicio et al., 2019). However, teachercentered approaches are particularly effective when supporting students' theoretical understanding of entrepreneurship and its benefits compared to student-centered approaches (Hytti & O'Gorman, 2004). Ismail et al. (2018) highlight and discuss the importance of context and culture on the effectiveness of teacher-centered and student-centered approaches. Where society widely accepts the authority and wisdom of teachers, teacher-centered approaches may have a greater impact on the development of entrepreneurship intention. In addition, students who are unfamiliar with constructivist student-centered approaches may face challenges when taught using such approaches (Bell, 2020b). These challenges include understanding the learning process and how learning and knowledge are discovered and created, linking taught content and knowledge to practical activities, working in, and managing group interactions (Bell, 2020b). Harima et al. (2021) also found that role ambiguity in the learning process may exist for students in courses centered on venture creation. Therefore, it is important that students fully understand the pedagogic and learning process within student-centered EE and the expected role of the student.

The next section discusses two case studies of EE practice in the UK and links back to the different approaches to EE and the underpinning educational philosophies and theory. The first case adopted a progressive "for" EE approach within the curriculum, whilst the second case study adopted a "through" EE approach within an extracurricular activity.

Examples of EE practice in the UK

This section provides two case studies of EE in the UK. These case studies will be used to apply the concepts from the QAA guidelines and the educational philosophy and theory discussed in the previous sections. These case studies do not necessarily represent best practices, and there is a need to tailor the learning experience to individual student cohorts and contexts. The two case studies both apply experiential learning approaches, as it has been suggested that such approaches are particularly efficacious for EE (Fuchs et al., 2008; Honig, 2004). Experiential learning allows students to actively participate in the entrepreneurial process, rather than simply reading or hearing about it (Jones & English, 2004). The learning within both cases studies sought to mimic part of the entrepreneurial processes and the creation of something, using new processes or techniques to create value (Schumpeter, 1942). This allowed for an inductive process of opportunity recognition in an environment with a degree of uncertainty, unpredictability, and risk (Jack & Anderson, 1999). This meant that the students needed to engage in creative problem-solving throughout the experience, and learned by doing (Jones & Iredale, 2010). Due to the acknowledgment of uncertainty and unpredictability in the students' activities and tasks, the teaching within the case studies moved away from a process view of entrepreneurship whereby it was viewed and conceptualized as a set of linear stages, to a method view that allowed students to engage in the method of entrepreneurship (Neck et al., 2014). Adopting a method view of entrepreneurship forces students to go beyond seeking understanding, knowing, and discussing entrepreneurship to applying and acting through practice (Neck et al., 2014). The learning activities within the case studies allowed students to play freely with only limited burden in an entrepreneurial setting, develop empathy with those they were developing products for, and create and experiment within entrepreneurship (Neck et al., 2014). The activities also provided links to real-life entrepreneurial practice in a scaffolded environment to encourage and support the learning and development of entrepreneurial skills (Macht & Ball, 2016).

Within both case studies, the underpinning theory on entrepreneurship was provided to students, as engaging in entrepreneurship does not exclude theory; rather, the effective undertaking of entrepreneurship requires a set of practices that is grounded and underpinned by theory (Bell & Bell, 2020; Neck et al., 2014). Therefore, there were different teaching goals within the cases studies at different stages, and to effectively achieve these different goals, a mix of educational philosophy and theory was used. The main emphasis was on learning from experience: reflecting on the experience and what worked well and did not work well, and what changes could be made. This was encouraged and supported by Schön's (1983) principles of reflection-in-action, which supports reflection during the experience to re-evaluate logic and strategy, and Kolb's (1984) theory of experiential learning, which promotes turning experience into learning and development after the event (Bell & Bell, 2020). The overall purpose within the teaching was to support students to acquire entrepreneurial skills, knowledge, and mindset through deliberate hands-on, action-based activities that enhance and support the development of entrepreneurial performance (Neck et al., 2014).

Case study 1: Popup shops and social events

Course purpose and structure

This case study presents details of a course where students engaged with the entrepreneurial process by undertaking two practical applied tasks within groups. Each of the applied tasks was targeted at part of the entrepreneurial process, rather than the whole entrepreneurial process and the formation of a complete business. As such, the course could be classified as a progressive "for" EE approach. The course was designed to give students the experience of identifying entrepreneurial opportunities, planning, managing the sales and marketing process, and implementing the initial launch of a venture in a supportive and scaffolded environment. The tasks and learning environment were designed to be fun and positive. Students could play freely with ideas, connect with end users to develop empathy and understand their needs and desires, as well as create, experiment, and reflect on how the process went (Neck et al., 2014). The course was for second-year higher education students who already had an understanding of basic business functions and the supporting theory. It allowed students to apply some of the theory previously taught to them, as well as new theory and knowledge delivered as part of this course, to practice and engage in the entrepreneurial process. Whilst the course was mandatory for some students, it was an elective for others. The course

ran throughout the full academic year, a total of 24 weeks, with 12 weeks in each semester. Midway through the first semester, students needed to complete the first applied task, whilst toward the end of the second semester, they needed to complete the second applied task.

