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Boundary crossing ahead: perspectives of entrepreneurship by sustainability educators in Higher Education

Abstract

The study focuses on university sustainability educators and evaluates their knowledge and perspectives of entrepreneurship through the theoretical lens of communities of practice. The study considers the potential for collaboration between academics in the entrepreneurship and sustainability disciplines and the advantages this provides. The literature considering the value of entrepreneurship within the sustainability academic discipline remains limited. This study explores, through a UK and European semi-structured survey of sustainability educators, three key research questions. Firstly, how an entrepreneurial or an enterprising approach contributes to solving sustainability problems? Secondly, the extent to which sustainability education programmes in universities are making reference to enterprise/entrepreneurship? Lastly, the future considerations being made to include entrepreneurship and enterprise within such programmes in the future? This study provides a benchmark regarding the consideration of entrepreneurship provision within sustainability curricula which is of relevance to both academic communities, the external sustainability community and policy makers. The study proposes several avenues in which entrepreneurship might be more meaningfully integrated into sustainability programmes.

Keywords: sustainability; educators; entrepreneurship; community of practice

Introduction

In the recent economic climate, there has been increased interest in encouraging entrepreneurial behaviours that enable viable business start-ups to benefit national economies in terms of improved economic activity and employment opportunities (Packham et al. 2010). To facilitate this outcome, there has been a global increase in the provision of entrepreneurship education (EE) throughout the university sector (Gorman et al. 1997; Kuratko 2005). Paralleling this trend, it is being recognised that entrepreneurs play a significant role in enabling societal change (Wennekers et al. 2002) and the call for these change agents to embrace the sustainability agenda is increasingly being heard. Although predominantly driven through the provision of EE within Business Schools, it has been recognised that delivering EE in this context can give rise to a “silo mentality” whereby other

faculties are reluctant to effectively engage, embed and collaborate with this agenda (Jones et al. 2013).

Moreover, it is the authors' view that the enormity and intractability of societal, economic, and environmental challenges facing the global community requires a new approach from sustainability practitioners, one in which entrepreneurial behaviours are valued, harnessed, and actively promoted. A necessary step in this cultural shift will involve the encouragement of the growing number of sustainability educators within the field of Education for Sustainable Development (ESD) in the higher education (HE) sector to embrace entrepreneurial concepts. Unfortunately, existing dialogue and research between the two communities remains nascent, with limited exchange of knowledge or expertise and a wide-scale reluctance within university programmes to embrace the other, to date (Wyness et al. 2015).

This study sits within a conceptual framework that posits curricular change as a function of a broad and complex landscape of practice, comprising limited boundary crossings between the two distinct 'communities of practice' of EE and ESD (Wenger-Trayner 2014). Building on their well-rehearsed theory of situated learning within 'communities of practice' (Lave and Wenger 1991), this theory seeks to position learning in the negotiation and interaction of distinct communities of practice across a complex landscape of practice, where the sharing of knowledge, learning, and understandings between these communities can be at once problematic and fruitful. This paper contends that EE and ESD, with their distinct cultures, languages, and pedagogies, are recognisable communities of practice operating within the ever-shifting landscape of practice of HE; curricular change that relies on the interplay between these two communities will hence likely be problematic, reluctant in the large part, and full of potential.

Wyness et al. (2015) undertook initial research to evaluate the perceptions of EE educators regarding their understanding and incorporation of sustainability concepts in EE and related programmes. This study presents further evidence from this project, this time providing insights into the current perspectives of sustainability educators towards the entrepreneurship discipline. Specifically, the research questions addressed are: how can entrepreneurs or an enterprising approach contribute to solving sustainability problems; to what extent are UK sustainability-related HE programmes currently making reference to enterprise and entrepreneurship within their content; and what considerations are being made to include entrepreneurship and enterprise within these programmes in the future.

The following section presents the significant literature in the sustainability and EE disciplines, followed by details of the study's methodology. The findings precede the discussion section, which elucidates the findings in relation to the theory of landscape of practice. The study concludes by considering ways in which the two communities of EE and ESD might engage more effectively with the other, implications for policy and practice, study limitations and future research opportunities.

