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<cn>10.<ct>Providing effective entrepreneurship education: a UK perspective
<au>**Paul Jones, David Pickernell, Rebecca Fisher and Celia Netana**

<a>1.INTRODUCTION
This study evaluates the future design of entrepreneurship education (EE) based on the retrospective experiences of students regarding the educational experience encountered at two UK universities. The contribution here is to identify optimum course design and programme impact which informs the discipline. This study utilises the QAA's (2018) definition of 'enterprise and entrepreneurship' programmes as focusing 'on the development and application of an enterprising mindset and skills in the specific contexts of setting up a new venture, developing and growing an existing business, or designing an entrepreneurial organisation' (p. 6). Therefore, the focus is on both undergraduate and postgraduate students who have completed a programme of EE that aims to educate students for self-employment and prepares them for an entrepreneurial career. The following section considers the EE literature followed by a discussion of the methodology employed within the study. Thereafter, the key findings are presented followed by a discussion in contrast to the extant literature. The study ends with the Conclusion section confirming the contribution to knowledge achieved, the implications for both policy and practice, study limitations and further research required.
<a>2.LITERATURE
Within the UK there has been a significant expansion of the university sector (Cribb and Gewirtz, 2013). A consequence of this has been concern regarding the value of university degrees towards enhancing employability and career prospects (McLarty 2003; Bridgstock, 2009). More specifically, the curriculum provision in business schools has been criticized for not adequately developing employability skills within students (Neubaum et al., 2009; Bell, 2016). Moreover, the literature suggests that university graduates are poorly equipped for future business activity (Pittaway and Cope, 2007; Premand et al., 2016). A result of this debate has witnessed the rapid expansion of university provision of EE programmes both within the UK and globally (Jones et al., 2017). Baldassarri and Saavala (2006) note the requirement for more students to undertake business start-up, while Rae et al. (2011) and QAA (2018) suggest that

graduates need to acquire an enterprising mindset and competencies to prepare them effectively for employment.

A key driver has been to encourage economically sustainable business start-ups to boost economic activity and unemployment (Packham et al., 2010; Matlay, 2011). As a relatively nascent sector, the EE discipline continues to evolve with a recognition that it needs to provide fit-for-purpose curriculum that provides graduates with the appropriate competencies and knowledge and an engaging educational experience (Bell, 2016). Furthermore, EE has been said to enhance employability skills (Etzkowitz et al., 2000), reduce graduate unemployment (Onuma, 2016) and enable entrepreneurial activity and mindsets (Matlay, 2006).

Gibb (2005) has suggested effective EE should develop an understanding of entrepreneurship (Jack and Anderson, 1999), acquire an entrepreneurial mindset (Loudon and Smither, 1999) and relevant operational knowledge regarding the set-up and operation of a business through start-up and growth stages (Solomon et al., 2002; Matlay, 2009). Kolvereid and Moen (1997), Souitaris et al. (2007), Athayde (2009) and Sánchez (2013) suggest that studying EE programmes increases the interest and likelihood of graduates pursuing a career in self-employment compared to other graduates (Walter et al., 2013). Students pursue EE programmes to acquire additional skills and knowledge, independence and increased confidence (Young, 1997; Galloway and Brown, 2002; Beynon et al., 2014). Furthermore, it is argued that EE programmes provide the opportunity to develop subject-specific knowledge and experience (DeTienne and Chandler, 2004; Politis, 2005). Employers are seeking graduates that possess knowledge and intellect, a proactive attitude to learning, self-management competencies, effective communicators and ability to work in a team (Bunney et al., 2014; El Mansour and Dean, 2016). Boyles (2012) suggests that key entrepreneurial competencies include human capital, social capital and social skills.

There remains a need to validate the effectiveness of EE to demonstrate its value for its stakeholders (Martin et al., 2013; Rae et al., 2014; Jones et al., 2017). The eternal question of whether entrepreneurship can be taught remains an ongoing challenge to dispute for the EE community (Fisher and Koch, 2008; Lautenschläger and Haase, 2011). EE remains unusual amongst business disciplines in having to continually validate its contribution and value (Oosterbeek et al., 2010). This evidence however remains relatively nascent despite an emerging literature (Jones et al., 2017).

