

Increasing engagement with enterprise and entrepreneurship education in the arts, humanities and sciences

This research project was undertaken by Andrea Macrae (Oxford Brookes University), Mircea Scrob (University of Birmingham) and Helen Hook (University of Birmingham), from September 2021-September 2022, and was funded by the EEUK Research Project Fund.

1 Introduction

1.1 Overview

This project provides practical insights into how to better engage arts, humanities and sciences staff and students with enterprise and entrepreneurship education. It presents and analyses the views of staff and undergraduate students across these subject areas at two universities – Oxford Brookes University and the University of Birmingham. It investigates the key challenges and barriers, and critical motivating and enabling factors, with respect to engaging and supporting staff in providing in-curricular enterprise and entrepreneurship education opportunities, and with respect to engaging undergraduate students with these opportunities. The resulting insights can be used to enhance academic staff understanding of, interest in and capacity for providing enterprise and entrepreneurship education, and to inform the design and communication of more student-centred, appealing and accessible enterprise and entrepreneurship education opportunities.

1.2 Project rationale and scope

The project was prompted by anecdotal evidence of lower provision of in-curricular enterprise and entrepreneurship education opportunities, and lower student engagement with extra-curricular enterprise and entrepreneurship education opportunities, in the arts, humanities and sciences in comparison to business subjects. This was the case at both institutions – Oxford Brookes University, a south/south-east post-1992 institution, and the University of Birmingham, a midlands Russell Group institution. This pattern is in line with some research findings: DBIS (2013, p.60) surveyed provision of credit-bearing enterprise and/or entrepreneurship modules/units in UK HEIs and found 66% to be offered within Business faculties. Other courses outside of Business faculties which offered credit-bearing entrepreneurial education opportunities tended to be courses such as events management, tourism, engineering, and animal and countryside management. Among research on the efficacy of enterprise and entrepreneurship education in Higher Education, the significantly high proportion of this research that focusses on impact specifically on students within business and business-related disciplines is further implicit evidence of other subject areas having less provision and/or uptake. With regards to staff engagement with provision, Dinning (2015), Hegarty (2006) and Jones and Iredale (2010) have identified a range of barriers to academic staff contributing to provision of in-curricula enterprise and entrepreneurship education opportunities across non-business disciplines, including low confidence in relevant knowledge and experience, and variation in perceptions of and attitudes towards enterprise and entrepreneurship education. Variation across subject areas in both provision of enterprise and entrepreneurship education opportunities and uptake of such opportunities is as yet under-researched.

Some of the leading research in this area includes Bell (2019), which finds that attitude to risk is a critical factor influencing entrepreneurial orientation, and that attitude to risk is a characteristic which varies across disciplines. Finding such as this indicate that there is value in probing and identifying disciplinary variation in student attitudes to enterprise and entrepreneurship education, and that adapting provision in ways which speak to student priorities and needs can be beneficial (Meldrum et al. 2018; Nabi et al 2018).

The focus of the staff-focused part of this research project is largely on in-curricular enterprise and entrepreneurship education: elements of enterprise and entrepreneurship education which are embedded, and variably integrated and contextualised, within credit-bearing provision. Extra-curricular provision can exclude disabled students, students with caring responsibilities, students with part-time employment commitments, etc. (Hordósy and Clark 2018). In-curricular provision is more accessible to more students, and is therefore a locus of greater potential impact upon students. In-curricular provision is also more likely to depend on the collaboration and input of academic staff, and is thus the area of enterprise and entrepreneurship education in which their views and behaviours are more critical. Other staff involved, directly or indirectly, in facilitating and influencing undergraduate enterprise and entrepreneurship education, such as placement liaison staff and non-teaching staff involved in shaping institutional pedagogical strategies, are also included in this study.

1.3 Original contribution

This research builds on and adds to the prior research base to provide a deeper understanding of the challenges to both students and staff in engaging with in-curricular enterprise and entrepreneurship education, and also of the critical motivating and enabling factors that can be leveraged to enhance engagement, within the arts, humanities and sciences. Using student surveys and focus groups and staff focus groups, our research investigates staff and student experiences of, and attitudes and approaches towards, enterprise and entrepreneurship, with reference to self-identity, disciplinary identity and professional and personal aspirations. This research provides insights into:

- i) which enterprise and entrepreneurship competencies are most valued by students, and therefore a) which competencies providers can constructively foreground when promoting enterprise and entrepreneurship education opportunities to increase uptake; and b) which competencies require more careful explanation to students regarding value and transferability, to more effectively engage students with enterprise and entrepreneurship education opportunities which develop these competencies.
- ii) what kinds of enterprise and entrepreneurship education activities a) appeal to students; b) are more or less frequently experienced by students (indicative of gaps in provision or of factors deterring uptake); and c) are perceived by students to have design strengths or weaknesses, enabling providers to maximise the value and scale up stronger provision and address gaps and weaknesses in provision to enhance engagement.
- iii) which factors are significant in enabling staff to provide or expand enterprise and entrepreneurship education, allowing providers to explore and exploit these opportunities to increase and enhance provision.
- iv) which factors are critical in obstructing the provision or expansion of enterprise and entrepreneurship education, allowing providers to address these blocks to increase provision.