Literature review

Currently, there is limited literature discussing the delivery of EE in non-Business-related disciplines (Martin and Lucu 2014; Wyness et al. 2015; Law and Breznik 2016). For EE to achieve effective cross-university distribution, it must be available across university through inter-disciplinary solutions and embedded curriculum. Janssen and Bacq (2010) and McCarver et al. (2010) have promoted the benefits of interactions between different academic disciplines. Moreover, Hynes (1996) identified the need to teach entrepreneurship to non-Business students, who possess a business idea but lack the requisite business and knowledge expertise to undertake a business start-up. Similarly, Shinnar et al. (2009) noted interest

among non-Business students towards entrepreneurial activity suggesting a significant opportunity to expand provision of EE beyond Business Schools. For entrepreneurs and entrepreneurship educators, the value of engaging with sustainability per se, and with those who advocate for Education for Sustainable Development (ESD) or sustainability education specifically, should not be under-estimated. In 2015, the United Nations launched 17 Sustainable Development Goals (SDG) to supersede the Millennium Goals, focusing on development that balances social, economic, and environmental sustainability across the globe. The eighth goal addresses the economy and calls for the global community to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Such a laudable aim will by necessity require future business leaders and entrepreneurs to be fully equipped with the knowledge, skills, and values associated with sustaining businesses and enterprises that contribute to ‘inclusive’ and ‘sustainable’ economies (Sustainable Development Knowledge Platform 2017). Yet, the educational and training processes by which those future business leaders and entrepreneurs will develop that knowledge, skills, and values are currently far from consistent and robust enough to address this goal. The UNESCO (2014) report acknowledged that the transformation of all forms of education to more sustainable systems that can achieve the SDGs is yet to be implemented, with curricula in Higher Education (HE) globally being reticent with making the shift towards sustainable education.

The extant literature highlights that the business community has a central role in enabling a more sustainable future (Hall et al. 2010; Baumann-Pauly et al. 2013). This evolution is evidenced by established business concepts such as the “triple P” bottom line, where business accountability encompasses people, planet, and profit (Elkington 1997). Sustainable business behaviour in developed countries embraces concepts such as ethical behaviour and sustainability of supply chain management and labour, human resource

management, energy consumption, carbon emissions, and climate change mitigation and adaptation (Bos-Brouwers 2010) to the sustainability of small and medium enterprises (SMEs) and family businesses (Tan et al. 2015).

Business education has a significant role to play in effectively equipping graduates to enter a rapidly evolving and increasingly complex business world, with the concomitant risks (and opportunities) associated with climate change, environmental degradation, resource scarcity, and the availability of appropriately skilled labour (Borel-Saladin and Turok 2013). In management education, Naeem and Neal (2012); Adomssent et al. (2014) and Hart et al. (2015) note the presence of Corporate Social Responsibility and Sustainability (CSRS) in the top-100 MBA programmes in the United States (US) and whilst they uncover a ‘strong minority’ (2015: 723) of programmes embracing CSRS (mostly as electives), significantly fewer programmes promote such activity as their core rationale through their websites. The authors posit that even though sustainability appears in programmes, the emphasis on traditional MBA curricula remains typically business growth orientated. Moreover, Sharma (2014) recognises the trend to ‘saddle-bag’ or ‘bolt-on’ models of inclusion of sustainability in generic business programmes as a typical behaviour across HE business curricula and programmes (Djordjevic and Cotton 2011). In a comparison of the occurrence of sustainability in management education courses in China and the US, Huang and Wang (2013) noted the diversity of content and pedagogical approaches, in part due to institutional and cultural differences and attitudes towards sustainability. Several case studies offer models for how individual business schools can embed sustainability in their curricula, including examples of partnering with local stakeholders (Barber et al. 2014; Hughes and Troy 2015), sustainability management practices (Koch 2005; Huang and Wang 2013), and the use of inquiry-focused learning and students-as-partners (Warwick et al. 2017).

