

Evaluating Entrepreneurship Education impact within Universities: a retrospective perspective

Executive Summary

The project involved participants from the University of South Wales team (USWT) and Coventry University team (CUT). Both institutions have long established track records in entrepreneurship education, in terms of curriculum delivery, external projects with funding bodies and academic research. Furthermore, both institutions have established portfolios of Entrepreneurship programmes at both undergraduate and postgraduate level, from which to generate the samples and interviewees for the research study. The combined project management team for the project was Professor David Pickernell (USWT) and Professor Paul Jones (CUT). They ensured the project met its objectives by the required deadline. Professor Jones and Ms Rebecca Fisher (CUT) and Professor Pickernell, Celia Netana and Ms Atkinson (USWT) developed research instruments for the study namely a structured questionnaire for an online survey and follow-on semi-structured qualitative interviews. Thereafter, Professor Jones and Ms Fisher from CUT and Professor Pickernell and Ms Atkinson (USWT) analysed the collected data and reported the results in various forms (academic conferences, academic journals, and media).

USWT undertook the following roles within the project. Ms Christine Atkinson and Ms Celia Netana identified survey respondents from the alumni of the various undergraduate (BA Enterprise and Entrepreneurship, E-College) and postgraduate (MSc Female Entrepreneurship, Women Adding Value to the Economy Post Graduate Diploma) entrepreneurship programmes at USW. These programmes were/have been in operation over the past 15 years. The Research Assistant, Celia Netana created a shared database of all participants in the study, helped develop a literature review and acted as the lead administrator for the USWT. Professor David Pickernell and Ms Christine Atkinson acted as the lead researchers for the USWT. They managed the research process for USWT and coordinated with the lead researchers from the CUT. Professor Pickernell, Ms Christine Atkinson and Ms Celia Netana undertook processes related to the interview design and data collection processes.

The CUT undertook the following roles within the project. Professor Paul Jones and Rebecca Fisher identified survey respondents from the alumni of the undergraduate (BA Enterprise and Entrepreneurship) and postgraduate (MA Global Entrepreneurship) entrepreneurship programmes at Coventry University. Both these programmes are established awards which have been in operation for over six years. The Research Assistant, Rebecca Fisher created and maintained a shared database (along with the USWT counterpart) of all participants in the study, developed a literature review and acted as the lead administrator for the CUT. Professor Paul Jones acted as the lead researcher for the CUT. They managed the research process for CUT and coordinated with the lead researchers from the USWT. For CUT, Professor Jones and Ms Rebecca Fisher undertook the interview design and data collection processes. In addition to the above, Ms Fischer also undertook general research administration in relation to the project.

The project included 5 stages:

- **Stage 1 - Identification of Respondents:** Alumni networks, University records and other mediums were searched to identify former entrepreneurship education students (both undergraduate and postgraduate who have completed their course of study,

including both UK and International classified students) at either University. The USW/Glamorgan students were identified from a range of programmes including WAVE-related, BA Enterprise students, Entrepreneurship awards on business degrees, and MSc Female Entrepreneurship). Coventry students were identified from the undergraduate Entrepreneurship/Enterprise degree, and the MA Global Entrepreneurship programme. Social media networks such as LinkedIn were also used to contact and identify whether former students are willing to participate in the study. From this, a database was constructed. The combined research team then developed an online questionnaire research instrument for Stage 2, designed to initially assess the value attained from different types of entrepreneurship education, impacts on employment/self-employment career paths undertaken and reflections/recommendations on the future construction of effective entrepreneurship education.

- **Stage 2 - Quantitative online survey:** The research team undertook a quantitative online survey of respondents using Qualtrics software. The analysis of the quantitative study was led by the USWT for both the CUT and USWT data. The quantitative survey attained 83 respondents of which 39% derived from CU and 61% from USW, less than the minimum of 100+ respondents from each centre originally envisaged (which led there to be an increased focus on the qualitative elements in stage 3). The survey evaluated a range of issues including course design, programme satisfaction, impact, career outcomes and respondent demographics using a range of bivariate techniques. Emergent themes were also used to inform the construction of the qualitative research instrument in Stage 3.
- **Stage 3 - Qualitative interviews:** To provide an additional rich picture of the stories of the respondents 23 interviews were undertaken 9 at Coventry, 14 at USW. A semi-structured research instrument was developed by the combined research team. These semi-structured interviews captured detailed life stories of former entrepreneurship education graduates to fully appreciate career choices (including self-employability, corporate sector and public sector career choices) and the impacts of the programmes.
- **Stage 4 - Evaluation:** The qualitative data collected was then evaluated both in its own right and in comparison with the quantitative analysis and the report written up. This process was led by the CUT and employed NVIVO software to analyse the data.
- **Stage 5 - Dissemination:** Internal dissemination informed construction and delivery of entrepreneurship education curricula at undergraduate and postgraduate levels at both institutions. Results of the study will also be disseminated internally via symposia events (in Coventry and USW), and externally through academic outputs (forthcoming IOEE and ISBE conference papers, book chapters, journal papers (forthcoming Education + Training article) and other media (internet, newspaper, trade magazine etc).

The project provided retrospective evidence regarding the career outcomes achieved from undertaking a programme of entrepreneurship education. This project also:

- Developed new areas of applied enterprise education which link with the national focus on the needs of the economy and employers (entrepreneurship and intrapreneurship) by collecting evidence that informs the value of entrepreneurship education and its impact on self-employability and employability career choices. This information also informs the needs of the economy and the small business sector.
- Underpins the curriculum with research in new and developing approaches to embedding enterprise education in the curriculum, by identifying the types of enterprise education that are most effective in practice, establishing effective entrepreneurship education practice and making recommendations to inform future pedagogical practice and curriculum design.
- Provides evidence of the effectiveness and impact of enterprise education through further retrospective evidence towards this debate within a UK context which should inform both policy and practice.
- The project has confirmed the contribution and value of entrepreneurship curriculum, the results of the study informing the value of embedding entrepreneurship education and its key constructs in University curriculums.
- The study has also identify the value of entrepreneurship education for both employability and self-employability career paths, informing the value of entrepreneurship education in the UK within private, public and third sector contexts.
- The study has utilised both qualitative and quantitative methods to measure the value of entrepreneurship education examining long term impacts and career destinations of students from two UK universities.
- The study has also achieved gender equality in all element undertaken in the project, including the project team and research participant design.

- Specifically, the quantitative results suggest that EE programmes provide value both in terms of helping to enable business start-ups and also in supporting other career paths, through the enterprising knowledge and skill sets graduates acquire during their specialised studies. This study contributes to the literature by recognizing and measuring these contributions. For example, this study enables discernment between different EE course components and their value for different career outcomes.
- Practical implications of the quantitative analysis are that the HEI sector could usefully both evaluate practices and programme design and utilise measures of the effectiveness of its entrepreneurship education, most obviously in terms of graduates achieving sustainable business start-up, but other measures as well given that the findings suggests that EE graduates typically experience portfolio careers with multiple occupations in different sectors and roles within both employment and self-employment. In course design, the evidence suggested that students value both the enterprising and entrepreneurial skills and knowledge components and discern value between them in their later careers. Thus it is important that EE programme design includes both Enterprising and Entrepreneurial components to meet the future requirements of their graduates post-graduation.
- A variety of life experiences were found to have driven the interview respondents towards EE, this multiplicity of pre-course experiences, when seen in conjunction with varied post-course activities also potentially helping to explain the results from the quantitative survey that EE has positive effects on more than just start-up and self-employment. This also suggests that an approach which includes measures in addition to the traditional one of post course start-up may be more relevant for policymakers.
- The qualitative data also highlights that there may be complementary/substituting roles for the extra-curricular activities and resources that may also assist in promoting entrepreneurial outcomes, in addition to the EE topics highlighted to be of importance to both start-up and other post study occupations in the quantitative analysis. From a future policy perspective, this suggests that the complete package around EE courses needs to be carefully considered.
- More broadly, it is the “difference” that respondents perceive, between EE and other educational experiences that appears to be of great value, the qualitative analysis indicating that EE tends to attract “adventurous” learners, with broad and multiple outlooks and interests. EE can also be seen to have had an impact in helping to further widen the horizons of these learners, both in terms of entrepreneurship, but also the activities around entrepreneurship. From a policy perspective, EE could therefore assist in developing the entrepreneurial ecosystem.

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Introduction

There has been a significant expansion of EE curriculum provision both within the UK and globally in Higher Education institutions (HEIs) in recent decades, a major driver of which has been to encourage successful business start-ups (Packham et al., 2010; Matlay, 2011). More broadly, Gibb (2005) suggests three main objectives for effective EE, namely to develop an effective understanding of entrepreneurship (Chen *et al.*, 1998; Jack and Anderson, 1999); acquire an entrepreneurial mindset (Loudon and Smither, 1999) and relevant knowledge regarding business start-up and development processes (Solomon *et al.*, 2002; Matlay, 2009). There remains ongoing debate, however, regarding the value of EE and its contribution, particularly in terms of achieving viable business start-ups that contribute significantly to employability and economic growth (Martin et al., 2013; Rideout and Gray, 2013; O'Connor, 2013; Rae et al., 2014).

In the UK, the extant literature base is emerging (Jones et al., 2017) but is typically short term in focus considering immediate attitudinal impact upon students of an EE intervention (Rae et al., 2014; Nabi et al., 2016). Literature considering longer term impact of EE is more nascent (Shinnar et al., 2014) requiring reinforcement and extension (Martin et al., 2013; Rae et al., 2014). It is important therefore to provide a retrospective career impact evaluation of entrepreneurship education (EE). This study undertakes this task, considering evidence drawn from a quantitative study of alumni within two UK Universities. The data collected in this study and emergent results is clearly UK centric, but could also have wider relevance for the EE community in Europe and beyond. The evidence collected informs the value of the EE experience and its impact on self-employment but also wider employability career choices, giving it relevance to enterprise support agencies and government policy makers as well as universities.

The following section considers the key literature in this area followed by an outlining of the methodology employed within the study. Thereafter, key findings are presented followed by a discussion in contrast to the extant literature and preliminary conclusions, first for the quantitative element and then the qualitative element of the research. Overall conclusions are then drawn, confirming the contribution to knowledge achieved, implications for policy and practice, study limitations and further research required.

Literature Review

The teaching of EE within the UK HEI curriculum has expanded considerably in recent decades (Neck et al., 2014; Preedy and Jones, 2015), driven by the requirement to enhance employability skills (Etzkowitz et al., 2000), reduce graduate unemployment (Onuma, 2016) and help enable entrepreneurial activity to solve economic underperformance (Matlay, 2006). HEI's have also seen the development of entrepreneurial skills and knowledge become a priority for government policy makers seeking to create a more enterprising and innovative society (Henry *et al.*, 2005; Autio *et al.*, 2014).

Previously, Beynon et al. (2014) noted ongoing changes in UK society impacting on the job market, including privatization, deregulation, business restructuring, environmental impacts, increased legal provision for minority groups and the decline in public sector size and importance. The outcome of such changes is that the individual is faced with an increased variety of employment choices, opportunities and having to undertake a diversity of job roles during their life-long employment career including increased self-employment opportunities (Henry et al., 2005). Whilst, self-employment is chosen by only a minority of graduates (see Pickernell et al., 2011; Matlay, 2011), it could also be argued that ongoing cuts to the UK's public sector provision makes greater entrepreneurial activity increasingly an economic necessity, in order to generate alternative career opportunities (Jones et al., 2015).