1.4 Project structure

Within what follows, section 2 provides a description of the methodology used in the study. Section 3 presents key findings from the student-related data, contextualised in relation to extant scholarship

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where relevant. Section 4 is as per section 3, but details the staff-related data. Finally, section 5 summarises the limitations of the study.

Section 2 Methodology

This study was conducted using a mixed methods approach soliciting quantitative and qualitative data. The research was conducted in two phases.

2.1 Phase 1: Student questionnaire and focus groups

Part 1: Student questionnaire

An online questionnaire was designed using the survey platform Qualtrics, and was completed by 119 undergraduate students at Oxford Brookes University and 119 undergraduate students at the University of Birmingham. The student participants were recruited via a range of methods (e.g., the student newsletter and other methods at Oxford Brookes University; random email sampling and other methods at the University of Birmingham). The recruitment methods aimed to predominantly target students of non-Business degrees (though available recruitment methods made it difficult to exclude them). The students were paid a £15 Amazon e-voucher as remuneration for the time cost.

There were two variants of the questionnaire. Participants were asked a screening question:

Please tick the statement which is true for you.

- A. I have learned about enterprise and/or entrepreneurship within my university degree course (e.g., within a module).
- B. I have learned about enterprise and/or entrepreneurship through extra-curricula activities (e.g., through volunteering, student societies, sports, etc.).
- C. I have learned about enterprise and/or entrepreneurship both within my university degree course and through extra-curricular activities.
- D. None of the above apply - I have NOT learned about enterprise and/or entrepreneurship either within my university degree course or through extra- curricular activities.
- E. I am not sure about any of the above.

Students who felt that they *had not* engaged with enterprise and/or entrepreneurship within their degree course or through extra-curricular activities, *or were not sure*, i.e., those who select responses D or E to the screening question, were presented with questionnaire variant A, and students who feel that they *had* engaged with enterprise and/or entrepreneurship within their degree course and/or through extra-curricular activities, i.e., those who select responses A, B or C to the screening question, were presented with questionnaire variant B.

The student questionnaire variant A – completed by participants who felt that they *had not* engaged with enterprise and/or entrepreneurship within their degree course and/or extra-curricular activities, *or were not sure* - covered the following areas:

- Understanding of enterprise and entrepreneurship.
- Perceptions of relevance of enterprise and entrepreneurship to themselves and their degree.
- Feelings about the number of opportunities to learn about enterprise and entrepreneurship during university experience.

- Feelings about the relative importance of enterprise and entrepreneurship competencies and of associated outcomes of enterprise and entrepreneurship education, drawing on those outlined in 'EntreComp: The Entrepreneurship Competence Framework' (Bacigalupo et al. 2016).
- Feedback on summaries of different enterprise and entrepreneurship education opportunities.

The student questionnaire variant B – completed by participants who felt that that they *had* engaged with enterprise and/or entrepreneurship within their degree course or through extra-curricular activities allowed deeper probing of these areas.

Part 2: Student focus groups

The research team conducted focus groups with 6 students at Oxford Brookes University and 9 students at the University of Birmingham, in order to allow deeper exploration of some of the aspects covered in the student questionnaire. The participants were recruited via an invitation at the close of the student questionnaire, and thus all student focus group participants had also completed the student questionnaire. The participants were asked a screening question, asking whether or not they considered themselves to be engaged in enterprise and/or entrepreneurship education, and were grouped accordingly. The student discussion guides drew on the definitions of enterprise and entrepreneurship education outlined by the QAA (2018).

The student focus group discussion guide A - used for groups of student participants who felt that they *had not* engaged with enterprise and/or entrepreneurship within their degree course and/or through extra-curricular activities, *or were not sure* - covered the following areas:

- The QAA definitions of enterprise and entrepreneurship education.
- The kinds of their enterprise and entrepreneurship education experiences which have been available to them.
- Perceptions of what deters them from engaging with enterprise and entrepreneurship education opportunities, and what could make these opportunities more appealing.
- The relative appeal of different summaries of enterprise and entrepreneurship education opportunities.
- Creative thoughts on how to design and effectively communicate strong and appealing enterprise and entrepreneurship education opportunities.

The student focus group discussion guide B - used for groups of student participants who felt that they *had* engaged with enterprise and/or entrepreneurship within their degree course and/or through extra-curricular activities - covered the following areas:

- The QAA definitions of enterprise and entrepreneurship education.
- Which aspects of their enterprise and entrepreneurship education experiences they have enjoyed.
- Perceptions of what deters students from engaging with enterprise and entrepreneurship education opportunities, and what could make these opportunities more appealing.
- Prevalence of use of the terms enterprise and entrepreneurship within enterprise and entrepreneurship education opportunities.
- Enterprise and entrepreneurship skills literacy in association with job interview contexts.
- The relative appeal of different summaries of enterprise and entrepreneurship education opportunities.
- Creative thoughts on how to design and effectively communicate strong and appealing enterprise and entrepreneurship education opportunities.