There is an expanding ‘ecopreneur’ literature (Schaper 2016) within the entrepreneurship field related to the rise of sustainable entrepreneurship (Belz and Binder 2015; Munoz and Cohen 2017) and social entrepreneurship (Vickers and Lyon 2014), although there is acknowledgement that both are nascent and contested. In a similar behaviour to business and management education, the reference to sustainability remains limited and marginal within mainstream EE literature. Previously, the authors evaluated the attitudes towards ESD within EE education (Wyness et al. 2015). This paper evaluates the reverse of this situation – the understanding and deployment of entrepreneurship and enterprise concepts within sustainability-related programmes, and conversely their presence within the sustainability education (ESD) literature. Although the challenge of ‘finding space’ for ESD within the Enterprise Economy was highlighted by Higget (2006), there has been a minimal discussion since regarding the value of entrepreneurship and enterprise within the ESD literature (Lans et al. 2013). The authors argue that engagement with ESD is an important step and mitigates the requirement for EE to ‘reinvent the wheel’ in terms of teaching about sustainability. Table 1 shows the results of a search for the terms ‘entrepreneurship’ or ‘entrepreneurial’ in four of the most popular sustainability in HE related journals (search 26th October 2017).

Table 1: Entrepreneurship in Sustainability Journals

Journal	Number of papers containing terms in the title and/or abstract 2007 -2012	2013-2017
Sustainability (Open Access)	1	67
Journal of Cleaner Production	18	207
Environmental Education Research (EER)	0	1
International Journal of Sustainability in Higher Education (IJSHE)	2	1

Table 1 highlights that the Journal of Cleaner Production has witnessed a surge in interest in entrepreneurship over the last decade; an average of 4.6 articles a year between 2008 and 2012, rising to 19 articles being published in 2013, before more than tripling between 2014 (22 articles) and 2017 (72 articles). Articles address topics such as the role of SMEs, young entrepreneurs, policy makers, and universities, and utilise terms such as innovation, creativity, and entrepreneurial thinking, in the pursuit of sustainability. These results herald a growing and promising association between sustainability and entrepreneurship in the literature. However, just as there is a lacuna relating to pedagogical issues of how to engage students of entrepreneurship with sustainability and encourage the development of values and skills associated with sustainability (Wyness et al. 2015), there is also limited reference to how entrepreneurship and associated skills of creativity and risk-taking can be developed within ESD. As the two education-related sustainability journals reveal (see Table 1), entrepreneurship and entrepreneurial skills within ESD is a profoundly under-developed area.

Paralleling a trend towards graduate attributes and skills within HE at large (Barrie 2007), there is a growing literature base within ESD exploring the nature and role of competences relating to sustainability (Dlouhá and Burandt 2015). Whilst this is applied development that denotes ESD's desire to reach beyond the boundaries of its community of practice, the competence models that have thus far been proposed offer minimal reference to entrepreneurial skills such as creativity and innovative thinking (Miller 2016). Although certain skills appear to act as a proxy for entrepreneurial skills - the notion of 'action competence' as mooted by Mogensen and Schnack (2010), and Frisk and Larson's (2011) articulation of skills of action orientation and change-agency, for example – the absence of the language of entrepreneurship reveals a cultural scepticism towards business-orientated solutions. In Weik et al's (2011) five competences of sustainability, there is no consideration

of the need for creativity or innovation, and even in El Ansari and Stibbe's (2009: 435) extensive list of sustainability competences, there is a clear omission of creativity, entrepreneurial mindset, or innovativeness. There is some movement within the field to recognise and promote the value of sustainability as a more generic skill or attribute for improving graduates' employability; Bessant et al. (2015) make linkages between ESD and employability, and in their think tank report for the UK's Higher Education Academy (HEA), Luna et al. (2012) argue that sustainability competences are necessary for all graduates in the green economy, not just those following specific sustainability-related programmes. Indeed, they surmise that the future employability of graduates could be enhanced through more targeted development of sustainable competences in all HE programmes (Lambrechts et al. 2012; Davidson 2014; Sterling et al. 2017). However, there is clearly a need for the discourses and practitioners from the two communities of practice to engage with the 'other'.

There is minimal literature discussing the link between sustainable development and innovation (Ávila et al. 2017), although the case for the importance of entrepreneurial skills, particularly of creativity and innovation, in enabling people to address the sustainable development goals is strong. Abereijo argues that global development 'demands a pool of creative and innovative human capital with an entrepreneurial mindset that is capable of turning ideas into actions that can provide solutions for sustainable development' (2015: 30), although the link to sustainability here is implicit rather than clearly articulated. In a rare academic paper that recognises the connection between creativity and ESD, Sandri, (2013) proposes that the shift to a more sustainable society will be 'near impossible without creative minds and processes' (2013: 765).