All these factors have contributed to the significant expansion of the EE topic, both in terms of curriculum provision and the growth in related research as an independent academic discipline (Jones and Matlay, 2011; Jones and Jones, 2011; Henry, 2013). UK growth in the EE discipline is mirrored by global expansion and increased interest in related aspects (Fayolle et al., 2006). This has facilitated the emergence of a number of dedicated EE events including "Enterprise Educators UK" and the "3E conference". These conferences seek to disseminate and share effective pedagogical practices within a rapidly expanding discipline. A consequence of the changing socio-economic and business environment and increased curriculum provision has also been a growth in the interest from undergraduate students towards self-employment as a potential career option (Brenner et al., 1991; Kolvereid 1996; Matlay, 2006; Zellweger et al., 2010), Kolvereid and Moen (1997) claim that graduates with an EE degree were more likely to start new enterprises than other graduates. Indeed, several studies have indicated that taking entrepreneurship courses (Souitaris et al., 2007; Athayde, 2009; Sánchez, 2013) or their very presence increases interest in self-employment (Walter et al., 2013).

Some authors, however, question the effective integration of entrepreneurship into the curriculum (see Hannon, 2006), the extent to which it benefits students (Chell and Allman, 2003) and the effectiveness of formal and informal EE (Hytti and O'Gorman, 2004). Both Bechard and Toulouse (1998) and Henry et al., (2004) have noted the independence and the complexity of such an evaluation. There is therefore ongoing debate regarding the effectiveness of EE and calls from funders, policy makers and the academic community for further evidence to validate its social and economic impact and also to disseminate best and most effective practice (Fiet, 2001; Matlay, 2005; Fayolle et al., 2006, Duval-Couetil, 2013; Fayolle and Gailly, 2015). Holden et al. (2007) have identified the need for ongoing and more sophisticated research in the area of graduate entrepreneurship.

Achieving economically sustainable graduate start-ups and longer term job creation remains the ultimate measurement for judging the success of EE (Fayolle et al., 2006; Rasmussen and Sørheim, 2006). Young (1997), Galloway and Brown (2002) and Beynon et al. (2014), however, also suggest that students pursue EE courses to acquire broader additional skills and knowledge, independence and increased confidence through an entrepreneurial career, whilst DeTienne and Chandler (2004) and Politis (2005) argue that EE programmes provide the opportunity to develop subject specific knowledge and experience. The extant literature also reveals several studies measuring immediate changes in entrepreneurial attitudes as a result of an EE

intervention (Peterman and Kennedy, 2003; Souitaris *et al*, 2007; Packham *et al*, 2010; Jones *et al*, 2013).

Block and Stumpf (1992), however, also suggested the importance of measuring the delayed effects that may occur from the evaluation of EE. Several authors, including Shook *et al.*, (2003) and Matlay (2011) suggest that attitudes, perceptions and intentions toward self-employment can alter with the passage of time. Studies that consider the issue of time and its dynamic in the field of EE are, however, limited (Shook *et al.*, 2003). Research that explicitly takes into account the time variable in the field of entrepreneurial intention (Shook *et al.*, 2003) or the dynamics of the phenomenon (Moreau and Raveleau 2006) are, however, limited.

Whilst Rauch and Hulsink (2015) note that the number of firms created by graduates from a single university (Massachusetts Institute of Technology) contributed to approximately a million jobs and generated revenues in excess of 164 billion US\$ worldwide (Roberts and Eesley, 2011), more broadly there remains a need to track the experiences and destinations of graduate students, as the unit of analysis.

The reasons for graduates to pursue an entrepreneurial career are multifaceted. Amongst others, Duval-Couetil and Long (2014) identify several factors, including the desire for job satisfaction, market opportunities, family commitments, limited career opportunities, life dissatisfaction, flexibility, need for achievement, desire for independence, lack of other alternatives (Cabrera, 2007; Schjoedt and Shaver, 2007). There is, therefore, also a need to understand the effectiveness of EE graduates and their activities post course (Matlay, 2011). In this context, Pittaway and Cope (2007) suggest that the impact of EE on graduate self-employment levels remains unclear, including, but not limited to, whether such education provides the basis for graduates to be effective entrepreneurs. Rae *et al.* (2010) argues, for example, that the UK requires enterprising graduates to more broadly enable the wellbeing and productivity levels required in the future, Pickernell *et al.* (2011) pointing out that this is based on the assumption that graduate entrepreneurs more generally possess skills, abilities, and resources that will produce more beneficial outcomes than non-graduates. Small business owner-managers also claim that their firms require resourceful graduates with relevant entrepreneurial knowledge and skills, including knowledge of assets, capabilities, organizational processes, attributes, and information, as well as knowledge sharing competencies enabling improved organisational efficiency and effectiveness (Barney and Arikan, 2001).

Pickernell *et al.* (2011) suggest that graduate entrepreneurs exhibit both general and specific competencies in accessing knowledge from a range of sources, as well as being more likely to access university-based guidance as well as informal sources of advice (e.g. family and friends). Furthermore, sources of support linked to informal networks/trade associations, in addition to direct industry knowledge (customers and suppliers) are also more likely to be accessed by graduate entrepreneurs (Matlay, 2011).

This also links to the concept of effectuation, whereby individuals within the business rely on the entrepreneur, as owner/manager, to shape and construct its infrastructure over time, according to the means and resources available (Sarasvathy, 2001). Recent EE research (Smolka *et al.*, 2016; Reymen *et al*, 2016) has questioned whether effectuation or causation approaches are more

effective during the initial start-up stage (Perry et al., 2012). Indeed, there is minimal research evaluating the retrospective value students give to theoretical concepts such as effectuation following graduation both for self-employment but also other potentially entrepreneurship benefiting activities. Therefore, the primary research aims of this study are to explore the career paths of UK graduates and postgraduates who have previously completed a programme of EE and evaluate, retrospectively, the perceived value obtained by them from their EE experiences.

Methodology

General

The combined research teams contain experienced high profile academics with strong track records of successful academic project completion and external consultancy. Moreover, the combined team also have a very strong record of academic publication in highly respected highly ranked academic journals (for example, *International Small Business Journal*, *Regional Studies*, *Omega* etc) and major academic conferences (IEE, ISBE, BAM, ICSB, EURAM). The combined research team also have significant experience of evaluating entrepreneurship education experience and practice, with many publications in teaching and learning practitioner type journals (e.g. *Education + Training*, *International Journal of Management Education*). This prior experience was of great value in underpinning the development of this project. The project team also contained early career researchers who gained great benefit from involvement in the project. The senior academics within the network have an established track records of academic collaboration with several joint projects and academic publications. In order to support the project, several experienced senior academics (identified in section 3) also acted as an overseeing project panel, offering advice and feedback at each stage of the project. Internal ethical approval was obtained within the authors HEIs (both USW and Coventry) prior to the commencement of the data collection process.

The research process involved five stages. The first stage relates to the identification of graduated students at both sites at both undergraduate and postgraduate level. This involved data mining to identify previous cohorts of students on entrepreneurship-related programmes going back several years, from which a database was developed including potential respondents and their contact details. This process also involved internet searches and use of professional networking websites such as LinkedIn as well as using University records and alumni databases to identify former entrepreneurship education students. Inclusion criteria were completion of a full time/part time programme of study in entrepreneurship education in either postgraduate or undergraduate study at either Coventry or USW.

Following the identification of former students the next stage of the project (Stage 2) was the undertaking of a quantitative survey. Swartz and Boaden (1997) argue, however, that quantitative methods alone cannot indicate the richness of social phenomena. A rich holistic understanding of the nature and inter-relationship of the factors involved in Entrepreneurship Education can only be provided by also undertaking detailed qualitative investigation (Debreceeny et al., 2002). Johnson et al, (2006) support this argument, stressing the richness, increased validity and credibility of results from mixed methods. Hussey and Hussey (2003)

also identify that methodological triangulation could overcome potential bias or sterility of a single method approach.

This combination of qualitative and quantitative methods had been widely previously employed and recognised as complementary within other business disciplines (Ghauri and Grønhaug, 2002) and a mechanism to corroborate the various approaches (Mason, 2002). For reasons of academic precedent and prior experience, it was therefore deemed necessary to combine methods utilising quantitative data, to provide patterns and structure, and qualitative methods to enable understanding of the relationships within these patterns. Based on academic precedent, therefore, it was decided to undertake the stage 2 quantitative study followed by qualitative interviews (stage 3).

The quantitative survey was constructed using Qualtrics online survey software by the research team. The questionnaire was piloted with a group of independent academics to gather initial feedback on fitness for purpose. Following this process the instrument was refined and edited as required. Thereafter, the survey was emailed to potential respondents with an embedded link to the study. The email explained the purpose of the research and stressed that completion of the survey is optional, with all necessary protocols regarding ethical approval, informed consent and confidentiality being followed. The researchers' contact details were also provided in case of further queries. After the survey release, two sets of follow up emails were sent to non-responders to encourage completion. A set time period (three weeks) was available to gather responses. The initial aim of 100+ responses per institution did not prove possible to achieve, with 83 responses finally obtained after four weeks of the survey being open (the initial three week time window was extended with the aim of gathering more responses). The collected results was then analyzed using SPSS software to identify significant relationships and associations.

Analysis of the collected quantitative data also informed Stage 3 whereby 23 interviews (9 Coventry, 14 USW) were undertaken. These interviews were selected from respondents from the initial questionnaire who indicated they would be willing to participate in an interview. Interviews were designed to capture the participants' reflections on their enterprise education experiences and whether their course had had any perceived impact on their work pathways since graduating. This data was uploaded (in stage 4) to NVivo data management software and analysed using thematic analysis methodology against the interview schedule framework to identify key issues of entrepreneurship education experience. Thereafter, both the qualitative and quantitative studies were written up (stage 4) and disseminated (in stage 5).

Detailed Quantitative Methods and Results

As identified previously, this research study considers evidence drawn from a quantitative study of two UK HEIs, namely Coventry University (CU) and the USW. These HEIs were selected due to their significant involvement in EE curriculum development in recent years. Both HEIs have offered a wide range of undergraduate and postgraduate EE programmes, including specialist business start-up programmes. This study utilises the QAA's 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*" (QAA, 2012,

p.6). Thus, the focus is on graduates who have completed a programme of EE that aims to educate students for self-employment and prepare them for an entrepreneurial career.

Respondent entry criteria for inclusion in the survey required completion of a full time or part time course in EE at postgraduate or undergraduate level (e.g. BA Entrepreneurship, MSc in Entrepreneurship) at either HEI within the last ten years. The study employed a self-selection sampling method whereby survey participants had to meet the specific entry criteria (McDowall and Saunders, 2010). Respondents were identified from HEI records and thereafter contacted through social media to assess their willingness to participate in the survey. The identification of potential respondents involved detailed Internet searches and use of professional networking websites, such as LinkedIn and HEI alumni databases to identify suitable and willing participants (Denscombe, 2003). When individuals were identified via HEI records, they were emailed with details of the project including research contact details and the link to the online questionnaire. When an individual was identified via a social media platform, they were sent a message detailing the research process. It was noted that there was the potential for selection bias in the data collection process given that potential respondents had to be “findable” on the Internet. However, given the passage of time since graduation and the cultural adoption of technology by UK society it was decided that this was acceptable.