The quantitative data generated through the student questionnaire was analysed, employing a range of statistical tests as appropriate. The free text responses within the student questionnaire and the responses within the student focus groups were manually coded and thematically analysed using an inductive approach, which is deemed an appropriate and powerful method of analysis experiences, attitudes and behaviours across a dataset involving multiple respondents (Kiger and Varpio 2020). Section 3 of this report presents and discusses key findings from the questionnaire data along with themes arising from the questionnaire free text and focus group responses, and explores them in relation to related extant scholarship. Recommendations drawn from this discussion are summarised in section 5.

The student questionnaire designs and student focus group discussion guides were piloted and were approved for use in this study by Oxford Brookes University Research Ethics Committee (UREC L20241) and by the University of Birmingham (ERN_22-0560 and ERN_22-0561).

The student questionnaire designs and focus group discussion guides have been shared as a tool within the EEUK Enhancing the Curriculum Toolkit, available for use at other institutions, as a means to:

- generate evidence to guide staff in increasing student engagement in, and strengthening the provision of, entrepreneurial education activities.
- enable students to reflect on their understanding of, experiences of and attitudes towards enterprise and entrepreneurship and entrepreneurial education activities.
- support students in recognising and articulating what they value, have gained and/or want from entrepreneurial education activities.

The resource is titled 'Student attitudes to and engagement with enterprise education (QAA5) #EERPF'. Additionally, the summaries of eight entrepreneurial education activities which are used in the student questionnaire and focus groups, on which participant feedback is solicited, are shared, along with a summary of that feedback, as a further resource within the EEUK Enhancing the Curriculum Toolkit. This resource is titled 'Student views on different in-curricular entrepreneurial education opportunities (QAA1234567) #EERPF'. Both resources can be found at <https://www.etctoolkit.org.uk/all-etc-how-to-guides-case-studies/>.

The questionnaire data and the transcripts of the student focus groups are available online as part of the project dataset at <https://doi.org/10.24384/epye-sj79> Macrae, A., Hook, H. and Scrob, M. (2022). Increasing Engagement with Enterprise Education in the Arts, Humanities and Sciences EEUK Research Project Dataset [Data set]. RADAR, Oxford Brookes University. Available at: doi.org/10.24384/epye-sj79

2.2 Phase 2: Staff focus groups and interviews

The research team conducted focus groups or interviews with 18 members of staff at Oxford Brookes University and at the University of Birmingham. The participants were recruited by internal email lists. The participants were asked a screening question, asking whether or not they considered themselves to be engaged in enterprise and/or entrepreneurship education, and were grouped accordingly. Two variations of the discussion guide were used. As per the student focus group discussion guides, the staff discussion guides drew on the definitions of enterprise and entrepreneurship education outlined by the QAA (2018).

The discussion guide that was used for the groups of participants who identified as engaged with providing enterprise and/or entrepreneurship education covered the following areas:

- Their understanding of the term entrepreneurial education.

- Reflections on examples of entrepreneurial education activities, and feelings about the idea of using such activities within their own teaching.
- The QAA definitions of enterprise and entrepreneurship education.
- Ideas about how they might embed entrepreneurial education in their own teaching if asked to do so, in the light of the QAA definitions.
- Whether or not they would define themselves as engaged in enterprise and/or entrepreneurship education in the light of the QAA definitions of each term, and whether their response now differed from their response to the same question when asked as a pre-focus group screening question.
- Whether or not enterprise and/or entrepreneurship education should be part of the HE curriculum.
- Motivating/enabling factors which would enhance their engagement with providing enterprise and/or entrepreneurship education.

The discussion guide that was used for the groups of participants who identified as not engaged with providing enterprise and/or entrepreneurship education opportunities covered the following areas:

- Their understanding of the term entrepreneurial education.
- The QAA definitions of enterprise and entrepreneurship education.
- Whether or not they would define themselves as engaged in enterprise and/or entrepreneurship education in the light of the QAA definitions of each term, and whether their response now differed from their response to the same question when asked as a pre-focus group screening question.
- Examples of their engagement with providing enterprise and/or entrepreneurship education.
- Motivating/enabling factors driving their engagement with providing enterprise and/or entrepreneurship education.
- Experiences of providing enterprise and/or entrepreneurship education: what has worked well, and what has worked less well.
- Barriers and challenges to providing enterprise and/or entrepreneurship education (either experienced or anticipated).
- Motivating/enabling factors which would enhance their/others' engagement with providing enterprise and/or entrepreneurship education.

As per the method used to analyse the data generated through the student focus groups, the responses were manually coded and thematically analysed using an inductive approach. Section 4 of this report presents a discussion of the arising themes, contextualised in relation to related extant scholarship. Recommendations drawn from this discussion are summarised in section 5.