There is evident potential for sustainability-related educational programmes (within various academic disciplines) to engage with discourses of entrepreneurship, thus further developing the narrative beyond the reductionist critique of capitalism and condemnation of

consumer culture (Komulainen et al. 2013). Moreover, it would address ‘compatibility’ issues that highlight the difficulty of engaging in the enterprise economy (Higgitt 2006) and the reproduction of neoliberalism mindsets, as critiqued in youth entrepreneurial activities in urban agriculture (Weissman 2015).

In summary, this study considers the EE and ESD/sustainability disciplines through a communities of practice theoretical lens continuing the debate initiated by Wyness et al. (2015). It focuses on the perspectives of sustainability educators on the role of entrepreneurial skills in sustainability, the current state of sustainability programmes in the UK and beyond, and the extent of the presence of entrepreneurship within them, and attempts to conceptualise why engagement has been limited to date.

Methodology

This study presents the second phase of an 18-month research project evaluating the collaborative opportunities between EE and ESD. The aim of the project was to ascertain, evaluate, and disseminate effective pedagogical practices between the disciplines. To enable the effective cross-fertilisation of ideas and information, the authoring team were drawn from both academic fields. This study focuses on the ESD context and considers: the extent to which educators from the ESD community are currently embedding entrepreneurship into their curricula, and their readiness to introduce entrepreneurship into their future programmes. A hybrid quantitative approach was adopted to allow the data collection process to capture a wide range of perspectives of the ESD community regarding entrepreneurship (Ghauri and Gronhaug, 2005).

Data collection

This study employed an Internet survey to capture the attitudes towards entrepreneurial behaviour by ESD academics. This method was identified as providing optimum access and ease of completion in comparison to other methods such as telephone or postal surveys (Ilieva et al. 2002). Internet based surveys have become an increasingly popular survey data collection method due to their inherent flexibility, low cost and accessibility due to the societal adoption of web based technologies (Wright 2005). University academics from the UK and Europe were identified from the ESD academic community and contacted through email and asked to participate in the study. Potential respondents had to be academics teaching ESD or involved in the discipline through research and projects activity within a University. They were identified through a combination of the authors' own networks, searches of University websites that identified those with a significant ESD presence through a research centre, and social media platforms (for example LinkedIn). Thereafter, a database of 96 UK and European based ESD academic practitioners was created listing name, role and email contact details. It must be noted that the ESD community remains small and it is therefore challenging to capture large sample returns. Thereafter, potential respondents were approached with a personalised email to explain the nature, purpose and completion requirements of the survey, and to invite survey completion (Ilieva et al. 2002; Jones et al. 2014). For this study, it was decided to focus on the European community of ESD academics where the research team had existing networks and enhanced access to the community. Each communication included an embedded web link to the survey instrument (Porter and Whitcomb 2005). SurveyMonkey© software was used due to its functionality, usability and low cost. Ethical approval was sought and granted by Plymouth University for undertaking the project.

Research instrument

A structured questionnaire was developed out of the key emergent themes identified within the literature survey concerning EE, ESD and evaluation of pedagogy. The hybrid questionnaire design allowed respondents to provide detailed open ended responses to questions to ensure a detailed discourse across the themes. The first section explored the respondent's attitudes to ESD including key competencies and drivers. The second section explored the respondent's ESD level of lecturing activity and their understanding of the discipline. Section three related to the respondent's pedagogical preferences to their lecturing. The fourth section evaluated the respondent's knowledge of Entrepreneurship and its association with ESD activity. The final section explored the respondent's intention to include entrepreneurship within their future ESD teaching. The research instrument allowed respondents to provide detailed responses regarding their experiences, knowledge and attitudes towards entrepreneurship provision. Thereafter, the questionnaire was converted to an electronic survey using SurveyMonkey© by the authoring team and extensively tested to ensure fitness for purpose. It was also piloted with a group of six ESD academics drawn from the authoring teams' host institutions. The feedback was evaluated and used to further refine question wording and meaning plus the questionnaire flow. Overall, 42 completed questionnaires were completed providing a response rate of 44 per cent.