An online structured questionnaire was designed to explore the nature of the EE undertaken (level, qualification achieved, when obtained), programme content, type and nature of study (e.g. part time, full-time, face to face, e-learning), programme focus (e.g. start-up, growth), satisfaction with programme, current career outcome (e.g. self-employment, employment etc), career history (e.g. self-employment, employment etc), impact of EE experience (high impact to no impact) and demographic profile (e.g. age, gender, ethnicity). The data was 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 including 22 categories of entrepreneurship education content including business start-up, business planning, and entrepreneurial strategy. This listing was developed from observation and analysis of content on several EE degree course curricula on the Internet. The questionnaire was designed to encourage efficiency and ease of user completion (the questions contained within the online questionnaire reproduced in Appendix A).

Thereafter, eligible participants were emailed and sent an embedded link to a Qualtrics electronic online survey. The email explained the purpose of the study and stressed that completion of the survey was optional, with all necessary protocols regarding ethical approval, confidentiality, etc., being strictly observed and adhered to. Contact details of the lead researcher were provided in case of any queries. Prior to release, the questionnaire was piloted with a group of independent EE academics to gather feedback on ‘fitness for purpose’. Following this process, the survey instrument was edited and refined. This predominantly involved refinement and rewording of individual questions to improve clarity and question meaning.

The final career choices and current practices of respondents in both HEI were compared and contrasted in both employability and self-employability career options. Reflections on the effectiveness and impact of the EE experience were evaluated. After the survey’s initial release, two sets of follow up emails were sent to non-responders, to encourage completion. A set time period of three weeks was extended to four weeks to allow for as many responses as possible to

be collected. By the deadline, a total of 87 respondents completed the survey (from 125 individuals contacted from Coventry and 568 individuals contacted from USW). After inspection of responses, this was reduced to 83 respondents due to partial completion of the research instrument in four cases, giving an overall response rate of 12%. The relatively high response rate for an online questionnaire can be attributed to the familiarity and willingness of the participants to be involved in the study. The collected data was analyzed using univariate analysis methods employing SPSS software to identify significant relationships and associations.

The analysis was conducted using bivariate techniques. Where bivariate techniques were required, and both variables used ordinal scales then the Kendall Tau B statistic was deemed the most appropriate. When one of the variables had a dichotomous outcome (see table 5) 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 analyzed. A composite factor was identified using exploratory factor analysis including all five outcomes from EE (see table 4), identifying a one factor solution, with each of the five individual variables highly correlated with the factor, explaining nearly 62% of total variance and a Cronbach Alpha of 0.841. The next section presents the key findings of the study.

Key Quantitative Analysis Findings

Table 1 highlights some of the key demographics within the data. Overall, the survey attracted 83 respondents of which 39% derived from CU and 61% from USW. The larger response rate from USW can be explained by the institutions larger student numbers in the EE discipline. Overall, 57% of respondents were male and 43% were female. As a discipline, Entrepreneurship has historically attracted a disproportionately male audience although, with the recent growth of the discipline, it appears to be gaining popularity with female students as well. In terms of ethnicity, 70% of the respondents were white, 12% black and 7% Asian. At the time of study, 45% were within the 18-24 age category, 30% were 25-34, 15% 35-45 and 6% between 46 and 54 and 3.5% in the age category 55-65. Comparing current age with when the EE course was undertaken suggests that EE programmes appeal to a wide age demographic, potentially driven by the more vocational nature of the discipline, opportunities that the self-employment career path offers, and also potential external funding for EE courses (for example via EU funding streams).

Overall, 75% of survey respondents were both over the age of 25 and well into their careers post university study. This allows this study to make more valid longer term observations post education regarding the value of the EE programme, it being a deliberate strategy of the research team to explore the experience of Entrepreneurial education graduates and postgraduates several years following the completion of their course. For example, when respondents were questioned on when they had completed their EE programme of study, table 1 reveals that over 30% of respondents completed their course over five years previously, over 25% between three to five years ago and only 29.1% between one and three years ago. The remaining 15% had completed their course under one year ago.

Respondents were queried regarding their initial motivations for undertaking the EE programme. As Table 1 illustrates the results show that 45% undertook the course to obtain a qualification

while 52% were interested in entrepreneurship as a subject. In terms of business start-up activity, 16% were thinking about starting a business at the time, approximately 13% were in the process of undertaking a start-up, around 13% were considering the option immediately following their course and 29% at some future point in their careers. These results confirm the importance of the qualification to the student 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% of respondents achieved a degree level award, 48% a Master's degree and approximately 6% a Doctorate, illustrating Entrepreneurship as a subject that exists across a range of University award levels for the respondents. When considering course evaluation post programme from a retrospective perspective, approximately 77% of respondents identified that they were quite or very satisfied in terms of the knowledge, skills and experiences that their courses provided. Just over 9% of respondents offered a neutral response and approximately 14% noted that they were either very dissatisfied (2.3%) or quite dissatisfied (11.6%). These results suggest that overall the entrepreneurial education offered value and was fit for purpose.

Table 1 also provide data on career outcomes. In terms of current career, 36% of respondents were self-employed and a further 14% were employed within the small business sector. Otherwise, 23% of respondents were employed in large private sector businesses (>250 employees) or working within the public sector (approximately 20%). A minority undertook charity work (3.5%), were employed in a social enterprise (3.5%) or were volunteering (4.7%). More disappointingly, 8% 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 current career outcome. When asked to relate their career history it was apparent that respondents had acquired wide experience across the categories. However, again, self-employment remained, relatively speaking, the dominant career path, with 50% indicating that they had taken this option at some point.

Table 1: Survey Demographics, Motivations, Qualification attained and Current Career Profile

| Variable | Coventry % | USW % | | | | | N (Missing) | |
|--|---|--|---|--|---|--|--|------------------------|
| University last accredited entrepreneurship taken at | 39 | 61 | | | | | 83 (4) | |
| | Within last year % | 1-3 years ago % | 3-5 years ago % | Over 5 years % | | | N | |
| How Long ago last accredited entrepreneurship course taken | 15.1 | 29.1 | 25.6 | 30.3 | | | 86 (0) | |
| | 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 % | Potentially starting business at some point in future % | N | |
| Reason to take course | 45.3 | 52.3 | 16.3 | 12.8 | 12.8 | 29.1 | 86 (0) | |
| | 4 % | 5 % | 6 % | 7 % | 8 % | | N | |
| Level Entrepreneurship Qualification Achieved | 5.8 | 3.5 | 37.2 | 47.7 | 5.8 | | 86 (0) | |
| | <25% | 25-50% | 51-75% | 75-99% | 100% | | N | |
| Perceived proportion of Course that was Entrepreneurship Focused | 15.1 | 25.6 | 25.6 | 27.9 | 5.8 | | 86 (0) | |
| | Very Dissatisfied % | Quite Dissatisfied % | Neutral % | Quite Satisfied % | Very Satisfied % | | N | |
| Satisfaction with Course | 2.3 | 11.6 | 9.3 | 31.4 | 45.3 | | 86(0) | |
| | Part Time % | Full Time % | | | | | N | |
| Delivery Pattern | 27.2 | 72.8 | | | | | 81 (5) | |
| | Unemployed / Economically Inactive % | Volunteering % | Employed in large (>250 employees) Private Business % | Employed in SME private business % | Employed in Public Sector (incl. education) % | Employed in Charity % | Employed in Social Enterprise % | Self Employed % |
| Current Activity | 8.1 | 4.7 | 23.3 | 14 | 19.8 | 3.5 | 3.5 | 36 |
| Previous experience (since taking course): at least 1 episode | 29.1 | 37.7 | 37.7 | 32.6 | 30.2 | 5.8 | 14 | 50 |
| | 18-24 % | 25-34 % | 35-45 % | 46-54 % | 55-65 % | Over 65 | N | |
| Age on course | 45.3 | 30.2 | 15.1 | 5.8 | 3.5 | | 86 | |
| Age Now | 20.9 | 44.2 | 14.0 | 14.0 | 5.8 | 1.2 | 86 | |
| | Male | Female | | | | | | |
| Gender | 57% | 43% | | | | | 86 | |
| | White % | Black % | Asian % | Indian % | Pakistani % | Chinese % | Other % | N |
| Ethnicity | 69.8 | 11.6 | 7 | 2.3 | 1.2 | 2.3 | 5.8 | 86 (0) |

The study also asked respondents to identify the course content that they experienced during their course. Table 2 shows the responses to identifying the course content experienced on their EE course. Business Research Methods (92%), Entrepreneurial Strategy, (87%), Innovation (81%) and (Leadership 80%) are the most prevalent EE programme content. Conversely, the least prevalent content were Coaching (only 30% of respondents indicating that their course had included this topic), Bricolage/ Resourcefulness/ Effectuation (35%) and Social Media (37%), probably indicating that these topics have more recently been added to many entrepreneurship curricula. The responses here also probably reflect the most distinctive or memorable elements of the courses, recognition of content such as Business Start-up, Small Business Finance and Growth elements also reflecting the consistent and typical construction of EE programmes.

Table 2: Entrepreneurship Education Course Content

| Content | % of Respondents | N (Missing) |
|---|-------------------------|--------------------|
| Entrepreneurial Opportunity Recognition | 63.2 | 76 (10) |
| Small Business Start-up | 73.2 | 82 (4) |
| Small Business Planning | 76.8 | 82 (4) |
| Small Business Finance | 68.3 | 82(4) |
| Leadership | 80.2 | 81 (5) |
| Pitching | 51.3 | 76 (10) |
| Networking | 56.8 | 81 (5) |
| Coaching | 30.3 | 76 (10) |
| Mentoring | 43.2 | 81 (5) |
| Marketing | 79.1 | 86 (0) |
| Business Research Methods | 91.8 | 85(1) |
| ICT/Website/ E-commerce | 52.5 | 80 (6) |
| Social Media | 36.7 | 79 (7) |
| Social Entrepreneurship | 53.2 | 79 (7) |
| Intrapreneurship | 55.9 | 68 (18) |
| Entrepreneurial Strategy | 86.6 | 82 (4) |
| Female Entrepreneurship | 36.4 | 77 (9) |
| Internationalisation | 74.0 | 77 (9) |
| Innovation | 81.0 | 84 (2) |
| Growth | 78.5 | 79 (7) |
| Bricolage/Resourcefulness /Effectuation | 34.9 | 63 (23) |
| Entrepreneurial environment assessment | 63.3 | 79 (7) |

The study also considered the broad effects of EE on the future career activity of the respondents as identified within Table 3, 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%), followed by self-employment (48%) and entrepreneurship support activities (47%), much higher than for intrapreneurial activities of general activities. The results therefore demonstrate some discernment between enterprising and entrepreneurial behaviours for the respondents at least. This issue has been recognised within the discipline in recent years and is most effectively illustrated by the QAA (2012) Guidelines for Enterprise and Entrepreneurship Education which provides definitions of both behaviours.