Applied task 1: Running a popup shop

Students in groups were tasked with picking a product that they would then attempt to sell in a popup shop. They were presented with a booklet detailing the products they could choose from. The booklet contained details about the products and their wholesale cost. The products were largely imported and represented trends in other countries. The groups had the opportunity to review the potential products and costs, and then decide which product they wanted to sell, along with the price they would charge, and how they would market it. They created a list of the products they would like to sell in their preferred order. The groups were encouraged to develop a robust rationale and justification for their choice of products. One of the rules was that no two groups could sell the same product. So, if more than one group requested the same product, there would be a tiebreaker to decide who could sell the product. The tiebreaker involved the groups pitching their rationale for choosing the product and why they would be the best representative for it. The decision as to who got to sell the product was made by the instructor in consultation with the rest of the class. The competition and experience of competitive pitching was meant to create a buzz. This component of the class and the selling of the product through a popup shop emulated a task regularly undertaken on the realitytelevision show *The Apprentice* and parallels were drawn between the two to heighten the similarity and enjoyment. Once it was confirmed what each group was going to sell at the popup shop, students were required to confirm their pricing strategy, marketing, and advertising, and complete a worksheet explaining their expectations and predicted sales. In the following week, the pop-up shop was run by a second different group of students selling their using their marketing and advertising materials developed and the pricing strategy set. During and after the popup shop, students were asked to reflect on the experience and the worksheet previously completed, with their expectations used as an aid for their reflections.

Applied task 2: Developing, organizing, and running a social event

As part of the second half of the course, the student groups needed to develop an innovative and novel concept for a social event, pitch it to the Student Union, and then once agreed after making any required changes, market, organize, and manage the event. This task built on the first by allowing students to engage with more of the entrepreneurial process and

involved more complexity. Each group had an evening where they could run an event at the Student Union on campus. They developed a theme and concept for their event, including the entertainment and activities to be offered. Additionally, they could pick the entry price and drink offers from an agreed range, and they needed to market the event. In essence, students acted as the event promoter, whilst the regular staff managed the essential functions of service and security, etc. Each group was provided with a budget that they could spend to cover props, activities, and entertainment for their event, and the entry/door cover charge and a percentage of bar sales formed the revenue from which their final profit was determined. Each group was tasked with breaking even or making a small surplus.

As part of the preparation for the second applied task, students were guided and supported through several stages of the entrepreneurial process including market research, planning, budgeting and costing, and marketing and advertising. They needed to complete a document like a business plan for their event, including details of their expectations for the event. During the process, students were encouraged to reflect on how the process was going as well as on the outcome and success and/or failure.

The students ran a range of events with different themes, activities, and entertainment, including trivia, karaoke, food events, sporting activities, photobooths, bands, and DJs. Some events failed to break even, while others made a surplus.

Teaching during the course

Due to the hands-on and practical nature of the course, it was timetabled for three hours per week in a single block for 24 weeks. All the teaching was delivered in seminar rooms where the students sat in their respective groups. The first session introduced the course and provided an overview of the module, outlining the learning objectives, the scope of content, what students would need to do and their role in the learning process, and how they would be assessed. After this, each session focused on what the students needed to do to prepare for the applied tasks. The instructor used approximately the first third of each session to introduce the week's topic, discuss the theory underpinning the topic, and explain what students were required to do. During this first phase of the session, the instructor provided theory and knowledge and encouraged critical analysis and discussion. The presentation and discussion of objectivist knowledge were underpinned by a behaviorist and cognitivist approach to teaching and learning. After this, the students worked in their small groups to apply the theory and knowledge to the activities and challenges to prepare them for the tasks. For the final two-thirds of the session, the activities and challenges were the same for the whole class, as each

group was working at their own pace and doing projects with different emphases based on their own assessment of their context and situation. Therefore, there was some flexibility allowing groups to focus on and prioritize what they thought was most important for them. During this phase of the session, the instructor acted as a facilitator and guide who was available to explain what should be done and why, and provide guidance when groups were stuck. This allowed students to construct their own learning and meaning based on their own context of what they were doing, how they approached it, and how it went. Therefore, there was limited uniformity of the learning from this phase. Time for structured reflection was built into the course and individual groups and students were encouraged to reflect on the decisions made each week, how it was going, and whether any pivots or adjustments should be made. Additionally, students were encouraged to reflect on how the applied activities had played out and what they would do differently next time. Both reflection-in-action and reflection at the end of sessions and after the applied tasks, were central to learning throughout the course (Schön, 1983; Kolb, 1984). The learning during this phase of the sessions was underpinned by a constructivist educational approach. As the course progressed, students were generally given greater autonomy and less guidance as they became more accustomed to what they needed to do, took more responsibility for their learning, and developed their entrepreneurial skills. The groups became experts in their own events as they continued to research and plan them. The theory and the stages for completing the activities were presented in bite-size pieces, which supported them to achieve what many of them had initially gasped at when they found out what they needed to do.

Assessment

The assessment was a portfolio comprising three parts that had been completed at different stages of the module. Feedback was given after the submission of each component for students to improve on their subsequent submissions. The first component required students to present a group reflection of their experience running the popup shop (applied task 1). Help was provided to structure the reflective presentation, as this was many students' first reflective presentation. They were encouraged to revisit their expectations and forecasts, choice of product, marketing, pricing, what worked and did not work, and why this might have been. They also identified what they had learnt by exploring whether there was anything they would have done differently and what advice they would give to someone considering opening a retail shop. For the second component, the groups wrote a report explaining and justifying their decisions made for the social event (applied task 2), which was submitted before the event ran.

This covered the concept for the event, activities, and entertainment, the marketing strategy and messages communicated, their financial and budget decisions as well as any other decisions they had made. The third and final assignment was an individual reflection on the social event (based on applied task 2), a small reflection on the entire module, and what was learnt. Like the first assignment, students were guided to reflect on the experience and their learning. As students moved through the module, their reflective capability and ability to learn from their experience were strengthened.