Unlike Entrepreneurship programmes, which typically reside within business and entrepreneurship schools, the sustainability-related programmes targeted in our survey were hosted across a range of discipline areas and schools, and to a certain extent formed a less-bounded community of practice. Respondents in the sustainability educators' survey were involved in a range of core and elective courses, in addition to undergraduate and postgraduate provision. Specific sustainability-related modules included Introduction to Environment and Sustainability (within a BSc Environment and Sustainability), Eco-literacy

(within BA Education Studies), Education for Change, and specific business-related courses included Greening Business: Employability and Sustainability, Accounting for Sustainability, Managing Sustainability, and Business Ethics and Sustainability. Broader sustainability-related courses within other disciplines included Society and Sustainability (Sociology), Adult and Child Nursing, Midwifery, Sustainable Healthcare, Professional Skills for Computer Science, Connecting Sustainable Practices (Architecture), Public Relations, the Media and Sustainability, and English for Academic Purposes. Respondents derived from a variety of UK universities, as well as European universities including the University of Iceland, University of Vechta, Tallinn University and the Technical University of Denmark.

Data analysis

The data was analysed using both quantitative (SPSS) and qualitative software (NVivo) due to the hybrid nature of the data. Given the size of the sample, greater emphasis is placed here on the analysis of the qualitative data collected. The qualitative data analysis method was undertaken in a systematic manner employing a coding process to logically categorise the data (Drakopoulou-Dodd et al. 2016). Employing the protocol proposed by Miles and Huberman (1994), a process of data reduction, display and conclusion drawing and verification was undertaken. Here the data was sorted into groups relating to the research themes developed from the literature, namely EE, ESD, and pedagogical approaches (Jones and Jones 2014). This axial coding narrative text approach was adopted to enable an accurate description of the data as related to the issue of entrepreneurship and its association with ESD (Strauss and Corbin 1990). This process of interpretation involved multiple author reviews in order to explicate and refine understanding and meaning (Baskerville and Pries-Heje 2001). Preliminary findings were shared with colleagues at an ESD conference, to provide reflexivity, by discussing and challenging the findings with a diverse group of academics. Thereafter, analysis, findings, and theoretical framing were refined following this interaction

(Drakopoulou-Dodd et al. 2016). The next section explores the key findings from the survey and identifies the value ESD academics might attain by engaging with the field of EE.

Findings

How do sustainability educators feel that entrepreneurs or an enterprising approach can contribute to solving sustainability problems? (RQ1)

In total, 27 sustainability educators responded to this question, and findings were mixed. It was apparent that there was a lack of appreciation and understanding regarding the value that entrepreneurs would contribute to solving sustainability problems. Eight respondents (30% of respondents to this question) agreed with the proposal but provided vague or limited responses in that they elicited no supporting detail, or offered unclear responses. Three (11%) respondents answered “Yes” or ‘most definitely’. One (4%) respondent was unclear about the role of entrepreneurs and four (15%) did not directly address the question or misunderstood it. By contrast, four (15%) respondents exhibited cynicism and scepticism regarding the value of entrepreneurship towards solving sustainability problems. Illustrative quotes included:

“I am sceptical of the value of commercially motivated entrepreneurial activity for long-term sustainability although it can, and does, clearly produce useful remedial action.” (No.12)

*“This seems to be another popular word today, something earlier called creativity!”
(No.7)*

“Not sure. I’m sceptical about business approaches since they tend to be profit-driven - which I don't think is the optimal approach to sustainability.” (No.18)

“I do not expect that entrepreneurs can contribute to solving key sustainability problems [...] I would not teach students to put faith in expecting entrepreneurial solution to sustainability problems.” (No.27)

The above quotes represent a general lack of value these respondents associate with the proposal including the association between entrepreneurship and profit. The use of value-laden language such as ‘faith’ and ‘sceptical’ suggests an inherent mistrust of enterprise and entrepreneurs, and an association with familiar tropes of venture capitalists and exploitation. From a more positive perspective, five (19%) respondents identified that entrepreneurs possessed a useful skill base. The respondents identified that similar skills are required by sustainability ‘change-agents’ and entrepreneurs, either that both types of people possess similar skills, or that entrepreneurs have skills that would be valuable for sustainability practitioners to acquire. Illustrative quotes included:

“They have a different skills-base, think outside the box, and challenge conventional ways of thinking” (No.16)