The discussion guides were piloted and were approved for use in this study by Oxford Brookes University Research Ethics Committee (UREC L21268) and by the University of Birmingham (ERN_21-1769).

The discussion guides have been shared as a tool within the EEUK Enhancing the Curriculum Toolkit, available for use at other institutions, as a means to explore, understand and work with staff attitudes towards and approaches to enterprise education. The resources is titled 'Staff identities as enterprise educators – perceptions, motivations and barriers (QAA25) #EERPF' and can be found at <https://www.etctoolkit.org.uk/all-etc-how-to-guides-case-studies/>.

The transcripts of these focus groups and interviews are available online as part of the project dataset at <https://doi.org/10.24384/epye-sj79> (Macrae et al. 2022).

Section 3 Findings of phase 1: Student questionnaire and focus groups

This section presents and discusses the key findings from the student questionnaire and focus groups. Within the data summaries, OBU refers to Oxford Brookes University and UOB refers to the University of Birmingham. For some aspects of the data, the responses of particular groups are compared (i.e., responses of students who report having experienced some enterprise and/or entrepreneurship education opportunities within their degree and/or extra-curricular university experiences vs. responses of students who report either not having done so or not being sure; and the responses of students in the arts, humanities and social sciences vs. the responses of students in STEM). These comparisons were tested using the Mann-Whitney U test (with Kruskal-Wallis H test as a further test option if there were more than 2 independent conditions). In cases where there is a statistically significant difference, statistical details are provided.

3.1 Prior university enterprise and entrepreneurship experience

Student respondents were asked to select one statement reflecting whether or not they had learned about experience of enterprise and/or entrepreneurship at university thus far, and if they had, whether this learning had come from within their degree course only, through extra-curricular activities (ECAs) only, or both. The responses are presented in Table 1.

Table 1. Prior university enterprise and entrepreneurship experience.

Enterprise and/ or entrepreneurship learning experience	Source	OBU		UOB	
Have	Degree and ECAs	2	28	9	35
	ECAs only	16		20	
	Degree only	10		6	
Have not/not sure	Have not	79	91	77	84
	Not sure	12		7	

These figures include the few student respondents studying business-related programmes as their disciplinary focus or as half of their degree. All of these students at OBU (n=3) reported learning about enterprise and/or entrepreneurship through their degree only. Of these students at UOB (n=5), three out of the five reported learning about enterprise and/or entrepreneurship through both their degree and extra-curricular activities; one reported learning about enterprise and/or entrepreneurship through their degree course only; whilst one reported not having learned about enterprise and entrepreneurship at university thus far. Thus, if these students are excluded from this data, leaving only the responses of students or arts, humanities and sciences, the proportions of students who confidently report having learned about enterprise and/or entrepreneurship at university becomes even smaller: 22% at OBU; 27% at UOB; 25% on average. It is also worth noting that just over 11% of respondents engaged with enterprise and/or entrepreneurship in their curriculum, and a significant number of the extra-curricular activities were not directly related to university provision.

This data seems to corroborate the prior research mentioned in the introductory section which indicates a lack of engagement with enterprise and/or entrepreneurship education among Arts, Humanities and Sciences undergraduates (e.g., DBIS 2013). This could be due to a lack of availability of such provision, in which case, if agendas to increase HEI student engagement with enterprise and entrepreneurship education are to be pursued, the reasons for the lack of provision need to be understood and addressed. The findings staff focus group data discussed in section 4 work towards this aim.

Alternatively, such provision may be available, but low uptake may be due to this provision being of limited appeal to these students. This would suggest the need to understand what aspects of current and potential enterprise and entrepreneurship education opportunities deter and appeal to these students, in order to clarify how enterprise and entrepreneurship and their value can be better explained to students and in order to support the tailoring of both provision and explanations/communication of provision to enhance appeal. Some of the findings discussed in the rest of this section contribute towards reaching to this objective. Relatedly, however, it is also possible that students are engaging with such opportunities, but without recognising them as enterprise and entrepreneurship education. If this were the case, this could potentially be due to a limited understanding of these terms (definitions of which were avoided within the survey so as not to distort responses to students' own explanations of what they understood by these terms), in combination with a lack of specific use of these terms within provision. If so, then this too suggests the need for improved explanations of enterprise and entrepreneurship and their value.

3.2 Perceptions of relevance of enterprise and entrepreneurship to themselves and their degree.

Student respondents were asked how far they felt enterprise and entrepreneurship skills to be relevant to themselves and to their degree, using a Likert scale. The responses are presented in Table 2.