Preedy and Jones (2017) and Mueller and Anderson (2014) suggest that both Enterprise and EE are problematic to design and deliver due to the subjects' complexity and variability. The development of both is essential for developing quality graduates with self-employability competencies valued by both the private and public sector (Bowden and Marton, 1999).

There is the ongoing challenge of having to meet the relevant university academic standards to ensure students achieve their qualifications whilst providing a valid and meaningful experience relevant to entrepreneurship (Pittaway and Edwards, 2012). This typically involves an onus on experiential learning to enable knowledge acquisition and skills development, such as undertaking a business start-up as opposed to traditionally delivered lectures (Neck and Greene, 2011). Moreover, there has been increased focus on enhancing the creativity within EE programmes (Gundry et al., 2014) with less focus on business plan production (Rausch and Hulsink, 2015) and greater cross-university provision (Karimi et al., 2014). However, Henry (2013) notes that institutional barriers with issues such as inappropriate or inflexible teaching environments and large class sizes can impact on the value of EE.

The effective design of EE in terms of curriculum content and pedagogy remains an ongoing debate (Gedeon, 2014). Shane (2003) for instance acknowledges that there are many EE programmes on how to start and finance a business start-up. Mason and Arshed (2013) noted that the acquisition of real world experience was important to both SMEs and employers. Lackéus and Williams Middleton (2015) identify that practice needs to be balanced with theory, action with reflection and learning goals with more business-oriented value creation goals. Matlay (2008) suggested that, prior to EE, entrepreneurial knowledge, particularly knowledge of finance, was generally poor but awareness of finance improved considerably following EE. Huffman and Quigley (2002), Russell et al. (2008) and Jones and Jones (2011) noted that business plan competitions as part of an EE programme offered a mechanism for new business start-up and for encouraging entrepreneurial ideas, talents and potential. Russell et al. (2008) suggested entrepreneurial skills development, increased self-confidence and risk-taking propensity, access to mentors and networking opportunities as fundamental components offered by effective business planning competitions. Gedeon (2014) recommended effective best practice for degree programmes included defining programme goals, content, pedagogy and measurement of student transformation. Thus there is a range of recommendations regarding best practice for the construction of effective EE programmes. This literature needs to be consolidated

by reflecting on the experiences of EE graduates to discern effective practice. So in summary this chapter evaluates the effective construction of EE to meet the requirements of the student community.

<a>3.METHODOLOGY

This research study evaluates data taken from a quantitative study of two UK universities: Coventry University (CU) and the University of South Wales (USW). These universities were selected due to previous involvement in EE curriculum development and delivery at both undergraduate and postgraduate level.

<b>3.1Study Sample

The study employed a self-selection sampling method where survey participants had to have completed a full-time or part-time entrepreneurship-focused course in EE at postgraduate or undergraduate level within the last ten years. Potential respondents were identified from university records and contacted through social media to assess willingness to participate in the study. This process involved internet searches and use of career profiling websites, such as LinkedIn and university alumni records to identify participants (Denscombe, 2003). On identification, they were contacted through a social media platform (for example Twitter, Facebook and LinkedIn) and the purpose of the study explained. The study authors recognise the potential for selection bias in the data collection process given that respondents had to be using the internet. However, given the passage of time since graduation and the societal adoption of technology (for example mobile and tablet technology) this was judged acceptable. Each participating research team gained internal ethical approval from their respective universities prior to the commencement of the data collection process.

<b>3.2Survey Design

The authors designed an online questionnaire to explore the EE programme studied, including academic level, qualification achieved, year attained, programme content, type of study (part-time, full-time) delivery method (face-to-face, e-learning), course focus (venture creation, business expansion), programme satisfaction, career outcome (self-employment, employment, and so on), career history (self-employment, employment and so on), impact of EE experience and personal demographic profile (age, gender, ethnicity). The questionnaire was designed using Qualtrics software to encourage efficiency and ease of user completion. Prior to its launch, the questionnaire was piloted with independent EE academics to evaluate its ‘fitness for purpose’.