Table 3: Impact 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 |

Tables 4 and 5 presents the outcome of a factor analysis for the five individual career outcomes and explores the relationships between the content of EE courses and positive effects of EE on the five individual career outcomes (e.g. “Self-Employment”, “Intrapreneurship”, “General activities”, “Entrepreneurship Support Activities” and “General Enterprising Behaviour”) and the composite factor. The comparison of means based analysis in Table 5 revealed several noteworthy findings. For “General Enterprising Behaviour”, for example, Small Business Start-up, Internationalization and Growth were identified as significant factors at a 1% level. This suggests a wide range of EE topics are valuable to achieving a generally enterprising mindset, encompassing important endogenous and exogenous factors impacting upon the firm. For “General Activities in Organisation Worked for” Entrepreneurial environment assessment, Bricolage/Resourcefulness/Effectuation as well as Internationalization course elements were identified as significant factors related to a positive impact from EE. Knowledge of these factors can also be seen as valuable in the general workplace as they potentially provide holistic knowledge of the working environment and the functioning of the business world.

Table 4: Factor Analysis Composite of Usefulness of Outcomes from EE

| Variable | Factor: Usefulness of Outcomes |
|--|---------------------------------------|
| Self-Employment | 0.667 |
| Intrapreneurial Activities | 0.775 |
| General Activities in organisation have been employed in | 0.890 |
| Entrepreneurship Support Activities | 0.818 |
| General Enterprising Behaviour | 0.743 |
| % of Variance Explained | 61.81% |
| Cronbach Alpha | 84.10% |
| N (Missing) | 40 (46) |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | 0.757 |
| Bartlett's Test of Sphericity Approx. Chi-Square | 85.964 |
| Df | 10 |
| Sig | 0.000 |

The concept of Bricolage/Resourcefulness/Effectuation in particular appears to be important across the range of potential outcomes, both employed and self-employed, being significant at the 5% level at least for all the variables. Thus, the ability to maximize limited resources/budgets and be resourceful and proactive were identified as key competencies of relevance in driving a positive impact from EE. Indeed, for the “Intrapreneurship”, Bricolage/Resourcefulness/Effectuation was the only variable found to be related to a positive EE related outcome at the 1% level of significance. Organizations’ possessing resourceful individuals with the capability to maximize resources would therefore appear to be a key EE competency of relevance to both intrapreneurial and entrepreneurial behaviours regardless of organizational size.

As shown in table 5, unsurprisingly, the “Self-Employment” outcome was the one with which the greatest number of content variables was positively and significantly related to EE courses studies. In addition, at the 1% 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, effectively market their enterprises to be able to grow their businesses. The capability to effectively maximize limited resources within a small business is essential especially in difficult economic periods.

Table 5: Comparison 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 | +* | +* | | +** | +* | +* |

Significant at 1-tailed level * = 5%, **=1%

Discussion of Quantitative Results

This study adds to the limited (Holden et al., 2007) quantitative EE literature considering retrospective impacts upon graduated students, on a quantitative survey from two UK HEIs. The findings also discern further understanding regarding the differential retrospective value of EE course content towards various career outcomes and current career outcomes achieved. The study offers a valuable retrospective perspective with regards to these issues, in that 55% of the sample had completed their EE course over three years previously.

It was also noteworthy that graduated students were more motivated to undertake their courses to obtain both a University qualification (45%) and their interest in the subject matter (52%), than by specific start-up or entrepreneurial foci. The interest in the subject matter confirms the prior studies by DeTienne and Chandler (2004) and Politis (2005). However, the interest in acquiring a University qualification in EE is more novel, suggest that EE graduates may also be appreciative of the value of University qualifications towards their career profile at a later stage. The fact that

48% of survey respondents achieved a Master's level qualification also suggests that postgraduate EE courses are also potentially attractive proposition to the student community interested in EE.

The actual act and process of business start-up were, by way of contrast, more secondary motivators to undertaking an EE course, the results supporting the importance of degree qualifications to the student community but also the value it offers to the individual student and their later career development across a range of outcomes. The results also confirmed that while self-employment (36%) was the most obvious ultimate career outcome both at the point of survey and in previous career choices (50%), respondents had often experienced a portfolio of different career occupations with time spent in a variety of sectors (e.g. public, private and charity sector). The results support the findings of Kolvereid and Moen (1997) regarding the capability and likelihood of EE courses producing future business start-ups, which also suggests that there will be an increase in EE graduate start-ups due to the growth of the sector as predicted by Zellweger et al. (2010) and Walter et al., (2013). These results also suggest, however, that whilst EE has value in producing individuals who are self-employed, it also provides assistance with other career alternatives.

The importance of specific course content towards certain career outcomes was also identified. For "General Enterprising Behaviour" value from EE courses was most strongly related to business start-up, growth and internationalization content. Respondents can be seen to discern between entrepreneurial and enterprise content and seem to value content that both provide to their career outcomes. Similarly, discernment between enterprising behaviour was also evident within the "Intrapreneurship" and "General Activities in Organisation Worked for" career outcomes. It was noticeable that the "Self-Employment" option identified the greatest level of value from the course content in terms of the number of content areas that were significant, with opportunity recognition, marketing, growth and Bricolage/Resourcefulness/Effectuation of greatest significance.

Another notable finding was the value perceived from the Bricolage/Resourcefulness/Effectuation course content across the various career outcomes. Bricolage/Resourcefulness/Effectuation was regarded as a key driver of EE satisfaction within all organisational contexts. The ability to maximize limited resources/budgets for organisation gain can therefore be seen as a key competency. This is especially important in difficult and uncertain economic times where organisations have to make do with limited and even reducing assets (Perry et al., 2012; Smolka et al., 2016).

Detailed Qualitative Method and Results

Further qualitative research is also required, however to more fully explore the detailed career histories of EE graduates and the value obtained from their EE courses (both what type of value and how the processes may work. 23 semi-structured interviews were therefore also undertaken with Enterprise and Entrepreneurship alumni from both the University of Coventry and the University of South Wales, using an interview protocol designed by the research team (reproduced in appendix B).

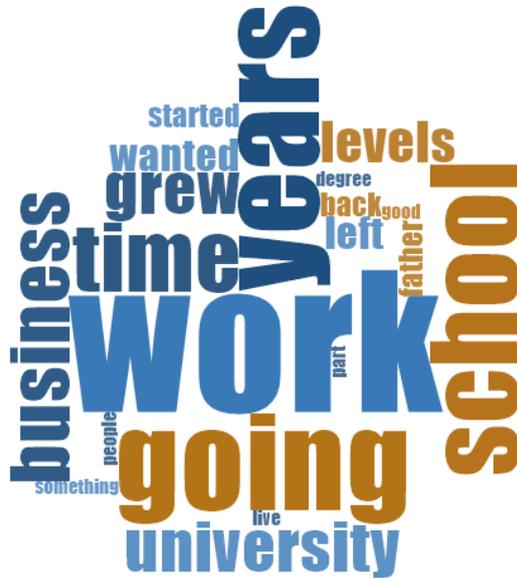
Table 6: Participant data

| Participant code | Gender | University | Age now | Age at time of course |
|------------------|--------|------------|---------------|-----------------------|
| USW1 | M | USW | 18-24 | 18-24 |
| USW2 | M | USW | 55-65 | 55-65 |
| USW3 | F | USW | 46-54 | 35-45 |
| USW4 | M | USW | 25-34 | 25-34 |
| USW5 | M | USW | 25-34 | 18-24 |
| USW6 | M | USW | 25-34 | 25-34 |
| USW7 | M | USW | 25-34 | 25-34 |
| USW8 | M | USW | 25-34 | 25-34 |
| USW9 | F | USW | 46-54 | 35-45 |
| USW10 | F | USW | 25-34 | 25-34 |
| USW11 | F | USW | Older than 65 | 55-65 |
| USW12 | M | USW | 35-45 | 25-34 |
| USW13 | M | USW | 35-45 | 25-34 |
| USW14 | F | USW | 35-45 | 18-24 |
| 106 | F | CU | 18-24 | 18-24 |
| 107 | F | CU | 35-45 | 35-45 |
| 109 | M | CU | 25-34 | 18-24 |
| 101 | M | CU | 25-34 | 18-24 |
| 104 | M | CU | 25-34 | 18-24 |
| 110 | M | CU | 25-34 | 18-24 |
| 105 | M | CU | 18-24 | 18-24 |
| 103 | M | CU | 18-24 | 18-24 |
| 111 | M | CU | 25-34 | 25-34 |

Interviews were transcribed and transcriptions then uploaded to NVivo data management software (version 11) for coding. An initial round of open coding was undertaken by the researchers, themes identified using thematic content analysis. Second order codes were then identified against the interview question framework of experiences before starting an enterprise or entrepreneurship course, experiences during an enterprise or entrepreneurship course and final experiences and reflections after having graduated from their enterprise or entrepreneurship course. These codes identified in Appendix C. The table 6 (below) then shows a summary of responses to the final issues identified by the analysis.

Summary of Responses

Participant experiences before starting enterprise or entrepreneurship course



Struggle

A theme which emerged from interviews with participants regarding their life before beginning an entrepreneurship course was their perceived lack of academic success throughout their schooling (P.101; P.111; P.USW2; P. 104; P. USW11). Participants explain how they failed exams which they had to retake (P. 111), or left school without qualifications (P. USW2), or did not enjoy school (P. USW6). P. USW2 describes their experience at grammar school:

“I left the Grammar School with 1 ‘o’ level. I missed the others by a mark or two so you might say I was not an academic person and I might have been better off to go to secondary modern but the grammar school was a good grounding. I did 2 ‘o’ levels later on at 19 – Economics and English. So it didn’t really prepare for a job in ... but it was important to get a good education ... for the building industry.”

Furthermore, some of the participants were not able to complete their education due to personal circumstances (P. 104; P. USW11). P.USW11 explains their struggle due to not completing their education:

“I wasn’t allowed to go to University when I was young and I did find it a tremendous disadvantage. Mainly because in every day practical things, I was a consultant and had

to write reports and I was always poor at that sort of thing and I was never any good at laying things out structurally.

I always felt that if I'd have had more help with education I wouldn't have struggle so much to earn a living and I have struggled."

In addition, P.106 explains how they were deterred from choosing a subject that interested them because of their gender:

"And I went to the careers advisor and told her I wanted to change my choice at University to IT and she was like, no, girls don't do that. I was like oh it's too late, so I stayed with that."

Though participants found gaining qualifications a struggle and did not always enjoy education, they see the value in achieving a University degree for credibility and the world of work (P. USW11; P.USW9). The interviews therefore give both context and reason for the value placed on the qualification in the quantitative analysis, also related to the greater age range (compared with more traditional academic programmes) represented in those undertaking the courses.