Table 2. Perceptions of relevance of enterprise and entrepreneurship.*

Relevance of...	Not relevant		Slightly relevant			Moderately relevant			Highly relevant			
	Total	Breakdown		Total	Breakdown		Total	Breakdown		Total	Breakdown	
Enterprise skills to you	45	Exp	5	74	Exp	11	82	Exp	22	37	Exp	25
		Not	40		Not	63		Not	60		Not	12
Enterprise skills to your degree	63	Exp	6	63	Exp	23	42	Exp	17	7	Exp	17
		Not	63		Not	63		Not	42		Not	7
Entrepreneurship skills to you	40	Exp	4	79	Exp	10	72	Exp	19	44	Exp	30
		Not	36		Not	69		Not	56		Not	14
Entrepreneurship skills to your degree	71	Exp	8	91	Exp	17	57	Exp	22	19	Exp	16
		Not	63		Not	74		Not	35		Not	3

*Exp = students who report having experienced some enterprise and/or entrepreneurship education opportunities within their degree and/or extra-curricular university experiences; Not = students who report either not having done so or not being sure.

The following two charts present this data differently:

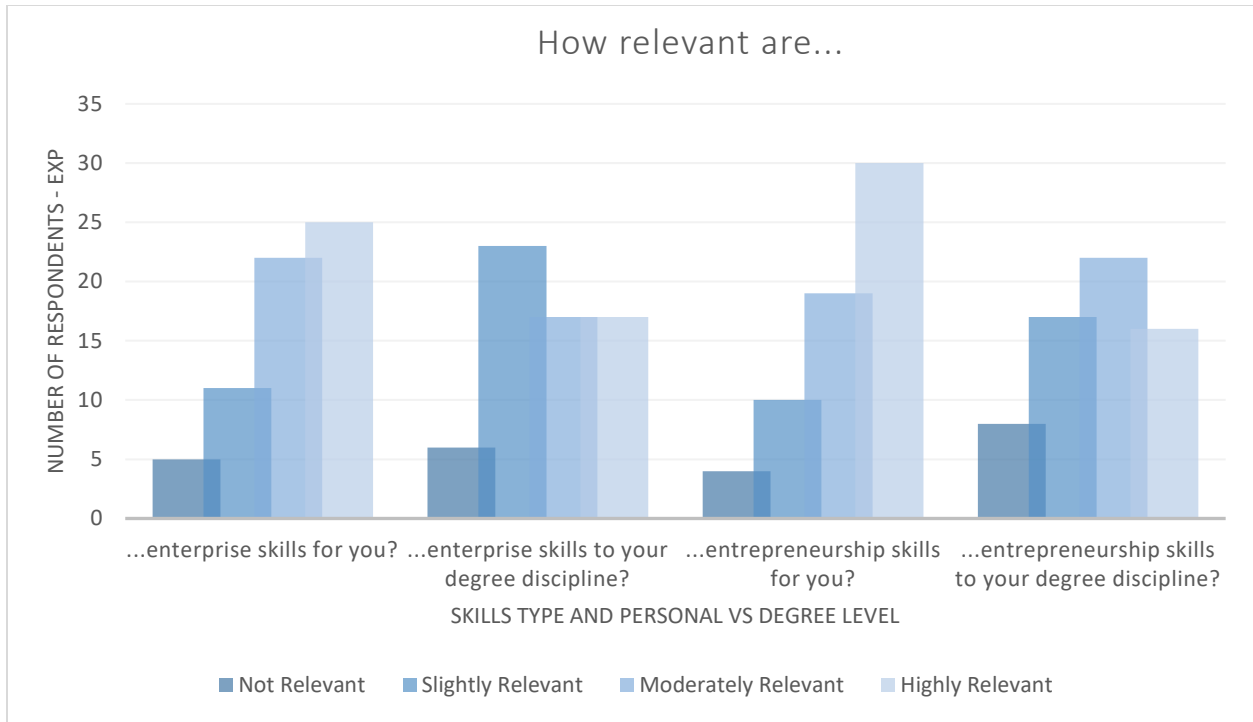


Chart 1. Perceptions of relevance of enterprise and entrepreneurship – students who report having experienced some enterprise and/or entrepreneurship education opportunities within their degree and/or extra-curricular university experiences.