Following this process, the survey instrument was edited and refined. This predominantly involved refinement of questions to improve clarity and question meaning. The data were collected by the authors over a four-week period. Respondents were asked to identify the content of their EE programme from a pre-prepared list of 22 categories of EE content, including business start-up, business planning and strategy. This listing was developed from observation of content on several EE course curricula on the internet. Thereafter, potential respondents were emailed and sent an embedded link to the survey. The email explained the study purpose and that completion of the instrument was optional, with respondent confidentiality being observed. A total of 87 respondents completed the survey from 125 individuals contacted. After inspection, this was reduced to 83 respondents due to partial completion of the survey in four cases, giving an overall response rate of 66 per cent. The high response rate of participants can be attributed to the familiarity of the participants with the research team.

<b>3.3Study Analysis

The data was analysed using SPSS software to identify significant relationships and associations. The analysis was conducted using bivariate techniques. Where bivariate techniques were required, both variables used ordinal scales, then the Kendall τ B statistic was deemed the most appropriate. When one of the variables had a dichotomous outcome (see Table 10.2) a comparison of means test was undertaken, supported by one-way ANOVA, to explore the relationship between the content of EE and five individual outcomes and a composite factor analysed. The composite factor was identified using exploratory factor analysis including all five outcomes from EE (in Table 10.2 below), identifying a one factor solution, with each of the five individual variables highly correlated with the factor, explaining nearly 62 per cent of total variance and a Cronbach's α of 0.841. Reflections on the effectiveness and impact of the EE experience were evaluated. The final career choices and current roles of respondents in both universities were compared and contrasted considering both employability and self-employability career options.

<a>4.FINDINGS

Table 10.1 highlights the key data demographics of the sample. The survey attracted 83 respondents, of whom 39 per cent were from CU and 61 per cent from USW. The higher response rate from USW can be explained by the university's larger student numbers in the EE discipline. Overall, 57 per cent of respondents were male and 43 per cent were female. As a

discipline, Entrepreneurship has historically attracted a disproportionately male audience although, with its recent dynamic growth, it appears to be growing in popularity with female students. In terms of ethnicity, 70 per cent of the respondents were White, 12 per cent Black and 7 per cent Asian. With regard to age, 45 per cent were between 18 and 24, 30 per cent were 25–34, 15 per cent 35–45, 6 per cent were between 46 and 54 and 3.5 per cent 55–65. Comparing respondent current age with when the EE programme was undertaken suggests that such programmes appeal to a wide age demographic, potentially driven by the more vocational nature of the Entrepreneurship discipline, opportunities that the self-employment career path offers, and also potential external funding that exists for EE courses (for example through EU funding).

<PLEASE INERT TABLE 10.1 ABOUT HERE>

Overall, 75 per cent of survey respondents were over the age of 25 and effectively engaged in their careers post-university. For example, when respondents were questioned on when they had completed their EE programme of study, Table 10.1 reveals that over 30 per cent of respondents completed their course over five years previously, over 25 per cent between three to five years ago and only 29 per cent between one and three years ago. The remaining 15 per cent had completed their course less than one year ago. Thereafter, respondents were queried regarding their motivations for undertaking the EE programme. Table 10.1 highlights that 45 per cent of respondents undertook the course to obtain a qualification, while 52 per cent were interested in entrepreneurship as a subject. In terms of business start-up activity, 16 per cent were thinking about starting a business at the time, 13 per cent were in the process of undertaking a start-up, 13 per cent were considering the option immediately following their course and 29 per cent at some future point in their careers. These results confirm the importance of the qualification to the student post-graduation but also the diverse career expectations in terms of business start-up at the outset of the course of study.

In terms of EE qualification outcome, 37 per cent of respondents achieved an undergraduate degree, 48 per cent a Master's degree and 6 per cent a Doctorate, highlighting that the Entrepreneurship discipline exists across a spectrum of award levels. When considering course evaluation post-programme retrospectively, 77 per cent of respondents identified that they were quite or very satisfied in terms of the knowledge, skills and experiences that they acquired during their courses. By contrast, 9 per cent of respondents offered a neutral response and approximately 14 per cent noted that they were either very dissatisfied (2.3 per cent) or quite

dissatisfied (11.6 per cent). Overall, the results suggest that EE provided value as a programme of study and was well designed in terms of content and focus.