Work and Business

Prior experience of work and business before starting an entrepreneurship course was another theme that emerged. Many participants explained how they had an interest in business throughout their life due to gaining employment from a young age (P. 101) and setting up and running businesses (P. 109; P. USW10; P.USW2; P. 111) prior to undertaking their EE course. Furthermore, some participants had prior experience of studying business, claiming that it was one of their favourite subjects (P.103; P. 105). In addition, some participants describe how an entrepreneurial spirit runs through their family (P. USW2; P.106; P.104):

"My parents are self-employed, and as a Nigerian most people are involved in business, they always have a side or second income. I've always actually wanted to have my own business. When I was little I already knew that I would work for a certain number of years then I wanted to create something that I could call my own." (P.106)

Thus, work and earning money is described as the beginning of an entrepreneurial path (P. 101). In addition, some participants had an existing business when they started their course (P. USW13) and chose to study an enterprise and entrepreneurship course to expand their business (P. USW10), though this entrepreneurial spirit was not always the motivation for going to

University, with some participants wanting “a proper job” (P.101) in engineering (P.101), modern languages (P. USW9), theatre and media (P. USW14) and management (P. USW7; P.104). The interviews thus revealed that prior experience both of studying business related subjects and running their own business gave them a particular context in which the EE took place, perhaps explaining the high value placed on entrepreneurship as a subject.

Aspiration

Aspirations prior to starting an entrepreneurship and enterprise course varied. Some of the participants interviewed aspired to start their own business before they started their course at university (P. 104; P. 105; P.110) or were already on the path to starting a business and wanted to complete the course to gain an academic perspective and learn more about business (P. USW3; P.107). Though, starting a business was not always the key aspiration for participants, personal ambitions and preferences which being self-employed would support often were:

“I was never really interested in starting a business, I was interested in cars and all the nice things in life.....

My dad said if you want the nice things in life don’t work for somebody else, work for yourself.” (P. 111)

“It was all about setting up my own business and doing something for myself as I don’t respond to authority that well. I got sacked from a few jobs, I walked out of a few more. I wasn’t very good about being told what to do by people.” (P. USW14)

Others did not have a set plan or goal but were interested in business (P. 106; P. 103; P. USW7; P.109) or had more than one career path in mind (P. USW1; P. USW4):

“My plans change every 2 months! Not the aim so much but the steps I take. I am opportunistic and take opportunities as they appear.” (P. USW4)

Participants also identified reasons for taking the course as related to gaining increased and better paid career options afterwards (P.USW12; P.USW6; P.USW14) and gaining a broader experience of life through the social elements and extracurricular activities available at university (P.USW1). A theme that emerged from conversations regarding reasons for attending university was that motivation arose from set-backs or perceived failure in theirs or others’ lives. P. USW8 explains how the fact that others around them in military service did not have the opportunity to further their education was a motivator to go to university. Furthermore, some participants did not achieve as well as they hoped earlier in their life and this was a motivator to get a degree

(P.USW9; USW11; P.106). Reasons for specifically choosing to enrol on an entrepreneurship and/or enterprise course varied. Some participants took the course because it sounded different and interesting:

“During my undergraduate studies I found it was quite boring and based on very old theories and traditional businesses and when you see what’s going on today you can see it has nothing to do with it. This was my motivation to acquire skills and know the theories that are really applied in entrepreneurship and also build networks of other students and lecturer and professors in this area.” (P.USW4).

“The course that I chose was, I was looking for something very unique, something a bit different from what was out there. I wanted something that would stand me out and people would hear and question, oh ok what’s that?” (P.110).

Other participants chose an entrepreneurship and/or enterprise course because they had been successful in prior business courses studied (P.USW1; P.USW6). Another common theme for wanting to take an enterprise focused course was to gain an enhanced grounding in business to aid the development of participants’ entrepreneurial journey (P. USW10; P.USW11; P. USW13; P. USW14).

“Although I felt I was an entrepreneur but if you look around at real entrepreneurs, I’m the one who’s kept awake at night worrying about things. That’s why I started a BA in Enterprise. I thought the whole thing would help me. To be honest it should have really been called “BA in Entrepreneurship” because enterprise/entrepreneurship are very similar and there were a lot of crossovers” (P.USW11).

The interviews highlight therefore that those undertaking EE, because of their age and experience, often have a baseline of experience that is different from more traditional students, which suggests that broadening measures of success of EE away from just business start-up, and towards business development and growth (given that many EE graduates will already own a small business).

Family

It is recognized in the literature that where close members of a family own their own businesses, this has positive associations with motivation to become entrepreneurial themselves (Athayde, 2009). Several participants claim that their first experience of enterprise was through working for their family business (P.USW6; P.USW2; P.USW9), which then led to undertaking an EE course to hone specific skills.

“I then decided to become builder, my Dad owns his own construction firm. My Dad needed some help on the management side of things so I undertook a Masters at the University of Glamorgan as it was then.” USW6

For others, their decision to take up an EE course was influenced by their family’s experiences and advice (P.USW5; P.USW10):

“Mostly my father’s persuasion my father did Masters and PhD. I was basically following along and trusting in it would be good for me.” P.USW10

This supports existing literature with regards to the importance of family background (Birley, 1989; Matthews and Moser, 1996) for entrepreneurship, though the proportions are much lower than reported in their work (i.e. one third compared to two thirds) which may be linked to the changing nature of female entrepreneurship. In addition, however, the study may also highlight that family influence can also be indirect, through EE choice.

Sense of Adventure

A dominant theme around activity, movement and adventure emerged when participants discussed themselves and their lives before university. Several participants had a keen interest in sport (P.USW1; P.104; P.105; P.109), outdoor activity (P.USW10; P.USW13) and / or adventurous pursuits (P.USW8; P.USW1). There also seems to be a tolerance of ambiguity and a will to see what else is out there.

“You need to be adventurous to found your own company and I believe I was an adventurer to go to Glamorgan [now the University of South Wales] and do International Business and Enterprise.” (P. USW8).

Related to this, other participants explained how they preferred a more active approach to their learning, stating that they think differently from others and seek interactive and practical learning opportunities (P.106; P.107; P.111; P.USW7), or described themselves as having a love of learning and a curiosity for things (P.USW10; P.USW3).

“Through my research being an entrepreneur is not just about setting up a business I think its about mindset and I think even before coming to University I was always the type of person, you just think in that different way, think outside the box, sometimes you get strange looks from people who think what are you on about? But it certainly worked out for me, I benefitted from having that thought process and those characteristics and competencies.” (P.111).

This supports the potential for EE to be of relevance, not only to those with a background (e.g. family) that is supportive of an entrepreneurial career, but also to those without such a background but with a more “adventurous” outlook that impacted upon their educational choice.

Life Experience

Taken as a whole, it can be seen therefore that a variety of life experiences have driven the respondents towards EE, which whilst mirroring to an extent the existing literature with regards to entrepreneurship, also highlight some additional nuances, which means that an approach which includes measures in addition to the traditional one of post course start-up may be more relevant. This supports the results from the quantitative survey that EE then has positive effects on more than just start-up and self-employment, as the post EE experiences are also varied.

During Course

Participant experiences during the course of studying enterprise or entrepreneurship



Working while Studying

A common theme when discussing their experiences during the course, that arose throughout interviews with participants, was an element of work aside from their course. Some participants held part-time jobs (P.USW4; P.USW9; P.USW14; P.USW3), whilst others were running a business (P.USW4; P.USW13; P.USW14). This was, however, viewed positively:

“Because I was having to work part time and was doing the postgraduate after a very long break, I really focused on my course and on working.” (P.USW9)

It was also common for participants to manage several responsibilities during their time studying (P.USW3; P.USW14; P.USW13; P.USW4):

“I managed to blag my way in to a Marketing Manager job with a technology company - Computer Forensics. There I got lots of opportunities through that. Before that I was literally doing admin temping – I don’t know how I managed to blag my way through the interview to get the job but I did! I was travelling the world, everything was paid for, it was great. I still had Synapse in the background as well and I was still doing the course” (P.USW14).

As such this may be indicative both of the multiple activities that entrepreneurs typically have to engage in, but may also indicate a specific enjoyment of such a scenario, which may also link with the quantitative results with respect to bricolage and effectuation being linked to a range of beneficial effects from EE, in the sense that these multiple activities give rise to potential access

to multiple potential sets of resources that bricolage EE might then more effectively allow to be recognized and utilized.

Shift in aspirations

Participants also explained how their aspirations and career plans changed during their time at University. For some previous failure caused them to re-evaluate why they wanted to become an entrepreneur when they first started their course:

“the supplier I was working with closed down which caused various issues but from there my aspirations just kind of went, is it all about the money or is it about the experiences, the lifestyle and things like that? So I kind of changed my philosophy and it was kind of, yes money helps and it makes things a bit easier but what do you enjoy doing?” (P. 111).

For others, their aspirations to start a business fluctuated throughout University depending on events and situations they found themselves in:

“They did several times. In first year, I got the SPEED grant and thought yeah I could make a lot of money out of this. Then second year, I thought I’m not sure and then third year I was like I came out of uni thinking I know what I’ll do, if I can’t get a job within 18 months I’m going to do it. Because that’s why I did the course really.” (P.104).

For others an event during University put them on entirely different career path (P.103). Generally, this suggests that participants were often in state of flux with regards to their careers, the EE not necessarily focusing them on a more entrepreneurial career path, but rather this also being shaped by a range of factors both before during and after the EE had taken place. Given the flexibility identified above, this may also help explain the multiplicity of types of employment many of the respondents had portrayed.

Social activity and support and unmet need for social activity

One common theme that emerged was that participants also engaged in a variety of extra-curricular activity. Some joined societies and university groups (P.104; P.111; P. USW1). Some of the extra-curricular activity that participants engaged in through the University was entrepreneurial (P.111; P.USW4; P.USW5; P.USW9). While others engaged in business activity outside of what was offered at University (P.USW11). Whilst participants also highlighted the importance of socialising and having fun outside of their course (P.104; P.109), some participants also asserted that the extra-curricular activity they engaged with at university was valuable and played a significant role in the direction their careers took:

“Yes, without it I wouldn’t be here. The extracurricular activities like being a student ambassador, being in the careers department, I learnt a lot of skills, interview skills, how

to help others, leadership skills, meeting different people, everything I did contributed to where I am now” (P.106).

“I found the peripherals, the extra stuff around my course valuable. I got to go to Canada for a term as part of my course. It’s a different way of learning for example they do night classes” (P. USW1).

The importance of networking emerged as a key beneficial contributing factor to participants’ experiences at University, which was not necessarily linked to the topics studied during the course. Participants explained how the networks and mentors they gained whilst at University were useful and impacted upon their career (P.101; 107; P.109; P110; P111; P.USW5). Specific reasons why participants found networking so important related to the engagement they got with entrepreneurs from the real world:

“We did get paired with a mentor, I think that was through the course. I had a really good one and he was great to me, he did have quite a big impact on me. So I used to meet him every couple of months, so that is closer to the real world so that is important. That’s the kind of key thing, I remember at the beginning, there was one guy I think he ran the course or he ran a business or something I think he kind of inspired us at the beginning” (P.109).

In addition, it was stated that networking was important in the entrepreneurial journey because the process can be a solitary one:

“I think having that network at University where, you may not be running your own business, is useful. Some find the process of business start-up a lonely process and that is quite a useful element of it” (P.101).

Another element of the course which was said to have influenced career direction and aspirations was additional support and funding provided by the university (P.101; P.109; P.111).

“..had a hell of a lot of good support so at the time there was the SPEED project, worth 4 and a half grand there was a £2,000 a year scholarship which I got so over the 3 years I was at Coventry I think I made out with about 20 grand worth of funding. When you consider it only cost me 9 grand to actually do the course itself it was a good deal” (P.111).