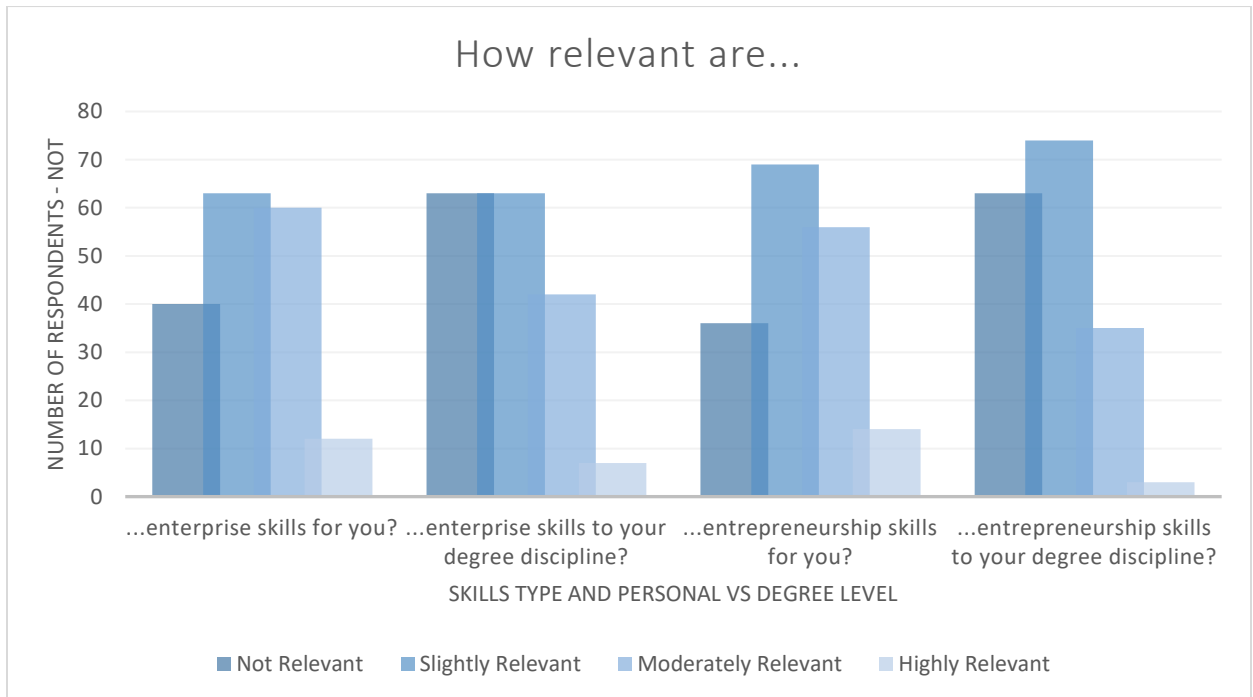


Chart 2. Perceptions of relevance of enterprise and entrepreneurship – students who report not having experienced some enterprise and/or entrepreneurship education opportunities within their degree and/or extra-curricular university experiences, or not being sure.

- Relevance of enterprise skills to you: Mann–Whitney U-value = 2987.5, Z-score = -5.38738, p-value < 0.00001.
- Relevance of enterprise skills to your degree: Mann–Whitney U-value = 3248, Z-score = -4.83146, p-value < 0.00001.
- Relevance of entrepreneurship skills to you: Mann–Whitney U-value = 2681, Z-score = -6.04146, p-value < 0.00001.
- Relevance of entrepreneurship skills to your degree: Mann–Whitney U-value = 2898, Z-score = -5.57838, p-value < 0.00001.

The raw data suggests that for each question, the group who had experience of enterprise and/or entrepreneurship within their degree and/or extra-curricular university experiences was more likely to consider enterprise and entrepreneurship skills to be more relevant, and the group who had not had this experience or were not sure were more likely to consider enterprise and entrepreneurship skills to be less relevant. The results cannot be interpreted as evidence that the process of engaging with enterprise and/or entrepreneurship education within their degree and/or extra-curricular university experiences causes an increase in perceptions of relevance, as the perceptions of relevance may have preceded and indeed motivated the drive to experience enterprise and/or entrepreneurship education. However, the comparatively higher perceptions of relevance among students who have experience of enterprise and/or entrepreneurship education does suggest that these students may be more likely to engage in further enterprise and/or entrepreneurship education, and that they may be useful in communicating this relevance to students who have not yet engaged with enterprise and/or entrepreneurship education.

Notably, the relevance of enterprise skills and of entrepreneurship skills to themselves are both rated slightly higher, on average, than the relevance of enterprise skills and entrepreneurship to their degrees. This could constructively spur different approaches. For example, educators could tap into this perception of relevance to self, and explicitly devote activities within modules to students' personal and professional development without attempting to directly relate this to or integrate it within discipline-specific degree content. Alternatively (or additionally), educators could devote more time and attention to explaining the relevance of enterprise and entrepreneurship to degree disciplines (and perhaps also to explaining the nature of enterprise and entrepreneurship more generally, as erroneous understanding could be influencing perceptions of disciplinary relevance). This may be a more effective strategy in the light of some of the feedback on summaries of different enterprise and entrepreneurship education opportunities reported below (section 3.5) which suggests that, for some students, alignment with degree discipline can be an important determiner of the perceived value of an activity.

Comparing the responses of students in arts, humanities and social sciences with the responses of students in STEM subjects revealed no statistically significant difference, which suggests that the implications are valid across disciplines.

3.3 Views on the amount of opportunities to learn about enterprise and entrepreneurship available during university experience.

Student respondents were asked to express a view on the amount of enterprise and entrepreneurship available during their university experience by selecting a statement from the following options:

- I would like more opportunities to learn about enterprise and/or entrepreneurship during my time at university.
- I think the number of opportunities I have had to learn about enterprise and/or entrepreneurship during my time at university is adequate.

- I would like fewer opportunities to learn about enterprise and/or entrepreneurship during my time at university.

Tables 3 and 4 capture this data, excluding the 8 student respondents who are taking business-related degrees.

Table 3. Views on the number of opportunities to learn about enterprise and entrepreneurship available at university, by students with university experience of enterprise and/or entrepreneurship education.