Table 10.1 also provides data on career outcomes. In terms of current career, 36 per cent of respondents were self-employed and a further 14 per cent were employed within the small business sector. Otherwise, 23 per cent of respondents were employed in large private sector businesses (> 250 employees) or working within the public sector (approximately 20 per cent). A minority undertook charity work (3.5 per cent), were employed in a social enterprise (3.5 per cent) or were volunteering (4.7 per cent). More disappointingly, 8 per cent reported themselves as currently unemployed or economically inactive. This suggests that the predominant occupation destinations have been within small business, with a relative (compared to the UK population as a whole) concentration on self-employment, suggesting at least the potential that the prior education has provided some value towards the respondents' current career outcome. When asked to consider their career history, it was apparent that respondents had acquired wide experience across different categories. However, self-employment remained the dominant career path, with 50 per cent indicating that they had taken this option at some point.

Table 10.1Survey demographics, motivations, qualification attained and current career profile

Variable	Coventry %	USW %				
University last accredited entrepreneurship taken at	39	61				
	Within last year %	1–3 years ago %	3–5 years ago %	Over 5 years %		
How long ago last accredited entrepreneurship course taken	15.1	29.1	25.6	30.3		
	Obtain a Qualification %	Interested in entrepreneurship as subject %	Thinking about starting a business at the time %	In process of starting business at time %	Potentially starting business immediately after course %	Potential starting business some poin future %
Reason to take course	45.3	52.3	16.3	12.8	12.8	29.1
	4%	5%	6%	7%	8%	
Educational level	4	5	6 Degree	7 Masters	8 PhD	
Entrepreneurship qualification achieved	5.8	3.5	37.2	47.7	5.8	
	<25%	25–50%	51–75%	75–99%	100%	
Perceived proportion of course that was entrepreneurship focused	15.1	25.6	25.6	27.9	5.8	
	Very Dissatisfied %	Quite Dissatisfied %	Neutral %	Quite Satisfied %	Very Satisfied %	
Satisfaction with course	2.3	11.6	9.3	31.4	45.3	
	Part Time %	Full Time %				
Delivery pattern	27.2	72.8				
	Unemployed/ Economically Inactive %	Volunteering %	Employed in large (>250 employees) Private Business %	Employed in SME private business %	Employed in Public Sector (incl. education) %	Employed Charity %
Current activity	8.1	4.7	23.3	14	19.8	3.5
Previous experience (since	29.1	37.7	37.7	32.6	30.2	5.8

taking course): at least 1 episode						
	18–24%	25–34%	35–45%	46–54%	55–65%	Over 65
Age on course	45.3	30.2	15.1	5.8	3.5	
Age now	20.9	44.2	14.0	14.0	5.8	1.2
	Male	Female				
Gender	57%	43%				
	White %	Black %	Asian %	Indian %	Pakistani %	Chinese %
Ethnicity	69.8	11.6	7	2.3	1.2	2.3

The study also considered the broad effects of EE on the future career activity of the respondents as identified within Table 10.2, namely self-employment, intrapreneurial activities, general activities, entrepreneurial support activities and general enterprising behaviour. In terms of having a 'very positive impact' the respondents identified EE as having the strongest effect on general enterprising behaviour (53 per cent), followed by self-employment (48 per cent) and entrepreneurship support activities (47 per cent), much higher than for intrapreneurial activities or general activities. The results demonstrate discernment between enterprising and entrepreneurial behaviours for the respondents. This issue has been recognised within the discipline in recent years (Jones et al., 2017) and is most effectively illustrated by the QAA (2018) Guidelines for Enterprise and Entrepreneurship Education which provides definitions of both behaviours.