Sustainability needs an enterprising approach in order to change what we currently do. Entrepreneurs have the creativity and 'out-of-the-box' thinking that is necessary to solve the problems we have.” (No.20)

Entrepreneurial skills are essential in the development of more sustainable solutions. Individuals must be encouraged and empowered to take risks, invest their time and resources and provide leadership in the development of more sustainable products, systems and environments.” (No.22)

“An enterprising approach is essential to many practical day-to-day sustainability challenges that we all face. Thinking creatively and positively about issues helps us to come up with new and innovative solutions, is exciting and rewarding.” (No.6)

“Enterprise is about the skills to deliver change, so change agents require enterprise skills.” (No.32)

These respondents’ quotes provide recognition of the entrepreneur as an agent of change, capable of embracing creativity and seeking a solution. However, it was apparent that such views were in the minority.

Just three respondents (11%) believed that entrepreneurs and their enterprise skills are essential to the future progression towards sustainability, with one respondent suggesting that this was a “critical” consideration (No.13). Illustrative respondent quotes included:

“The economic dimension of sustainability is often the most under-played aspect in ESD yet without understanding and engaging in wealth creation, most 'solutions' are not viable and thus unsustainable.” (No.13)

“To address the sustainability challenges the world faces it will be necessary to develop new and enterprising ways of doing things which people want to do. An enterprising approach will also be key to achieving the large-scale behavioural and psychological changes which are required for the development of a more sustainable world.” (No.24)

“By rethinking the purpose of business.” (No.30)

These quotes, although only a minority perspective, highlight that for some, entrepreneurial behaviour is a timely opportunity to think and engage more effectively with the sustainability agenda.

There were further individual comments which offer contributory evidence towards RQ1. For example, one respondent grasped the synergies between the two disciplines noting that entrepreneurial behaviour and sustainability both rely on individuals seeking effective

solutions to systemic problems. Another respondent recognised the opportunity for businesses to shift towards sustainability by adopting ethical values towards their business practices. Seeking entrepreneurial solutions was considered an opportunity to promote support for the advancement of sustainability in an economic context.

The incidence of entrepreneurship and/or enterprise in sustainability education programmes in the UK and beyond (RQ2)

The second research question addressed in this study was ‘to what extent are sustainability education programmes and courses in universities across the UK and beyond currently making reference to enterprise and entrepreneurship?’ The question received 25 responses out of a possible 42. Overall, 67% stated that they either did not include any reference at all to entrepreneurship in their programmes, or ‘not directly’, or no responses were received. The remaining 33% answered that they did include reference to entrepreneurship or enterprise in some way or other, including content such as social enterprise or CSR, as well as skills-based approaches such as those utilised in a professional practice module that ‘explores innovative and new forms of practice including working with real clients’. One respondent stated:

Capitalism is mentioned in terms of its potential to release creativity (entrepreneurship) rather than simply as a 'scourge'. (No.13)

The overall adoption of entrepreneurial behaviour within ESD programmes remained in the minority although several respondents espoused its values. The spectrum of response ranging from no deployment to adoption as a key concept is highlighted in Table 2.

Table 2: Adoption of Entrepreneurship within ESD programmes

Themes	Number and % of	Representative quotations
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	total respondents	
No response	(14) 33%	
Clear 'no'	(12) 29%	<i>'No, this module focusses on collaborative working' (No.3)</i>
Not directly, not yet	(4) 10%	<i>'Not explicitly though they learn a bit about business' (No.21)</i> <i>'Not yet' (No.39)</i>
'Yes' (no details)	(5) 12%	
Critique of entrepreneurship	(1) 2%	<i>'Yes, with a critical view' (No.10)</i>
Entrepreneurship as add-on to normal teaching	(3) 7%	<i>'Yes, some theory on CSR' (No.18)</i> <i>'Reference particularly to social enterprise as a present-day example that might contribute to a future sustainable economy.'</i> (No.37) <i>'Capitalism is mentioned in terms of its potential to release creativity (entrepreneurship) rather than simply as a 'scourge'' (No.13)</i>
Enterprise as a process or feature within course	(2) 5%	<i>'We encourage students to think about what they could be doing to improve sustainability in the healthcare industry, which takes them down their own routes and has inspired some of the students to get involved in movements such as recycling asthma inhalers' (No.20)</i>
Entrepreneurship as key to transformation	(1) 2%	<i>'Yes, we have a module dedicated to professional practice, which explores innovative and new forms of practice including working with real clients. We also work on live projects with external partners. Finally we have a direct relationship with the founder of altgen.org.uk who is working with a number of our students to support them setting up new businesses.'</i> (No.28)