EE-experienced students	OBU	UOB	TOTAL
Would like more opportunities	21	23	44/56
Think no. of opportunities is adequate	4	7	11/56
Would like fewer opportunities	0	1	1/56

Table 4. Views on the number of opportunities to learn about enterprise and entrepreneurship available at university, by students without university experience of enterprise and/or entrepreneurship education and those who are not sure about their experience.

Non-experienced students	OBU	UOB	TOTAL
Would like more opportunities	60	56	116/174
Think no. of opportunities is adequate	27	22	49/174
Would like fewer opportunities	4	5	9/174

The following chart illustrates this data more clearly:

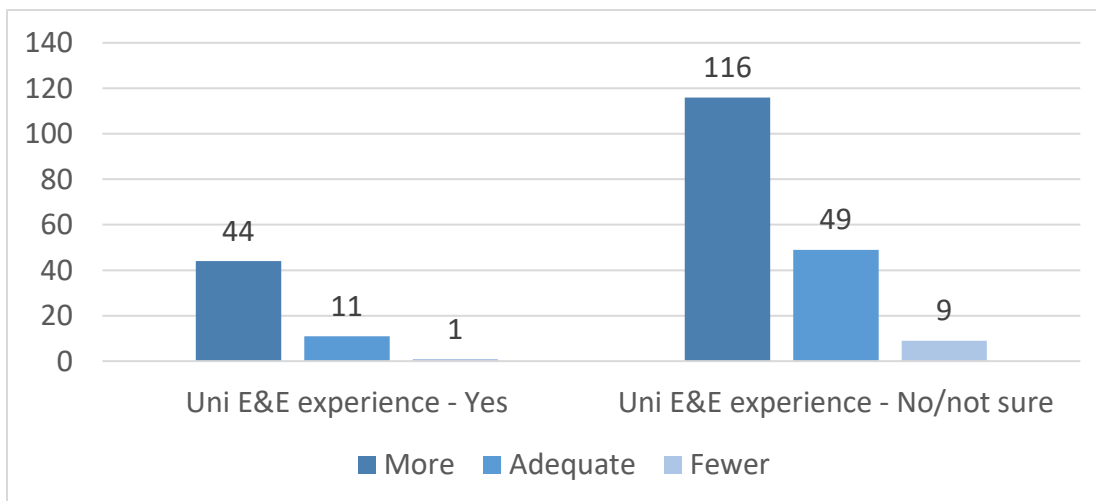


Chart 3. Views on the number of opportunities to learn about enterprise and entrepreneurship available at university

This data provides evidence that significantly more students desire more enterprise and entrepreneurship education provision during their university experience in comparison to the number of students who would like fewer opportunities, and that this is likely to be true of both students who have experienced enterprise and/or entrepreneurship education during their time at university, and those who have not or are not sure. This indicates that, though student perceptions of the relevance of enterprise and entrepreneurship skills to themselves and their degree are more ambivalent, students nonetheless perceive enterprise and entrepreneurship education opportunities to be of value and of interest. These findings were corroborated in the focus group data, which included student comments such as:

Yeah, um, I think I'd absolutely love any entrepreneurship thing like that, to be honest. I think it, it's just, like, more fun than anything and just something a bit out, you know, out of what you normally do as an opportunity like that. [...] I don't think I would turn down anything like that, because this is the sort of thing where I feel like you'd regret saying no to. And, no, nothing negative is going to come from that. And it would just be really, really valuable skills. And when it's this competitive, when... when we get out of uni, I think any added benefit... I'd really appreciate it. (Phoebe, EEUK RPF OBU UOB Student Focus Group Transcripts, focus group 1, p.10, ll.11-17).

I just didn't encounter any of this, so if it was advertised to me, I would definitely be interested. There would be nothing to... put me off. I think it'd be very useful to engage my skills in enterprise and entrepreneurship. (Simon, EEUK RPF OBU UOB Student Focus Group Transcripts, focus group 2, p.25, ll.13-14)

These findings notably contradict the hypotheses of some staff (as captured in the staff focus group data) that students in these subject areas are not interested in enterprise and/or entrepreneurship education. This evidence can be used to make a case for increasing and strengthening provision of enterprise and entrepreneurship education opportunities within institutions, and can also be used to motivate less previously engaged staff, including senior leadership in these subject areas, to engage with providing more enterprise and entrepreneurship education opportunities.

3.4 Feelings about the relative importance of enterprise and entrepreneurship competencies

Student respondents were asked 'How important are the following generic skills and competencies to you? That is, how much do you want to be good at these skills and have these competencies?' and were asked to rate, using a 4-point Likert scale, a set of 18 skills and competencies drawn from 'EntreComp: The Entrepreneurship Competence Framework' (Bacigalupo et al. 2016) (self-efficacy is paraphrased as 'Self-belief in your abilities to perform particular actions needed to achieve particular results' due to the risk of the term being unfamiliar to student respondents). Each point on the scale was given a numerical value and the response scores were calculated.