<PLEASE INSERT TABLE 10.2 ABOUT HERE>

Table 10.2Impact of entrepreneurship course

Impact on	Small Positive Impact %	Very Positive Impact %	Not Relevant (Defined as Missing)
Self-employment	35.0	48.3	26
Intrapreneurial activities	36.7	38.3	26
General activities in organisation have been employed in	42.9	35.7	16
Entrepreneurship support activities	36.5	47.3	12
General enterprising behaviour	37.0	53.1	5

As highlighted in Table 10.2, the 'Self-employment' outcome was the one with which the greatest number of content variables was positively and significantly related to EE course studies. In addition, at the 1 per cent level of significance, Entrepreneurial Opportunity Recognition, Marketing, Growth and Bricolage/Resourcefulness/Effectuation were all positively related to a beneficial effect from EE. This is again understandable in that those in self-employment need to be able to identify and exploit opportunities, and market their enterprises effectively to be able to grow their businesses rapidly. The capability to maximize limited

resources effectively within a small business context is essential, especially in difficult economic periods.

<PLEASE INSERT TABLE 10.3 ABOUT HERE>

Table 10.3Comparison of means (only results with 2-tailed significant results reported) where + shows content is positively associated with positive impact of entrepreneurship education on activities

Content	Factor analysed composite	Self-employment	Intrapreneurship	General activities in organisation worked for	Entrepreneurship support activities	General enterprising behaviour
Entrepreneurial Opportunity Recognition	+ *	+**	+*			+*
Small Business Start-up		+*				+**
Small Business Planning		+*				+*
Small Business Finance		+*				
Leadership		+*				+*
Pitching						
Networking		+*				
Coaching		+*				
Mentoring						
Marketing		+**				
Business Research Methods		+*				
ICT/Website/e-commerce		+*				+*
Social Media		+*				
Social Entrepreneurship	+*	+*			+*	+*
Intrapreneurship						
Entrepreneurial Strategy						+*
Female Entrepreneurship			+*			
Internationalisation				+**		+**
Innovation		+*				
Growth	+*	+**				+**
Bricolage/Resourcefulness/ Effectuation	+**	+**	+**	+**	+*	+*
Entrepreneurial environment assessment	+*	+*		+**	+*	+*

*Note:*Significant at 1-tailed level * = 5%; ** = 1%.

<a>5.DISCUSSION

This research has provided revealing insights into the impact of EE upon its recipients post-graduation. First, it is important to note that the evidence suggests that the EE programmes evaluated have encouraged entrepreneurial behaviour in their graduate outcomes. This

evidence should inform the value of EE programmes (Neubaum et al., 2009; Bell, 2016). These results can also inform the construction of future EE curricula. The results reveal that EE graduates, while inclined towards self-employment, experience diverse portfolio careers with periods of time spent in a range of employment types and self-employment (Jones et al., 2017). This is perhaps understandable given the difficult recent economic environment in the UK and high business failure rates. Table 10.2 is informative in evaluating individual components of an EE programme and their value in different employment/self-employment contexts. Whilst this is not an exhaustive list of components of an EE programme, it reveals compelling evidence and patterns of behaviour.

First, in terms of programme design, many EE programmes focus predominantly upon the business start-up process. Their focus is on providing the skills and knowledge required to enable a viable business start-up. The evidence presented here suggests EE programmes do effectively support start-up. The results also suggest that respondents noted the discernment between start-up and growth EE. Within an EE programme, the key competencies that were identified as statistically significant (at 1 per cent) include opportunity recognition, marketing, understanding business growth and appreciating bricolage/resourcefulness/effectuation. Thus value is ascribed to evaluating opportunity and understanding business competencies in key business functions. Thus any start-up focused programme should focus on opportunity recognition evaluation, enabling business start-up and providing competency in core business functions. Thereafter, the ability to grow the business and exploit available resources is identified as significant. Such knowledge should inform the construction of EE programmes in terms of recognizing enabling business start-up but also providing details knowledge of core business functions.