Conversely there were some participants who felt there were not as much extra-curricular activity for them to engage in as they needed (P. USW3; P. USW6) or who were unable to engage due to the combination of studying and work responsibilities (P. USW10; P. USW9). Whilst the results of the quantitative element of the study highlight the importance of EE topics to both start-up and other post study occupations, the qualitative data highlights that there may be complementary / substituting roles for the extra-curricular activities and resources that may also

assist in promoting entrepreneurial outcomes. This suggests that the complete package around EE courses needs to be carefully thought through, including the role that work should play, if the maximum benefit from the courses is to be achieved.

First experience of entrepreneurship

Some were drawn to an enterprise or small business course due to a prior interest in business (P.106) and others because it allowed them to apply what they had learnt to their practice (P.101). The fact that these were not more widespread, however, reinforces the quantitative results that business start-up / development was only the reason to undertake EE for a minority of the respondents.

Course structure and Learning

The types of enterprise and small business courses our participants took part in ranged from undergraduate degrees (BA) to Masters (MBA and Masters) to PhD as well as online courses (E-College) and postgraduate certificates, and postgraduate diplomas.

Whilst decisions to undertake a course included previously discussed family influence (P.USW10) and career progression (P.USW4), other factors, related to the way the course was structured, were also influential in the decision to take up a course, especially at Masters level. Funding, in the form of grants, studentships, scholarships and European funding were, for example, reported as being significant enablers and drivers in taking up a course by a number of interviewees (P.USW14, P.USW2, P.USW3, P.USW5, P. USW6)

“The fact that it was all free massively influenced me. I wouldn’t have been able to go at all given my background. My daughter’s 10 now and in eight years’ time I want her to go to University. I might just about manage it but many of my friends wouldn’t be in able to send people who really should be able to go and who would excel later in life if they were given the chance.” (P.USW14)

Conversely, for International students, particularly in our sample, those from Germany were drawn to undertake a Masters in a UK University as it was a one year course, much shorter than the typical duration of a Masters course in Germany. (P.USW7, P.USW8). Participants also benefitted from flexibility of modules from being able to extend their course in order to fit in other life and work commitments and responsibilities (P.USW3) or being able to add on entrepreneurship to a broad range of other interests:

“There was a module on academic writing, creative writing and leaders of the future as well. These were modules I felt were also adding to my creative side as an individual. They went hand in hand with the entrepreneurship course I was on I felt, so that was very interesting”. (P.110)

A more general draw to an enterprise course was a general love of learning for some of our participants (P.USW10, P.USW11, P.USW3). While this may have motivated some to start a course it is the lecturing staff who were key to engaging the student with the course being a source of inspiration. Some of our participants place a preference on a particular module based on the lecturer. The perceived entrepreneurial qualities, research and passion of the lecturer are seen as particularly valuable (P.104, P.USW9, P.USW7, P.USW1)

For international students, the teaching style in the UK Universities also appealed to them:

“I went back to Germany but I didn’t want to stay in Germany too much because I really enjoyed the Anglo Saxon sort of teaching.” (P.USW7).

For other participants, they recognised they had a particular learning style that was suited to their enterprise or small business course (P.111, P.107, P.106).

“I’m an interactive learner if I read something from a textbook it doesn’t go in. If I was to watch a video I would tell you everything. I’m one of these people that even when I’m not paying attention I’m listening”. (P.106)

“I was always the type of person, you just think in that different way, think outside the box.” (P.111)

Broadly, it is the “difference” that respondents perceive, between EE and other educational experiences that appears to be of great value. For older participants the financial aspects were more relevant to this, whilst a different teaching and learning style to the norm was also seen as of general relevance. When added to the non-traditional learner nature of respondents highlighted in the quantitative study, this also reinforces the view that EE attracts more “adventurous” learners, with broader and multiple outlooks and interests. As such this may also go some way to explain / give context to the multiple post EE experiences identified in the quantitative analysis.

Post Course

What have you been doing since graduating?



Career Activity after course: Social Focus

Our participants reported a variety of different career pathways on graduating from their enterprise or small business courses. Some had kept to the same pathway prior to starting the course and returned to their previous employed work or continued to apply to the organisations they were interested in (P.USW1, P.USW11). In terms of direct entrepreneurship, there were also participants who had already started a business prior to studying, who reported going back to their own enterprise (P107, P.USW13), as well as starting up their own business (P.USW13). Some also report a more varied pathway with life circumstances affecting their course – for example pregnancy and redundancy leading them into entrepreneurship (P.USW14). Several also reported, however, an expansion of their roles and interests, either undertaking further study or activities with a social focus in areas such as Mentoring (P.USW11 and P.USW2), and using their business skills and knowledge to help others start up a business (P.USW2, P106, P107).

EE can therefore clearly be seen to have had an impact in helping to further widen the horizons for their graduates (who as seen earlier are often open to such new opportunities), both in terms of entrepreneurship, but also the activities around entrepreneurship that could assist in developing the entrepreneurial ecosystem. This indirect benefit being something can be seen as in some ways linked to the results for the quantitative analysis and may to some extent help explain the links between positive entrepreneurship support outcomes from EE and taking social enterprise as a topic. This may therefore suggest that the benefits from such topics being included on EE curricula are not currently being fully identified, given the potential knock on effects from mentoring and business support.

Continuing study after Enterprise or Small Business course

A key similarity in activity after graduating included further or continuing study. For some, this was a route to promotion and a management career (P.USW 5 and P.USW7).

“A lot of Managers at that time said to me that I’d need to get a Masters otherwise you’re not climbing up the ladder further. So I decided to quit my job and do a Masters. P.USW 7

For others it was a way to add further to their skillset whilst navigating their way to their chosen career:

“Immediately after graduating I applied to the Air Force but didn’t get in so I went travelling for about a year. I helped out in the family business and I’m studying an NVQ Level 5 in Leadership and Management. Six months ago I did a teaching qualification which allows me to do health and safety training.” (P.USW1)

Scholarships and funding were considered motivators and enablers to continuing study at post graduate level especially Masters study for our participants (P.USW14, P.USW5):

“After the BA Enterprise I did the Masters as I could do it for free.” (P.USW14)

“Once I graduated in 2010 and I had a scholarship for a Masters I thought an additional qualification couldn’t do me any harm.” (P.USW5)

The decision to undertake PhD study for our participants was, however, not always part of their career pathway (P.USW4) and depended on the life stage of our participants where caring responsibilities or current business needs came first it was put on hold (P.USW10). This highlights therefore that EE can help stimulate further education and training outcomes, another non-start-up based measure that could also be considered as part of a broader view of the impact of EE. These results therefore support the quantitative analysis taking a broader perspective of the impacts of EE than just start up, promoting the idea of EE as also having beneficial lifelong learning effects.

Influence of course on current situation: Confidence and Credibility

Positive influences were reported by participants, particularly increased confidence in their own abilities and increased external credibility, particularly of relevance to the self-employed. Some apportion this to specific skills taught during their course such as research and presentation skills (P.USW10 and P103) and examples were given of general confidence raising through the knowledge gained which is specifically related to what is needed to start a business which they have previously seen as barriers, holding them back from becoming self-employed:

“What’s different after I enrolled on this course is that I have more confidence in that I can do it. I realised that all small businesses have a lack of capital but then after I study that money isn’t everything you’ve got to have – there are other resources other than money”. (P.USW10)

“I learnt a lot in the real world, but going to Uni was like looking through the glass if you know what I mean and building up my knowledge and confidence and then going in”. (P105)

Understanding how to work through problems or how to tackle new problems or working with new people (P.USW2, P.USW7) were also considered causes of increase in confidence in their own capabilities following undertaking a small business or enterprise course. Participants also report a greater degree of strategic thinking and planning with regards to their businesses which they felt was lacking prior to their course, again improving confidence.

“That’s what I learnt from University – I’ve got to have a plan and got to do some research” (P.USW10).

“After my degree I could plan better, I was much more strategic than I’d ever been – I was too operational before. It also gave me confidence – you can’t put a price on that. ...The quality of my work improved enormously.” (P.USW11).

“The credibility comes partly from the qualification and partly that I can consolidate from my previous experience and that I know things for a fact not just what I think.” (P.USW9).

In terms of practical application of what was learnt from their course, participants state a variety of influence from increasing their general business knowledge (P.USW12), to having a direct influence on their business (P.USW13) or employed work (P.USW8).

“It’s [participant’s new business, started after graduating] done really well and grown really fast and lots of the skills I used during my University degree have been useful and a real benefit.” (P.USW13)

“My first role was in a small company with 5 employees and was twofold: I was a Product Manager and was also responsible for Internationalisation. Which pretty well matched [my] course – “The Entrepreneurship and the Global Context”. That’s what I applied in my first job for 3 years.” (P.USW 8).

“Yes it has. The idea of Entrepreneurship either as your own small business or as part of a corporation in an interesting concept and I think people need to be empowered to be successful and not to be held below their level.” (P.USW 8)

Benefits of having a recognised, accredited and formal higher education qualification itself also includes a perception of an improvement of external status leading to improved career prospects and credibility within the business community (P.USW14, P.USW11, P.USW10 and P.USW9). This discourse was particularly strong among the female participants of our study:

“When I used to try and get work I’d always feel slightly like a second class citizen. But now I’ve got a degree and I’m proud of it and I’ll wave it under their noses.” (P.USW11)

“Yes it has influenced me hugely because I have gained confidence and can do business in other countries as well.” (P.USW10)

“Having that credibility was really significant for me.” (P.USW9)

Whilst others recognised a higher education qualification such as a degree had currency in the business world, it was not a substitute for experience.

“Academia gives you a foot in the door...I’d say that experience is far more valuable than anything academia can give you.” (P.USW14)

In addition to the topic specific results identified in the quantitative study therefore, the interviews revealed a broader benefit from EE upon small business activity (both start up and development of existing businesses) in terms of increased internal confidence and external credibility. This supports the literature which recognizes that EE education offers more to the individual than learning about just venture creation, supporting personal development and career planning resilience especially in recent tumultuous times (Rae, D. and Woodier-Harris, N., 2013).

Enterprise course had no influence on career or business

For others, however, EE could be seen as an end in itself without any perceived direct beneficial effect.

“I found it worthwhile going although it didn’t directly affect my business plans...” (P.USW2)

For some of our interviewees, therefore, completion of the course was considered sufficient attainment and specific impact of future career was not their main goal, which highlights a requirement to explore whether there were changes to the courses that may have improved outcomes in this regard (discussed below in reflections).

“I wanted three things from my time in the UK to help the career I had started before my second Uni stop. Improve my English, study/stay abroad and gain a Masters degree (turned out to become a PhD)”. (P.USW12)

For others, who had embarked on an enterprise course as a stop gap to their chosen career, their course content had little influence on them.