Working with partners and stakeholders

As part of the course, students had the opportunity to interact and work with a range of stakeholders. They talked to professionals about their entrepreneurial ideas to gain their buyin. As part of the popup shop, students discussed their pricing and marketing plans to seek approval from the course instructor and a representative of the property management company who ran the shopping center where the retail unit was located. Also, once the popup shop was up and running, the students had to speak with customers. Whilst preparing for the social event, students needed to undertake market research to determine the likely success and viability of their concept. They also discussed and cleared their event concept and plans with the Student Union and bar manager. These interactions with external stakeholders helped create a real-life experience and developed students' persuasive communication and soft skills. In addition, students had the opportunity to build networks and entrepreneurial identity through holding entrepreneurial discussions.

Student reaction and learning

The student reaction to the module was largely positive as they enjoyed the experience and it stood out from the other courses they took. The module helped them link and apply to actual practice the theory taught in the course and other business courses that they had previously studied. However, some of the students found it quite intense as it was not a class where they could be passive. This meant that whilst offering the potential for a real sense of achievement, it was time-consuming and tiring. This was highlighted and discussed when students were choosing the class, so as to ensure that those who enrolled were aware of the expectations and could commit to it.

The general learning that often results from the course includes the importance of linking products and concepts to customer demand and interest in order to identify a successful opportunity. Groups regularly got sucked into choosing products that they liked for the popup

shop, and developing concepts, activities, and entertainment for the social event which they thought would be enjoyable and popular. Instead, they ought to have considered what the market and potential customers would be interested in. This also highlights the importance and value of market research and not taking the easy option of speaking to people within one's social group as others may give a more honest and unbiased view. The importance of critical analysis and evaluation in decision-making was regularly brought up in reflections, as groups regularly struggled to make effective decisions. Groups could either become paralyzed by different viewpoints or acquiesce to one person for all the decisions. Presentation and the importance of being explicit, concise, and persuasive often comes to the fore when pitching and speaking to external stakeholder to seek agreement. External stakeholders often have defined red lines and questions that groups might not be able to answer on the spot. Groups also often learned the difficulty in developing effective budgets and forecasts, and regularly overestimate sales while benchmarking the value of their product. Individuals regularly reported feeling more comfortable with the concept of entrepreneurship and knowing where to start if they were interested in starting a new venture. Similarly, the engagement with external stakeholders made them feel more confident that they would be taken seriously when approaching such conversations. Finally, students often reported they learned the value of reflection and how to learn from it, as this was an important step when dealing with the many issues that often occurred, both when planning and during the applied tasks.

Further information

This case study outlines and discusses an updated and refined version of the course analyzed in Bell (2015). For further critical analysis and details as to the effectiveness of the original course in developing students' entrepreneurial skills, see Bell (2015). The original course was kindly supported by the Academy of Marketing, Teaching and Research Development Grant, and the nature of the course allowed for it to be sustainably funded, with any profits/surpluses used to support future academic years.

Case study 2: Supporting new retail ventures

Extracurricular activity purpose

This case study details an extracurricular EE program. It has been identified that, in some contexts, extracurricular EE has more scope for creative and innovative teaching, as there are fewer formal requirements, expectations, and restraints compared to EE delivered in the curriculum (Cui et al., 2021). Involving the collaboration and support from a bank and a

property management company, the program provided an opportunity for students to pitch for funding and free retail space in a shopping center. The property manager donated a shop unit in a shopping center while the bank provided some initial capital for four startups. Both were also involved in the training and mentoring of students. The program was promoted as a scaffolded, supported way to try out a retail concept where students could use their summer to gain entrepreneurship experience, market exposure, and potentially make a profit by running a startup. The program could be categorized as "through" EE, as the students were able to run their new venture over a sustained amount of time and complete the full entrepreneurial process.

The program was open to all students at one HEI, regardless of discipline and age. Students had the option to work as a group or independently, depending on their preference. In total, over 50 students participated in the program initially, with the number falling as the program progressed. This attrition was expected as the program grew increasingly demanding and real, and students reassessed their interest in entrepreneurship. Nonetheless, even those who started the program but did not complete it would have received exposure to entrepreneurship and learnt valuable lessons about entrepreneurship and themselves.

Stages of the program

The program was broken down into three stages. The first stage involved mentoring from a range of consultant mentors including a retail expert provided by the property manager, smallbusiness advisers from the bank, and the entrepreneurship faculty from the institution. Several short sessions were delivered which included a range of topics such as idea generation and refinement, planning, budgeting, persuasive communication, and pitching. These sessions were designed to support students to develop their new venture propositions and write a small business plan, based on the banks' normal loan application. At the end of the first stage, students who wanted to move to the next stage needed to support their business plan, with all business plans receiving feedback. Eight business plans were chosen to move to the second stage where the students were provided with individual mentoring and support to further develop their ideas and plans. They would pitch their plans to a panel who determined the awarding of capital and retail space. Students had approximately one month to develop their plans and pitches. Of the eight groups who pitched four were provided with seed capital and part of a retail unit to run their operations over the summer break. The third stage of the program involved the actual running of the business over the summer. During this time, students had weekly meetings with their mentors and were encouraged to reflect on what was working and not working, as well as what adjustments could be made. This led to several of the businesses

making marketing and/or pricing changes. The program largely adopted a constructivist approach to teaching where students were in control of their own learning, and it was structured around the development of their own proposed and actual businesses. Students were supported by industry experts and faculty who acted as mentors and guides who helped them develop their own unique business concepts. Therefore, the learning experience was different for each student. The program went beyond a common business pitching competition: those who were successful received the resources to run their new ventures over the summer and were supported by mentoring throughout the whole process, from the initial idea generation through to completing the paperwork to close or make the business dormant.