What considerations and plans are being made to include entrepreneurship and enterprise within these programmes and courses in the future? (RQ3)

In total, 21 (50%) out of the 42 respondents provided evidence towards this question. Seven respondents provided a negative response stating no, or not applicable in their context. Illustrative examples included not running a course at the moment, already implicitly embedded in the 'ethos' of course, raising awareness of the commercial nature of entrepreneurship and disassociating from this, encouragement of students if they wish to

create business, limited scope in vocational course, uncertainty about what to do, and the course not being ‘the place to do it’. Contrastingly, only two respondents provided a positive response identifying that they were planning to include a further exploration of the key issues of business, CSR and the circular economy. In addition, an increased emphasis on leadership and use of inspiring examples of how entrepreneurship aids the solution of sustainability problems were also cited as further examples of new features that ESD academics were looking to introduce. It was apparent that there was clear scepticism within the ESD community towards the concept of entrepreneurship and the paradigm from which it derives. The following quote is illustrative of this mindset:

‘Entrepreneurship within the current economic institutions is driven by profit maximization, which is problematic on a limited planet [...]. I could see a role for entrepreneurship motivated by rewards other than profit, but have not been introduced to examples of that yet. On a small scale wider social benefits have been combined with profits for the entrepreneur, but that is not reflected on a systemic scale applied to regions, continents or the planet.’ (No.27)

In conclusion to this RQ, there was a mixed response to future intention to increase the level of entrepreneurship on their programmes. There was also an issue in recognising the applicability towards their current sustainability-related programmes.

Discussion

Overall, the study found that ESD academics had mixed, but predominantly negative or absent, attitudes towards entrepreneurship and its perceived value towards sustainability. Only a minority of respondents considered the value of an entrepreneurial approach towards addressing sustainability as mooted by Higgett (2006). By comparison, in the previous survey conducted with entrepreneurship educators (see Wyness et al. 2015), over two-thirds

claimed to include some aspect of sustainability within their entrepreneurship programmes. Thus, this element of the research elicits a considerably less positive picture of entrepreneurship or enterprise in sustainability-related programmes, than sustainability in entrepreneurship programmes. The findings corroborate Lans et al's (2013) study that suggested a distance between the ESD and EE disciplines, yet also conflict with the findings of Munoz and Cohen (2017) and Belz and Binder (2015), who suggested increased growth of sustainable entrepreneurship.

In attempting to understand why this might be the case, Wenger-Trayners' theory of the landscape of practice is pertinent here. They suggest that 'relationships between practices are always a matter of negotiating their boundary' and that this is 'never unproblematic' (2014: 17). Their description of communities of practice as 'mini-cultures' chimes with the findings of this study, illustrated for example by the issue that some sustainability educators have taken with certain language associated with enterprise, and ascribed meanings to entrepreneurial concepts that entrepreneurship educators themselves might not recognise or hold. Whilst this study has revealed that the boundaries between communities such as EE and ESD are often problematic and charged with scepticism and mistrust, they also hold real potential for realising 'unexpected learning [...] [through] new insights, radical innovations, and great progress.' (Wenger-Trayners 2014: 17). The landscape of HE practice, and indeed the wider societal landscape of climate change, economic uncertainty, and environmental degradation, is calling for boundaries to be crossed, values and meanings negotiated, insights gained, and adaptations to practice brought about.

The extent to which ESD educators are making reference to EE content within their programmes is also limited. Perhaps unsurprisingly, when we consider the bounded nature of academic communities, there was a lack of connection between the disciplines with the majority of ESD courses making minimal reference to entrepreneurship, again confirming the

findings of Lans et al. (2013). Few ESD educators expressed a plan to consider or include entrepreneurship or enterprise within their programmes within the future, confirming the minimal awareness and appreciation that ESD community members hold for EE (Lans et al. 2013). There is clearly far more to be done on the part of entrepreneurship educators, and perhaps entrepreneurs themselves, to inform the ESD community regarding the value of entrepreneurship in contributing positively towards sustainability. Approaching this challenge through the lens of communities of practice may potentially more effectively reward efforts.