“Everything I do now for work, I’m learning as I go along. I can’t bring anything from Uni. Business Plans and Presentation yes you always need the practice but I’d done these at GCSE and A-level and I wasn’t learning anything new”. (P.USW1)

In this particular case (P.USW1) the participant themselves recognizes that, on reflection, they should have chosen a different course, though earlier evidence also suggests that the course generally did stimulate an ongoing interest in learning more generally. More broadly, however, cases such as these might lead to the question why someone would embark on an enterprise course when they are clear that they had no pre-course entrepreneurial or intrapreneurial intentions. This highlights the importance of pre-course screening, particularly for courses which are funded, where the desired outcomes are for increased start up / small business development. Within this it also reinforces the importance of the pre-course experience and mindset. We explore this question later in this section when asking participants if they consider themselves to be an entrepreneur at the time of the interview.

Reflections and suggested improvements for EE courses: Linking to the real world

On reflecting their time undertaking an enterprise or small business course, our interviewees considered ways in which their course could have been improved. These varied, but there was a general consensus around greater tailoring of content to the learner’s prior experience and level. For example, those who had prior business experience would prefer a less generalist approach:

“Some of the lessons are quite general so if the topics were more focused. General is good for people who don’t have a business background”. (P.USW10)

Others thought it was important that content needed to be tailored more depending on the stage of business development of the participant (P.USW3). Level of required previous academic attainment was also considered important to specify more clearly in the course prospectus in subject areas such as mathematics where participants in our sample either found classes too difficult (P.USW5) or too basic, causing frustration within the class (P.USW8, P104).

There was also a mixed response to content related to entrepreneurial theory. Students looking more for operational knowledge didn’t draw as much value from the more theoretical content:

“Well a lot of the organisation, business organisation, human resources, accounting we did. Things like that were useful but studying other entrepreneurs wasn’t that useful to me...The personality traits didn’t really help me because it was more like, well they teach, they taught me different backgrounds and why is an entrepreneur an entrepreneur, and things like that. But everyone is different so learning that didn’t really help me. For the organisation structures and how to start up was really useful but the entrepreneurship side wasn’t that great.”(P105)

However, for others, considering entrepreneurial characteristics and traits, for example, was of interest.

“Entrepreneurial personal development, that was good, I enjoyed that. That was about how entrepreneurial you were as an individual, what makes people’s personality you know what parts of their personality is entrepreneurial.” (P107)

The perceived competence and experience of the lecturer was important to our participants:

“One of the key things that I think was paramount to the course was the staff...” (P111)

A negative perception of a lecturer could be the deciding factor on whether the student engaged fully in the course.

“I would be like who have we got? If it's [name of lecturer] or [name of other lecturer] I'll go if it's not them then there's not much point really. I still went to about 80% of lectures but the quality of the lecturers and their experience was questionable at best.” (P104)

Conversely, positive perception and relevant experience of lecturers could be inspiring to the student:

“I’ve not just seen a video on YouTube this is what I’ve done, I’ve lost money on it or I’ve made money on it and this is how it really happens in the real world as opposed to getting what could happen in theory.” (P107)

Unsurprisingly, inclusion of more practical elements ranging from access to role models and mentors (P.USW1, P.USW3, P.USW4 and P.USW9), to access to University incubator facilities and greater use of tools such as the Business Model Canvas (P.USW4) were cited as being important elements to include in order to realise entrepreneurial ideas and ambitions and prepare students for “...what business is really like” (P109).

“I was disappointed that P.USW didn’t have an Incubator. I had a lot of help from Professors but would have found it really valuable to develop my business idea”. (P.USW4)

“There wasn’t enough of the exposure to Industry. You’d want visits to Industry and guest lectures.”(P.USW 3)

Skills based elements such as Leadership and Communication were also considered to be important inclusions for an enterprise course and skills seen to be lacking among other course participants (P.USW9). Positive experiences include having all stages of business development included in the course:

“I particularly liked that it brought you right through from starting a business to growing a business.” (P.USW13)

Relevant and practical application of course content were therefore particularly positively perceived. Participants recall finding the course content relevant to their aspirations and available modules provided flexibility and choice in module topics which students could choose depending on their interests or stage of development (P.USW2 and P.USW14). Activities and opportunities to put newly learnt skills or knowledge into practice, gaining experience were very well received.

“It was the best course I’d ever done because I’d learnt something and then could put it in to practice. It was like a higher level apprenticeship”. (P.USW3)

Some participants were also able to reflect on their own activities and felt that if they could do it all again they’d do more whether that was going full time rather than part time (P.USW2) or actively seeking out teaching opportunities and networks to participate in (P.USW6).

Overall, this suggests a more practically oriented, action learning style, focused on skills development was of most relevance to many of the interviewees, which can be seen to be linked both to the backgrounds of the interviewees, their aspirations and, learning styles. This is therefore of importance to recognize when designing EE curricula. Indeed, the point about higher level apprenticeships may be a particularly important one in the light of current government policy in this area.

Participants Identification with Entrepreneurial Activities, Traits and Characteristics

All participants were asked whether they considered themselves to be an entrepreneur, the answers proving to be illuminating in terms of self-perception about the term, and the belief for many that they sat on an entrepreneurial continuum, with EE often assisting them in the conclusions they came to about this.

Overall 11 of our participants describe themselves as an entrepreneur (P101, P105, P107, P109, P110, P111, P.USW10, P.USW11, P.USW14, P.USW2, P.USW8). Of these, some went further to describe themselves as serial entrepreneurs (P.USW11, P.USW14, P105). However, the term “entrepreneur” often does not sit well, even with these participants:

“I don’t know. People, if you say I’m an entrepreneur people are like oooh what does that mean? People think of Alan Sugar and Theo Paphitis, I mean I’m not that. I like an opportunity and I’ve got a lettings agent, I sell books on Amazon, I do bits and bobs everywhere. And I would say well that’s an entrepreneur but it’s probably emblazoned on people’s minds what that means.” (P105)

“I don’t really like admitting it too much to the wider world, I don’t know whether it sounds boastful, I’m an entrepreneur, very grand.” (P111)

Some prefer to describe themselves as possessing entrepreneurial traits and characteristics or undertaking entrepreneurial activities or behaving entrepreneurially rather than using the title of entrepreneur (P104, P105, P106, P107, P109, P110, P111, P.USW1, P.USW3, P.USW5, P.USW6)

“I didn’t feel like I was a natural, I was sort of running my own business and doing some sort of entrepreneurial activity but I didn’t feel like I was a natural entrepreneur” P107

“I would describe myself as entrepreneurial. I see opportunities but I don’t always take them up. I like to be my own boss and make my own decisions” (P.USW3)

Some of our participants also perceive themselves as not big risk takers and do not see themselves as fitting this particular entrepreneurial trait. Some of our participants apportion this to the financial constraints associated with being a student (P104, P106, P110).

“Doing the course I had a couple of chances of setting up companies but I was very risk averse... thought it’s not the right time to be taking on such a financial risk in my first year of university.” (P104)

“And I think now when you graduate you don’t take as much risks though you can, because now you are looking for more stability. So it would be quite interesting to see people from the course who are graduates because you can’t really take risks when you have rent to pay”. (P106)

A greater understanding from the theories that exist about entrepreneurs and a greater self-awareness of where they fit in (or not) to this theoretical perspective was also discussed among our participants (P105, P106) as an influence from their enterprise or small business courses. This led some to perceive value that they could add to their employed work place as intrapreneurs (P106, P.USW9).

“I knew very clearly that I’m not an entrepreneur. I don’t have that instinctive drive to start a new business. I understood how valuable I was at working. I’m intrapreneurial. That’s something I carry through to every business activity I’ve done since”. (P.USW9)

The remainder of our participants went on to employed work (P.USW5, P.USW7, P.USW8, P.USW9, P103) and prefer to describe themselves by their current job title or occupation.

“No. I guess because I’m training to be a teacher I would say a teacher” P103.

“Right now I would describe myself as a Manager with a vision for trends” (P.USW7)

Given that a combination of extrinsic and intrinsic factors combine to result in starting a business, undertaking an enterprise or small business course was not seen to have “made” them into an entrepreneur.

“I know a lot of people on my course who haven’t started a business. I don’t think modules I took helped me start a business. There are some people on my course who have started a businesses though” (P.USW1)

The description of those who went on to employment rather than self-employment and describe themselves by their job title may be instructive here. EE could be seen to have assisted in self-identification of the interviewees in terms of being entrepreneurial/enterprising/having entrepreneurial characteristics rather than “being an entrepreneur” per se. On a wider level, the variety of ways in addition to self-employment outcomes that EE could be seen to have benefitted may be related to the way in which participants generally viewed the courses, helping to identify, develop and entrepreneurial activities, in self-employed, employment, and other settings, rather than being a vehicle to “become” an entrepreneur.

Conclusions

The quantitative evidence presented indicates that EE programmes provide value both in terms of helping to enable business start-ups but also in supporting alternate career paths, through the enterprising knowledge and skill sets graduates acquire during their specialise studies. This contributes to the extant knowledge by recognizing and measuring these contributions, as well as enabling discernment between different EE course components and their value for different career outcomes.

The quantitative study has several implications for both policy and practice, potentially impacting on several stakeholders including educational bodies, the HEI sector, entrepreneurship educators, enterprise support agencies and the small business community. The evidence presented here suggests that many topic areas have a positive impact on EE being perceived to have value towards effective self-employment outcomes. The HEI sector must, however, continue to evaluate its practices and measure the effectiveness of its graduates in terms of achieving sustainable business start-up, as well as other outcomes. In course design, the evidence suggested that students value both the enterprising and entrepreneurial skills and knowledge components and discern value between them in their later careers. The value ascribed to Bricolage/Resourcefulness/Effectuation course content is of particular interest given its currency within recent EE literature (Perry et al., 2012). Further research is required here, however, to discern between effectuation and bricolage competencies for EE graduates. Moreover, because the findings suggest that EE graduates typically experience portfolio careers with multiple occupations in different sectors and roles within both employment and self-employment, it is

therefore important that EE programme design to include both Enterprising and Entrepreneurial components to meet the potentially varied and multiple post-graduation requirements. The study therefore supports the value of EE towards self-employability but also other career options. This should inform Enterprise support agencies and small businesses regarding the true value of HEI offered provision.

The quantitative study, however, also has limitations, in terms of the number of responses on which the analysis was based, the number of HEIs evaluated and its point in time design. The study also recognizes that the retrospective data gathering technique used requires either retrospective recall or real time data gathering (Perry et al., 2012). In this study, the data being captured retrospectively and thus potentially subject to potential recall biases (Eisenhower et al., 2004). The need to more effectively understand reasons behind the responses to the quantitative analysis also led to a qualitative analysis being undertaken. The qualitative study found that EE could be seen to have assisted in self-identification of the interviewees in terms of being entrepreneurial/enterprising/ having entrepreneurial characteristics rather than “being an entrepreneur” per se.

A variety of life experiences have driven the respondents towards EE, supporting the results from the quantitative survey that EE has positive effects on more than just start-up and self-employment. This also suggests that that an approach which includes measures in addition to the traditional one of post course start-up may be more relevant for policymakers.

The qualitative data also highlights that there may be complementary/substituting roles for the extra-curricular activities and resources that may also assist in promoting entrepreneurial outcomes, in addition to the EE topics highlighted to be of importance to both start-up and other post study occupations in the quantitative analysis. From a future policy perspective this suggests that the complete package around EE courses needs to be carefully considered.