Student learning and program outcomes

Student participants stated that the program demystified the entrepreneurial and startup process and what support was available. They also indicated that they now felt more comfortable talking and communicating with those in the industry. Those who ran businesses over the summer highlighted that they had learnt a lot from the experience. This included the need to be adaptable and flexible when their assumptions and expectations did not hold true, for example, items were often priced too high and/or potential customers did not perceive the value of the products as expected. The mentoring also allowed students to build industry networks when they engaged with stakeholders in the industry. Students identified the value of mentors in helping them think through and reassess their decisions as well as reconnect their experiences to the initial decision-making process. This allowed them to review and reflect on their assumptions and why they might not be right. Students also highlighted the value of reflecting during the experience as it allowed them to experiment and make ongoing decisions to improve their business.

Further information

This case study outlines and discusses a further iteration of the program analyzed in Bell and Bell (2016a).

Challenges and future directions for EE in the UK

This chapter discusses the development of EE in the UK, which continues to evolve despite its relatively long history. Whilst its relevance and pertinence have been maintained in government policy, the way in which EE has been viewed and delivered has continued to change. For example, there is increasing emphasis on social entrepreneurship, and the notion

of entrepreneurship has been broadened beyond new venture formation to include value creation in terms of cultural, social, or economic value. This movement to consider entrepreneurship as not exclusively new venture formation is likely to continue to grow, but it may also complicate the definition of entrepreneurship and therefore what exactly should be taught. Some scholars such as Bridge (2017) already believe that making a distinction between enterprise and entrepreneurship is arbitrary and causes more confusion. However, opening up entrepreneurship and EE to more people through a revised conceptual understanding should be considered to be a positive step.

Whilst EE is still taught using didactic principles in some cases, it is increasingly being taught with an emphasis on the development of practical skills and experiential learning. The QAA (2018) offers a set of guidelines rather than a prescriptive code or requirement, which allows entrepreneurship educators to be creative and tailor their provisions to individual cohorts. One of the main points of the QAA (2018) guidelines encourages educators to consider the purpose of their teaching—is it to teach "about," "for," or "through" entrepreneurship? Once this has been determined, there is value in considering and reflecting on the philosophy and theory that effectively underpin this type of EE. A challenge still potentially exists in supporting both students and educators to make the transition between "about," "for," and "through" EE. To support the transition, students need to understand the difference in their role in the learning process and be prepared to take ownership of their learning. Students commonly also need increased scaffolding to start with, which is then removed, otherwise they may become lost or dependent on the instructor. Both scenarios have the potential to reduce the effectiveness of the learning experience. Educators may be hesitant to transition as they perceive that "for" and "through" EE are more challenging, time-consuming, and resourceintensive, and this may not always be recognized by institutions (Bell & Liu, 2019). Therefore, educators may become apathetic and follow the path of least resistance, not wanting to make changes and sticking with the way courses have always been taught. Conversely, there is a potential danger of educators becoming carried away with more progressive EE at the expense of theory. One of the benefits of ensuring that EE is underpinned by educational philosophy and theory is that it reminds us of the importance of underpinning entrepreneurial experiences and hands-on learning with theory and that the two should not be separated. Therefore, there is a risk of educators perceiving their class to be either about theory or practice, but both should be brought together to ensure effective learning.

As technology opens up access to more markets and opportunities, and potentially making entrepreneurship more achievable, it is important that EE and educators can integrate this into

the curriculum. Therefore, it is important for technology to be embedded within EE, where students are equipped with the necessary understanding and skills to take advantage of changing and developing technology such as coding, web design, and crowdfunding, etc. This requires educators to stay on top of the latest technology and innovations and to bring them into the classroom, so students can learn, explore, and experiment with them. Similarly, it is important that entrepreneurship continues to be embedded within other disciplines and is not taught in isolation, as it is by allowing students to be entrepreneurial within their own context and using their own unique knowledge base and skill sets that the strongest innovations and opportunities will emerge. The so called fourth industrial revolution is not mentioned explicitly in the QAA (2018) guidelines, however the guidelines highlight that EE should prepare students for job roles which do not exist yet and technologies which are yet to be invented. The fourth industrial revolution has the potential to reshape markets and open new opportunities for entrepreneurs through the embedding of new technologies and e-commence (Hassan, et al., 2020). Therefore, EE needs to reflect these new potential opportunities by ensuring that future entrepreneurs are ready to take advantage of them (Bell and Bell, 2023). This can be achieved by ensuring that technological and digital disciplines feed into EE, so that entrepreneurship is not seen as an isolated discipline. Students need to be able to understand how contemporary technology can be used to support opportunity identification and take full advantage of opportunities within the changing landscape. However, on the ground different departments and expertise can become siloed, which can make bringing the required expertise into the EE classroom a challenge. Future EE guidelines might benefit from more explicit guidance as to the role and importance of embedding technology within EE teaching, and by suggesting paths forward as to how this can be achieved in practice.

Effective entrepreneurial ecosystems play an important role in the transfer of students from EE to entrepreneurship. Conducive entrepreneurial ecosystems can complement EE and support students to start new ventures. An effective and strong ecosystem has been described as bringing together alumni, partners in industry and commerce, joint research projects and incubators to offer opportunities for providing encouragement, and the practice and development of entrepreneurial ideas (Miller & Acs, 2017). However, entrepreneurial ecosystems should be tailored for different cohorts of nascent entrepreneurs as they require different support (Bell, 2019). Further integration of entrepreneurial ecosystems and EE can help reduce the leap and smoothen the transition from being entrepreneurial and starting a new venture.