Conclusions

The study adds to the nascent literature considering the delivery of EE in non-Business related disciplines (Martin and Lucu 2014; Wyness et al. 2015; Law and Breznik 2016). This study offers a novel baseline perspective regarding ESD academics' understanding and usage of entrepreneurship within their programmes. The findings of this study have confirmed that many members of the ESD community of practice do not currently appreciate the value of developing and promoting entrepreneurial skills within sustainability programmes. They also suggest that far greater collaboration and interaction is required between the disciplines to support this evolution. Using the theoretical framework of landscapes of practice, we propose that the embedding of 'entrepreneurial thinking' into broader sustainability-related curricula (such as construction, engineering, nursing, education, environmental science to name but a few), as well as other disciplines, requires entrepreneurship educators to step outside of their community of practice (and their comfort zone) and traverse the 'other' community of practice (Wenger-Trayner 2014). Undoubtedly, this journey will not be for everyone, and so it will likely be led by the more adventurous and seasoned 'travellers' amongst them. The HE context offers significant opportunities for both ESD and Entrepreneurship Education disciplines to further their limited and often inaccurate

understanding of the 'other', and thus to enhance their potential to collaborate and exchange best practice. Whilst sustainability and entrepreneurship remain embedded within their disciplinary communities of practice, the task of reaching the new required 'landscape' of sustainability and entrepreneurial knowledge, attributes, and values embedded in all curricula, will remain virtually impossible. However, envisaging the boundaries between the two communities as 'learning assets' in which the curriculum can be enhanced for both, as well as for the benefit of wider society, has implications for both policy and practice (Wenger-Trayner and Wenger-Trayner, 2014: 18).

Moving towards the third decade of the millennium, society faces significant challenges that have defied resolution to date. This paper has highlighted the very limited existing connections between ESD and EE communities, which we believe stand in the way of developing graduates capable of promoting more sustainable business practices and more enterprising sustainability practices. Both communities retain their different 'languages' and cultures, and thus skilled, committed, and adventurous 'translators' from each field are now required to cross boundaries and seize the potential to make real progress towards the SDGs. This study represents a first attempt to evaluate the crossover between the sustainability education discipline and EE and sets the scene for productive boundary crossings in the future.

Implications for Policy and Practice

Much work is required to familiarise the ESD and EE communities with the other's knowledge, competences, and practice. This could be achieved through enabling 'boundary encounters' between academics from the two disciplines that would yield fresh insights into the curricula of EE and ESD communities (Wenger-Trayner and Wenger-Trayner, 2014). Thus the University sectors strategic decision makers need to take responsibility for

developing and encouraging such conversations. Entrepreneurship educators are in a strong position to act as ‘brokers’ to facilitate conversations between the two communities’ educators that reflect on pedagogical approaches, overlaps in competence and knowledge, and areas that could generate new synergies. Encounters could be facilitated through collaborative research projects (like this one), combined teaching activity, or reflective seminars that facilitate collaboration between the two communities. Encounters such as these would stimulate conversations between the communities that promote the growth in awareness of the ‘other’s’ practice, and offer space to debunk some of the myths surrounding entrepreneurship (and indeed sustainability).

Study Limitations

The study acknowledges its limitations in terms of sample size and representation of the wider community. This study is based on a limited sample and further evidence is required to supplement the extant evidence. Moreover, the sample here is drawn from a UK and European sample. Further evidence is required to supplement this study and provide further country level comparisons. It would also be interesting to seek evidence from a developing world context.

Further Research Opportunities

The need for further research and development of practice across this landscape is evident. An avenue ripe for exploration lies in the deeper understanding of pedagogical practices between the two academic communities; sustainability educators undoubtedly have

pedagogical strengths (such as those that promote problem-based learning and critical thinking) that could prove beneficial to entrepreneurship education and vice versa (such as experiential learning and a focus on identity). This foray into each other's community through a shared lens of educational development again might prove fruitful. As Wenger-Trayner and Wenger-Trayner suggest, the key is to hold learning, rather than confrontation or judgement, at the heart of such encounters.

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