More broadly, it is the “difference” that respondents perceive, between EE and other educational experiences that appears to be of great value, the qualitative analysis indicating that EE tends to attract “adventurous” learners, with broad and multiple outlooks and interests. EE can also be seen to have had an impact in helping to further widen the horizons of these learners, both in terms of entrepreneurship, but also the activities around entrepreneurship. From a policy perspective EE could therefore assist in developing the entrepreneurial ecosystem.

In terms of limitations to the qualitative study the authors of this study recognizes the need for further supplemental survey evidence from different country contexts. There is also a need to evaluate in more detail, the value of specific forms of EE including female entrepreneurship, social entrepreneurship, technology entrepreneurship etc.

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Appendix A: Enterprise Educators UK Survey

PARTICIPANT INFORMATION STATEMENT The aim of this study is to conduct research funded by Enterprise Educators UK (EEUK) into the role and importance of entrepreneurship education in skills, training and qualifications obtained from UK Universities. The study is being conducted by Professor Paul Jones at Coventry University and Professor David Pickernell from the University of South Wales. You have been selected to take part in this questionnaire survey because you previously engaged in entrepreneurship education at Coventry University or the University of South Wales. Your participation in the survey is entirely voluntary, and you can opt out at any stage by closing and exiting the browser. If you are happy to take part, please answer the following questions relating to entrepreneurship education. Your answers will help us to find out exactly what former entrepreneurship education students think about the quality and effect of their entrepreneurship education courses and to gather evidence regarding the career outcomes achieved from undertaking programmes of entrepreneurship education. The survey should take approximately 15 minutes to complete. Your answers will be treated confidentially and the information you provide will be kept anonymous in any research outputs/publications. The project has been reviewed and approved through the formal Research Ethics procedure at Coventry University. For further information, or if you have any queries, please contact the lead researcher at Coventry University, Professor Paul Jones at paul.jones@coventry.ac.uk. If you have any concerns that cannot be resolved through the lead researcher, please contact Professor Gideon Maas at gideon.maas@coventry.ac.uk. Thank you for taking the time to participate in this survey. Your help is very much appreciated.

I have read and understood the above information. I understand that, because my answers will be fully anonymised, it will not be possible to withdraw them from the study once I have completed the survey. I agree to take part in this questionnaire survey and I consent for my answers to be used as described.

(Please select one option)

- Yes (1)
- No (2)

At which University did you undertake your last accredited entrepreneurship focussed course? (Please select one option)

- Coventry University (1)
- University of South Wales/Glamorgan (2)

Q1 How long ago did you undertake your last accredited entrepreneurship focussed course at a University? (Please select one option)

- Within the last year (1)
- 1-3 years ago (2)
- 3-5 years ago (3)
- 5-10 years ago (4)
- More than 10 years ago (5)

Q2 What was your reason for taking the course? (Please select all that apply)

- To obtain a qualification (1)
- Interested in entrepreneurship as a subject (2)
- Thinking about starting a business at that time (3)
- In the process of starting a business at that time (4)
- Potentially starting a business immediately following the course (5)
- Potentially starting a business at some point in the future (6)

Q3 At what level was the entrepreneurship qualification achieved? (Please select one option)

- Level 4 (First year degree or equivalent eg. Foundation degree, HNC) (1)
- Level 5 (Second year degree or equivalent eg. HND) (2)
- Level 6 (Undergraduate degree or equivalent) (3)
- Level 7 (Postgraduate degree, eg. Masters) (4)
- Level 8 (Postgraduate eg. PhD, DBA) (5)

Q4 Approximately how many hours of direct contact per week did the course involve?

Q5 In your opinion approximately what proportion of the total course was entrepreneurship focussed? (Please select one option)

- Under 25% (1)
- 25%-50% (2)
- 51%-75% (3)
- 76%-99% (4)
- 100% (5)

Q6 In terms of entrepreneurial content, which of the following were included in the course? (Please select yes/no/don't know for each)

| | Yes (1) | No (2) | Don't Know (3) |
|---|-----------------------|-----------------------|-----------------------|
| Entrepreneurial opportunity recognition (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Small business start-up process (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Small business planning (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Small business finance (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Leadership (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Pitching (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Networking (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Coaching (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mentoring (9) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Marketing (10) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Business research methods (11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ICT/website/e-commerce (12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Social media (13) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Social entrepreneurship (14) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Intrapreneurship (15) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Entrepreneurial strategy (16) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Female entrepreneurship (17) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Internationalisation (18) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Innovation (19) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Growth (20) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Bricolage/resourcefulness/effectuation (21) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Entrepreneurial environment assessment (22) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q7 In terms of delivery of the course, what pattern(s) did you follow? (Please select all that apply)

- Part time (1)
- Full time (2)
- Online only (3)
- Blended mixture of online and face to face (4)
- Face to face during the week between 8am and 6pm (5)
- Face to face in the afternoon/evening during the week (6)
- Face to face at weekends (7)

Q8 In terms of the following, how was the entrepreneurship course focussed? (Please select one option for each area)

| | No focus (1) | Small focus (2) | Medium focus (3) | Strong focus (4) | Very strong focus (5) |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Teaching about entrepreneurship (1) | <input type="radio"/> |
| Starting a new business (2) | <input type="radio"/> |
| Developing enterprise skills (3) | <input type="radio"/> |
| Developing small business management skills (4) | <input type="radio"/> |
| Growing a business (5) | <input type="radio"/> |
| Innovation in business (6) | <input type="radio"/> |
| Internationalisation in business (7) | <input type="radio"/> |

Q9 How satisfied were you with the entrepreneurship course you undertook? (Please select one option)

- Very satisfied (1)
- Quite satisfied (2)
- Neutral (3)
- Quite dissatisfied (4)
- Very dissatisfied (5)

Q10 What are you doing now? (Please select all that apply)

- Unemployed/Economically inactive (1)
- Volunteering (2)
- Employed in a large (more than 250 employees) private sector business (3)
- Employed in a small (fewer than 250 employees) private sector business (4)
- Employed in the public sector/education (5)
- Employed in a charity (6)
- Employed in a social enterprise (7)
- Self-employed (8)

Q12 Since completing the entrepreneurship course, what have you been doing? (Please specify how many instances and how many years for each)

| | How many instances | | | | | How long in total (years) | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 0 (1) | 1-2 (2) | 3-4 (3) | 5-6 (4) | 6+ (5) | Not applicable (1) | 0-2 (2) | 2-4 (3) | 4-6 (4) | 6+ (5) |
| Unemployment/Economic inactivity (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Volunteering (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Employed in a large (more than 250 employees) private sector business (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Employed in a small (fewer than 250 employees) private sector business (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Employed in the public sector/education (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Employed in a charity (6) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Employed in a social enterprise (7) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Self employment (8) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q14 In your opinion what impact do you think the entrepreneurship education you received has had on your participation in the following areas? (Please select one option for each area)

| | Not relevant (1) | Very negative impact (2) | Small negative impact (3) | No impact (4) | Small positive impact (5) | Very positive impact (6) |
|---|-----------------------|--------------------------------|---------------------------------|-----------------------|---------------------------------|--------------------------------|
| Self employment (1) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Intrapreneurial activities in an organisation you have been employed with (private/public/social) (2) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| General activities in an organisation you have been employed with (private/public/social) (3) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Entrepreneurship support activities (eg. business support, teaching) (4) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| General enterprising behaviour (5) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q15 What age are you now? (Please select one option)

- 18-24 (1)
- 25-34 (2)
- 35-45 (3)
- 46-54 (4)
- 55-65 (5)
- Over 65 (6)

Q16 What age were you when you undertook your last accredited entrepreneurship focussed course at a University? (Please select one option)

- 18-24 (1)
- 25-34 (2)
- 35-45 (3)
- 46-54 (4)
- 55-65 (5)
- Over 65 (6)

Q17 What gender would you classify yourself as? (Please select one option)

- Male (1)
- Female (2)
- Transgender female (3)
- Transgender male (4)
- Gender-variant/non-conforming (5)
- Prefer not to say (6)
- Other (7)

Q23 If you answered other in previous question, please specify

Q18 What is your ethnicity? (Please tick most applicable)

- White (1)
- White - British (2)
- White - English (3)
- White - Irish (4)
- White - Scottish (5)
- White - Welsh (6)
- Black (7)
- Black - British (8)
- Black - English (9)
- Black - Irish (10)
- Black - Scottish (11)
- Black - Welsh (12)
- Black Caribbean (13)
- Black African (14)
- White & Black Caribbean (15)
- White & Black African (16)
- White & Asian (17)
- Asian (18)
- Asian - British (19)
- Asian - English (20)
- Asian - Irish (21)
- Asian - Scottish (22)
- Asian - Welsh (23)
- Indian (24)
- Pakistani (25)
- Bangladeshi (26)
- Chinese (27)
- Gypsy/Traveller/Romany (28)
- Prefer not to say (29)
- Other (Please see next question) (30)

Q19 If you answered other in previous question, please specify

Q20 Where do you currently live? Please provide postcode.

Q21 Would you be willing to be interviewed as part of this research?

- No (1)
- Yes (please supply email address) (2)

Q22 If you answered Yes in previous question please supply your email address

Appendix B: Enterprise Educators UK Interview Questions

Can you tell me about your life before University, where you grew up, what you were interested in at school etc?

Can you tell me about your time at University, the courses you took and other interests and activities?

Why did you want to go to University?

Why did you choose an Entrepreneurship course? (might be answered in previous response)

What were your plans and aspirations for the future when you first started University?

How did these plans affect the programme/course/module choices you made?

How did you find the entrepreneurship courses/modules you took at University? (what had value in terms of curriculum, the experience, network etc)

Were there elements of the entrepreneurship course that you particularly liked or disliked? (what has value what did not, beware of overlap with previous).

Did your plans and aspirations change during your time at University? (what they intended to do on completion and motivations on entry).

What have you been doing since graduating from University? (need a quick overview of their career and what they intend to do in the future)

Do you think the courses you studied, or the activities you engaged in, at University influenced what you are doing now?

Is there anything you would change or do differently if you went back to study at University?

Do you consider yourself an Entrepreneur? (how would you describe yourself if not)

Thank you for all that valuable information, is there anything else you'd like to add before we end?

Appendix C: Codes of Analysis used

| Timeline | Components of key themes relating to experiences from within the timeline | Timeline | Components of key themes relating to experiences from within the timeline | Timeline | Components of key themes relating to experiences from within the timeline |
|--|--|--|--|---|--|
| Before undertaking Enterprise or Small Business course | Sense of Adventure | During their Enterprise of Small Business course | Working whilst studying | After graduating an Enterprise or Small Business course | Continuing study after Enterprise or Small Business course |
| | Work and Business experience prior to starting course | | Shift in aspirations | | Enterprise course no influence |
| | Struggle | | Social activity | | Suggested improvement for Enterprise course |
| | Aspiration | | Unmet need for social activity | | Influence of Enterprise course on current situation |
| | Family | | Course structure | | Activity after course |
| | | | Learning | | Social focus |
| | | | First experience of entrepreneurship | | Real world experience |
| | | | | | Entrepreneurial traits and characteristics |
| | | | | | I am an entrepreneur |
| | | | | | I am not an entrepreneur |
| | | Reflection | | | |