References

- Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *The Academy of Management Review*, 27(1), 17–40.
- Aldianto, L., Anggadwita, G., & Umbara, A. N. (2018). Entrepreneurship education program as value creation: Empirical findings of universities in Bandung, Indonesia. *Journal of Science and Technology Policy Management*, 9(3), 296–309.
- Ally, M. (2004). Foundations of educational theory for online learning. In T. Anderson (Ed.), *The theory and practice of online learning* (pp. 16-44). Edmonton, Canada: Athabasca University Press.
- Amer, A. (2006). Reflections on Bloom's revised taxonomy. *Electronic Journal of Research* in Educational Psychology, 4(1), 213–230.
- Anderson, W. L., Krathwohl, D. R., Airasian, P. W., Cruikshank, K. A., Mayer, R. E., Pintrich, P. R., ... Wittrock, M. C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives* (Complete Edition, 1st edition). New York, NY: Pearson.
- Aparicio, G., Iturralde, T., & Maseda, A. (2019). Conceptual structure and perspectives on entrepreneurship education research: A bibliometric review. *European Research on Management and Business Economics*, 25(3), 105–113.
- Audretsch, D. B. (2014). From the entrepreneurial university to the university for the entrepreneurial society. *The Journal of Technology Transfer*, 39(3), 313–321.
- Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ: Prentice-Hall.
- Barr, S. H., Baker, T., Markham, S. K., & Kingon, A. I. (2009). Bridging the valley of death: Lessons learned from 14 years of commercialization of technology education. *Academy of Management Learning & Education*, 8(3), 370–388.
- Béchard, J. P., & Toulouse, J. M. (1998). Validation of a didactic model for the analysis of training objectives in entrepreneurship. *Journal of Business Venturing*, 13(4), 317–332.
- Bell, R. (2015). Developing the next generation of entrepreneurs: Giving students the opportunity to gain experience and thrive. *The International Journal of Management Education*, 13(1), 37–47.
- Bell, R. (2016). Unpacking the link between entrepreneurialism and employability: An assessment of the relationship between entrepreneurial attitudes and likelihood of graduate employment in a professional field. *Education + Training*, 58(1), 2–17.
- Bell, R. (2019), Predicting entrepreneurial intention across the university. *Education* + *Training*, 61(6/7), 815–831.

- Bell, R. (2020a). Developing entrepreneurial behaviours in the Chinese classroom through value creation pedagogy. *Innovations in Education and Teaching International*, 59(1), 37-48.
- Bell, R. (2020b). Adapting to constructivist approaches to entrepreneurship education in the Chinese classroom. *Studies in Higher Education*, 45(8), 1694–1710.
- Bell, R. (2021). Underpinning the entrepreneurship educator's toolkit: Conceptualising the influence of educational philosophies and theory. *Entrepreneurship Education*, 4(1), 1–18.
- Bell, R., & Bell, H. (2016a). An enterprise opportunity for entrepreneurial students: Student enterprise development and experience assessed through the student voice. *Education* + *Training*, 58(7/8), 751–765.
- Bell, R., & Bell, H. (2016b). Replicating the networking, mentoring and venture creation benefits of entrepreneurship centres on a shoestring: A student-centred approach to entrepreneurship education and venture creation. *Industry and Higher Education*, 30(5), 334–343.
- Bell, R., & Bell, H. (2020). Applying educational theory to develop a framework to support the delivery of experiential entrepreneurship education. *Journal of Small Business and Enterprise Development*, 27(6), 987–1004.
- Bell, R. & Bell, H. (2023), Entrepreneurship education in the era of generative artificial intelligence. *Entrepreneurship Education*. Doi: 10.1007/s41959-023-00099-x
- Bell, R., & Liu, P. (2019). Educator challenges in the development and delivery of constructivist active and experiential entrepreneurship classrooms in Chinese vocational higher education. *Journal of Small Business and Enterprise Development*, 26(2), 209–227.
- Bennett, R. (2006). Business lecturers' perceptions of the nature of entrepreneurship. International Journal of Entrepreneurial Behavior & Research, 12(3), 165–188.
- Biggs, J. (2012). What the student does: teaching for enhanced learning. *Higher Education Research & Development*, 31(1), 39–55.
- Blanka, C. (2019). An individual-level perspective on intrapreneurship: A review and ways forward. *Review of Managerial Science*, 13(5), 919–961.
- Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals*. New York, NY: David McKay Company.
- Blundel, R. (2002). Network evolution and the growth of artisanal firms: A tale of two regional cheese makers. *Entrepreneurship & Regional Development*, 14(1), 1–30.