A further lesson from these findings is that EE graduates experience diverse careers with periods of self-employment and employment (Jones et al., 2017). When asked to consider the value of their EE studies towards employment, several issues were identified. In Table 10.3, the following headings were relevant: ‘Intrapreneurship’, ‘General Activities in Organisation Worked for’ and ‘General Enterprising Behaviour’. Each of these columns provides evidence of EE programme content that provides value for future employment experience. First, in the case of ‘Intrapreneurship’, Bricolage/Resourcefulness/Effectuation was judged as important. In the ‘General Activities in Organisation Worked for’ category, the respondents identified the importance of Internationalization, Bricolage/Resourcefulness/Effectuation and Entrepreneurial environment assessment. In the ‘General Enterprising Behaviour’ category, small business start-up, internationalization and

growth EE competencies were identified as relevant. In summary, respondents identified several relevant competencies that provided relevant knowledge for periods of employment. Issues such as Internationalization and growth were judged important to assist the development and activity of firms in international markets. Notably, across all these categories, Bricolage/Resourcefulness/Effectuation featured consistently. This confirms the value respondents ascribe to enterprising behaviour attributes and the ability to maximize organizational behaviour. This adds further knowledge regarding the value of enterprise skills to the employability agenda (Bunney et al., 2014; El Mansour and Dean, 2016). This issue would be of particular relevance in the UK, which has experienced a challenging economic environment in recent years.

'Entrepreneurship Support Activities' was a category used to identify EE programme attributes that were relevant to a career in business support. Interestingly, no response was identified as significant at a 1 per cent level of significance. At a 5 per cent level of significance, knowledge of social entrepreneurship, Entrepreneurial environment assessment and Bricolage/Resourcefulness/Effectuation were identified as of relevance. This suggests the importance regarding the knowledge of different forms of entrepreneurship, assessing the effectiveness of business models and being enterprising and maximizing enterprises.

<a>6.CONCLUSIONS

The study has contributed increased understanding regarding our knowledge of EE graduates and their career outcomes. The value EE graduates place on various elements of the programme experience post-programme is highly relevant and should inform design of EE curricula. Furthermore, the study provides a fresh perspective regarding the construction of EE programmes. The findings reveal that while the majority of EE graduates progress towards self-employment, they typically experience a portfolio career with time spent in both employment and self-employment (Jones et al., 2017). So EE programmes do enable graduates to undergo the business start-up process in response to Fisher and Koch (2008) and Lautenschläger and Haase (2011). This trend is a reflection on the perilous nature of a self-employment career with high business failure rates and churn evident across the small business sector. This issue could be perceived as negative in many ways. However, the findings of this study reveal that graduates still perceive great value in the knowledge and skills gained on their EE programmes and that elements of the programme provide value in both an employment and self-employment context (Bowden and Marton, 1999). So the findings here suggest that the competencies acquired during their EE programme enhance student employability and career prospects, thus meeting the call from McLarty (2003). Thus

EE programmes need to consider their provision and degree programme carefully, including whether they are focused on business start-up or growth. Their prime focus remains business start-up. However, the development of enterprise skills for employment is also contributing valuable skills which are relevant to the workplace experience (QAA, 2018). The opportunity exists for EE programmes to discern between the entrepreneurship and enterprise elements within their programme and further promote the workplace competencies that they provide. It may be the case that dedicated Venture creation EE programmes might consider rebranding to widen their appeal to the employment market. EE programmes seem to offer less value for those in Entrepreneurship Support activities. It maybe that such occupations require more dedicated and specific HE programme provision.

In terms of practical implications for various stakeholders, the following should be considered. For EE programme providers, they must be careful in their discernment between Entrepreneurship and Enterprise content and be confident in the promotion in the value of their curriculum offerings. For university managers, the evidence here should provide more confidence in the value of EE programmes and their contribution to both self-employment and employment career outcomes. Similarly, for government policy makers there is reassurance here in the value and contribution of EE provision. In terms of limitations, the study recognizes that the sample is restricted to two universities. Large samples must be evaluated and results contrasted against non-entrepreneurial graduates. Further qualitative evidence is required to illustrate the case histories of graduate EE students and their careers in both employment and self-employment. There is a clear requirement for ongoing research in this area to extend the knowledge base regarding the contribution and value of EE graduates.

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