- Bridge, S. (2017). Is "entrepreneurship" the problem in entrepreneurship education?. *Education* + *Training*, 59(7/8), 740–750.
- Brieger, E., Arghode, V., & McLean, G. (2020). Connecting theory and practice: Reviewing six learning theories to inform online instruction. *European Journal of Training and Development*, 44(4/5), 321–339.
- Cope, J. (2005). Toward a Dynamic Learning Perspective of Entrepreneurship. Entrepreneurship Theory and Practice, 29(4), 373–397.
- Cranmer, S. (2006). Enhancing graduate employability: best intentions and mixed outcomes. *Studies in Higher Education*, *31*(2), 169–184.
- Cui, J., Sun, J., & Bell, R. (2021). The impact of entrepreneurship education on the entrepreneurial mindset of college students in China: The mediating role of inspiration and the role of educational attributes. *The International Journal of Management Education*, 19(1), Article 100296.
- Darkenwald, G. G., & Merriam, S. B. (1982). *Adult education: Foundations of practice*. New York, NY: Harper & Row.
- Department for Business Enterprise and Regulatory Reform. (2008). *Enterprise: Unlocking the UK's talent*. London, England: HM Treasury.
- Department for Education and Skills (DFES) (2003), *The future of higher education*, paper presented to Parliament by the Secretary of State for Education and Skills, January. London, UK.
- Dierksmeier, C. (2020). From Jensen to Jensen: Mechanistic management education or humanistic management learning?. *Journal of Business Ethics*, 166(1), 73–87.
- Doutriaux, J., & Barker, M. (1996). University and industry in Canada: A changing relationship. *Industry and Higher Education*, 10(2), 88–102.
- Education and Skills Committee. (2003, June). *The future of higher education*. London, England: The Stationery Office Limited.
- Enterprise Educators UK (2021, August). *Timeline*. Retrieved from https://www.enterprise.ac.uk/about/#timeline
- European Commission, Enterprise and Industry Directorate-General. (2008, March).

 Entrepreneurship in higher education, especially within non-business studies. Brussels,
 Belgium: European Commission. Retrieved from
 https://ec.europa.eu/docsroom/documents/8969/attachments/1/translations/en/renditions/
 pdf

- Facione, P. (1990). *The California critical thinking skills test: College level*. Millbrae, CA: California Academic Press.
- Ferreira, C. C. (2020). Experiential learning theory and hybrid entrepreneurship: Factors influencing the transition to full-time entrepreneurship. *International Journal of Entrepreneurial Behavior & Research*, 26(8), 1845–1863.
- Freire, P. (2006). Banking versus problem-solving models of education. In R. Curren (Ed.), *Philosophy of education: An anthology* (1st ed., pp. 68-75). Malden, MA: Wiley-Blackwell.
- Fuchs, K., Werner, A, & Wallau, F. (2008). Entrepreneurship education in Germany and Sweden: What role do different school systems play?. *Journal of Small Business and Enterprise Development*, 15(2), 365–381.
- Gedeon, S. (2014). Application of best practices in university entrepreneurship education: Designing a new MBA program. *European Journal of Training and Development*, 38(3), 231–253.
- Gibb, A., & Hannon, P. (2006). Towards the entrepreneurial university. *International Journal of Entrepreneurship Education*, 4(1), 73–110.
- Guerrero, M., & Peña-Legazkue, I. (2013). The effect of intrapreneurial experience on corporate venturing: Evidence from developed economies. *International Entrepreneurship and Management Journal*, 9(3), 397–416.
- Halpern, D. F. (1996). *Thought and knowledge: An introduction to critical thinking*. Mahwah, NJ: Lawrence Erlbaum.
- Hannon, P. D. (2005). Philosophies of enterprise and entrepreneurship education and challenges for higher education in the UK. *The International Journal of Entrepreneurship and Innovation*, 6(2), 105–114.
- Hannon, P. D. (2006). Teaching pigeons to dance: Sense and meaning in entrepreneurship education. *Education + Training*, 48(5), 296–308.
- Harima, A., Kroczak, A., & Repnik, M. (2021). Role ambiguity in entrepreneurship education: Expectation gaps between educators and students in venture creation courses. *Education* + *Training*, 63(9), 1309-1325.
- Hassan, A., Saleem, I., Anwar, I. & Hussain, S.A. (2020), Entrepreneurial intention of Indian university students: the role of opportunity recognition and entrepreneurship education. *Education* + *Training*, 62 (7/8), 843-861.
- Henry, C. (2013). Entrepreneurship education in HE: Are policy makers expecting too much?. *Education* + *Training*, 55(8/9), 836–848.

- Higher Education Funding Council Executive (2004), *HEFCE Strategic Plan for 2006-2011*. London, UK.
- Hindle, K. (2010). How community context affects entrepreneurial process: A diagnostic framework. *Entrepreneurship & Regional Development*, 22(7–8), 599–647.
- Honig, B. (2004). Entrepreneurship education: Toward a model of contingency-based business planning. *Academy of Management Learning & Education*, 3(3), 258–273.
- Hytti, U., & Kuopusjärvi, P. (2004). Evaluating and measuring entrepreneurship and enterprise education: Methods, tools and practices. Small Business Institute, Business Research and Development Centre, Turku School of Economics and Business Administration. Retrieved from https://ibw.at/resource/download/1419/entreva-net-report,pdf
- Hytti, U., & O'Gorman, C. (2004). What is "enterprise education"? An analysis of the objectives and methods of enterprise education programmes in four European countries. *Education + Training*, 46(1), 11–23.
- Ismail, A. B. T., Sawang, S., & Zolin, R. (2018). Entrepreneurship education pedagogy: Teacher-student-centred paradox. *Education* + *Training*, 60(2), 168–184.
- Jack, S. L., & Anderson, A. R. (1999). Entrepreneurship education within the enterprise culture: Producing reflective practitioners. *International Journal of Entrepreneurial Behaviour & Research*, 5(3), 110–125.
- Jonassen, D. H. (1991). Evaluating constructivistic learning. *Educational Technology*, 31(9), 28–33.
- Jones, B., & Iredale, N. (2010). Enterprise education as pedagogy. *Education + Training*, 52(1), 7–19.
- Jones, C. (2019). A signature pedagogy for entrepreneurship education. *Journal of Small Business and Enterprise Development*, 26(2), 243–254.
- Jones, C., & English, J. (2004). A contemporary approach to entrepreneurship education. *Education* + *Training*, 46(8/9), 416–423.
- Jones, S. (2014). Gendered discourses of entrepreneurship in UK higher education: The fictive entrepreneur and the fictive student. *International Small Business Journal*, 32(3) 237–258.
- Kakouris, A., & Liargovas, P. (2021). On the about/for/through framework of entrepreneurship education: A critical analysis. *Entrepreneurship Education and Pedagogy*, 4(3), 396–421.
- Kantar, L. D. (2013). Demystifying instructional innovation: The case of teaching with case studies. *Journal of the Scholarship of Teaching and Learning*, 13(2),101–115.

- Katz, J. A. (1991). The institution and infrastructure of entrepreneurship. *Entrepreneurship Theory and Practice*, 15(3), 85–102.
- Kauppinen, A., Paloniemi, K., & Juho, A. (2019). Failed firm founders' grief coping during mentoring: Learning as the single catalyst of their restarting performance narratives. *The International Journal of Management Education*, Article 100288.
- Kirschner, P. A., Sweller, J., & Clark, R. E. (2006). Why minimal guidance during instruction does not work: An analysis of the failure of constructivist, discovery, problem-based, experiential, and inquiry-based teaching. *Educational Psychologist*, 41(2), 75–86.
- Klofsten, M., Fayolle, A., Guerrero, M., Mian, S., Urbano, D., & Wright, M. (2019). The entrepreneurial university as driver for economic growth and social change Key strategic challenges. *Technological Forecasting and Social Change*, *141*, 149–158.
- Kolb, D. (1984). Experiential learning. Englewood Cliffs, NJ: Prentice Hall.
- Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory Into Practice*, 41(4), 212–218.
- Kreitzer, A., & Madaus, G. (1994). Empirical investigations of the hierarchical structure of the taxonomy. In L. Anderson & L. Sosniak (Eds.), *Bloom's taxonomy: A forty-year retrospective* (pp. 64-81). Chicago, IL: University of Chicago Press.
- Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship Theory & Practice*, 29(5), 577–597.
- Kyrö, P. (2015). The conceptual contribution of education to research on entrepreneurship education. *Entrepreneurship & Regional Development*, 27(9–10), 599–618.
- Lackéus, M. (2014). An emotion-based approach to assessing entrepreneurial education. *The International Journal of Management Education*, 12(3), 374–396.
- Lackéus, M. (2018). "What is value?" A framework for analyzing and facilitating entrepreneurial value creation. *Uniped*, 41(1), 10–28.
- Lackéus, M., Lundqvist, M., & Middleton, K.W. (2016). Bridging the traditional-progressive education rift through entrepreneurship. *International Journal of Entrepreneurial Behavior & Research*, 22(6), 777–803.
- Lackéus, M., & Middleton, K. W. (2015). Venture creation programs: Bridging entrepreneurship education and technology transfer. *Education + Training*, *57*(1), 48–73.
- Löbler, H. (2006). Learning entrepreneurship from a constructivist perspective. *Technology Analysis & Strategic Management*, 18(1), 19–38.

- Lord, T., & Baviskar, S. (2007). Moving students from information recitation to information understanding: Exploiting Bloom's taxonomy in creating science questions. *Journal of College Science Teaching*, 36(5), 40–44.
- Macht, S. A., & Ball, S. (2016). "Authentic alignment" a new framework of entrepreneurship education. *Education + Training*, *58*(9), 926–944.
- Mathews, M. (2007). Constructivist pedagogy for the business communication classroom. Journal of College Teaching & Learning, 4(11), 99–106.
- Matlay, H., & Carey, C. (2007). Entrepreneurship education in the UK: A longitudinal perspective. *Journal of Small Business and Enterprise Development*, 14(2), 252–263.
- Mayhew, K., Deer, C., & Dua, M. (2004). The move to mass higher education in the UK: Many questions and some answers. *Oxford Review of Education*, 30(1), 65–82.
- McKeown, J., Millman, C., Reddy Sursani, S., Smith, K., & Martin, L. M. (2006). Graduate entrepreneurship education in the United Kingdom. *Education* + *Training*, 48(8/9), 597–613.
- McMullan, W. E., & Long, W. A. (1987). Entrepreneurship education in the nineties. *Journal of Business Venturing*, 2(3), 261–275.
- Merriam, S. B. (1982). Some thoughts on the relationship between theory and practice. In S.
 B. Merriam (Ed.), *Linking philosophy and practice: New directions for continuing education* (pp. 87-91). San Francisco, CA: Jossey-Bass.
- Merriam, S. B., Caffarella, R. S., & Baumgartner, L. M. (2007). *Learning in adulthood: A comprehensive guide* (3rd ed.). San Francisco, CA: Jossey-Bass.
- Meyer, A. D., Aten, K., Krause, A. J., Metzger, M. L., & Holloway, S. S. (2011). Creating a university technology commercialisation programme: Confronting conflicts between learning, discovery and commercialisation goals. *International Journal of Entrepreneurship and Innovation Management*, 13(2), 179–198.
- Miller, D. J., & Acs, Z. J. (2017). The campus as entrepreneurial ecosystem: The University of Chicago. *Small Business Economics*, 49(1), 75–95.
- Moreland, N. (2006). *Entrepreneurship and higher education: An employability perspective*. York, England: The Higher Education Academy.
- Morselli, D. (2018). Teaching a sense of initiative and entrepreneurship with constructive alignment in tertiary non-business contexts. *Education* + *Training*, 60(2), 122–138.
- Mueller, S., & Anderson, A. R. (2014). Understanding the entrepreneurial learning process and its impact on students' personal development: A European perspective. *The International Journal of Management Education*, 12(3), 500–511.

- Murphy, E. J. (2007). Prior learning assessment: A review of Bloom's taxonomy and Kolb's theory of experiential learning: Practical uses for prior learning assessment. *The Journal of Continuing Higher Education*, 55(3), 64–66.
- Nabi, G., & Holden, R. (2008). Graduate entrepreneurship: Intentions, education and training. *Education* + *Training*, 50(7), 545–551.
- National Committee of Inquiry into Higher Education (1997), *High Education in the Learning Society: Report of the National Committee*, HMSO, London, UK.
- National Council for Graduate Entrepreneurship (NCGE) (2004). *Mapping of Existing Activity to Support Graduate Entrepreneurs*, National Council for Graduate Entrepreneurship Report, Coventry, UK.
- Neck, H., Brush, C., & Greene, P. (2014). *Teaching entrepreneurship: A practice-based approach*. Cheltenham, England: Edward Elgar.
- Newman, C., & Giles, C. (2005, December 10). 1976 Sterling crisis details made public. Financial Times. Retrieved from https://www.ft.com/content/93cb0260-68f4-11da-bd30-0000779e2340
- O'Brien, E., M. Cooney, T., & Blenker, P. (2019). Expanding university entrepreneurial ecosystems to under-represented communities. *Journal of Entrepreneurship and Public Policy*, 8(3), 384–407.
- Peltier, J. W., & Scovotti, C. (2010). Enhancing entrepreneurial marketing education: The student perspective. *Journal of Small Business and Enterprise Development*, 17(4), 514–536.
- Pepin, M. (2012). Enterprise education: A Deweyan perspective. *Education + Training*, 54(8/9), 801–812.
- Piercy, N. (2013). Evaluating experiential learning in the business context: Contributions to group-based and cross-functional working. *Innovations in Education and Teaching International*, 50(2), 202–213.
- Pinchot, G. (1985). Intrapreneuring: Why you don't have to leave the corporation to become an entrepreneur. New York, NY: Harper & Row.
- Pittaway, L., & Cope, J. (2007). Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal*, 25(5), 479–510.
- Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education*, 93(3), 223–231.
- Quality Assurance Agency for Higher Education. (2012). *Enterprise and entrepreneurship education: Guidance for UK higher education providers*. Gloucester, England: QAA.

- Quality Assurance Agency for Higher Education. (2018, January). *Enterprise and entrepreneurship education: Guidance for UK higher education providers*. Retrieved from https://www.qaa.ac.uk/docs/qaas/enhancement-and-development/enterprise-and-entrepreneurship-education-2018.pdf?sfvrsn=15f1f981-8
- Rae, D. (2005). Entrepreneurial learning: A narrative-based conceptual model. *Journal of Small Business and Enterprise Development*, 12(3), 323–335.
- Ragins, B. R., Cotton, J. L, & Miller, J. S. (2000). Marginal mentoring: The effects of type of mentor, quality of relationship, and program design on work and career attitudes. *The Academy of Management Journal*, 43(6), p1177–1194.
- Ramsgaard, M. B. (2018). Experiential learning philosophies of enterprise and entrepreneurship education. In D. Hyams-Ssekasi & E. F. Caldwell (Eds.), *Experiential learning for entrepreneurship* (pp. 3-18). London, England: Palgrave MacMillan.
- Ramsgaard, M. B., & Christensen, M. E. (2018). Interplay of entrepreneurial learning forms:

 A case study of experiential learning settings. *Innovations in Education and Teaching International*, 55(1), 55–64.
- Robertson, M., & Collins, A. (2003). Developing entrepreneurship in West Yorkshire: West Yorkshire universities' partnership and Business Start-Up@Leeds Met. *Education* + *Training*, 45(6), 303–307.
- Robinson, S., Neergaard, H., Tanggaard, L., & Krueger, N. F. (2016). New horizons in entrepreneurship education: From teacher-led to student-centered learning. *Education* + *Training*, 58(7/8), 661–683.
- Schön, D. (1983). The reflective practitioner: How professionals think in action. New York, NY: Basic Books.
- Schramm, C. J. (2006). The entrepreneurial imperative: How America's economic miracle will reshape the world. New York, NY: Harper Business.
- Schumpeter, J. (1942). Capitalism Socialism and Democracy (3rd ed.). New York, NY: Harper.
- Seikkula-Leino, J., Ruskovaara, E., Ikavalko, M., Mattila, J., & Rytkola, T. (2010). Promoting entrepreneurship education: The role of the teacher? *Education + Training*, *52*(2), 117–127.
- Sewell, P., & Pool, L, D. (2010). Moving from conceptual ambiguity to operational clarity: Employability, enterprise and entrepreneurship in higher education. *Education* + *Training*, 52(1), 89–94.
- Sullivan, R. (2000). Entrepreneurial learning and mentoring. *International Journal of Entrepreneurial Behavior & Research*, 6(3), 160–175.

- Urbano, D., & Guerrero, M. (2013). Entrepreneurial universities: Socioeconomic impacts of academic entrepreneurship in a European region. *Economic Development Quarterly*, 27(1), 40–55.
- Vestergaard, L., Moberg, K., & Jørgensen, C. (2012). *Impact of Entrepreneurship Education in Denmark*. Odense, Denmark: Young Enterprise Denmark.
- Watkins, D., & Stone, G. (1999). Entrepreneurship education in UK HEIs: Origins, development and trends. *Industry and Higher Education*, 13(6), 382–389.