Chart 4 presents a comparison of scores given by Oxford Brookes University (OBU) students and scores given by University of Birmingham students (UOB). This chart reveals striking similarity between the overarching scores given by the two cohorts. The three outliers are 'creativity' and 'vision', which were considered to be more important (i.e., to self-development) by Oxford Brookes University students in comparison to University of Birmingham students. Conversely, 'ethical and sustainable thinking' was considered more important by University of Birmingham students in comparison to Oxford Brookes University students. This may relate to the culture of the two universities, and to the relative foregrounding of sustainability agendas at the University of Birmingham. Yar Hamidi et al. (2008)

propose that individuals’ creativity may directly interact with their entrepreneurial intention, and that in turn less creative people are less likely to want to engage with enterprise and entrepreneurship education.

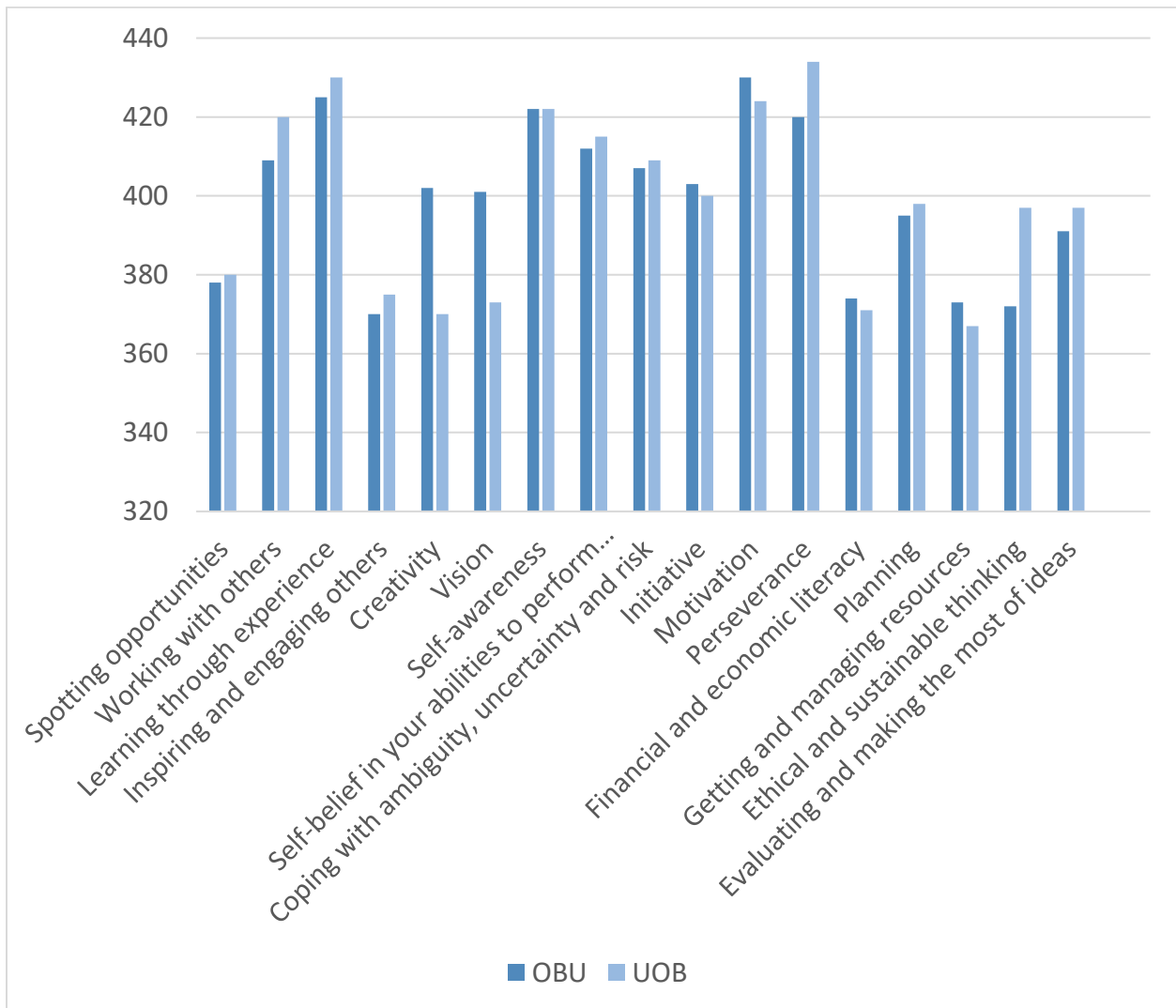


Chart 4. Comparing OBU and UOB student views on the relative importance of enterprise and entrepreneurship competencies

The presentation of the aggregated scores in Chart 5 shows that the three skills and competencies which students considered to be least important to themselves are ‘getting and managing resources’, ‘financial and economic literacy’ and ‘inspiring and engaging others’. The first two of these would be considered by Elmuti at al. (2012) to fall within the category of ‘business management entrepreneurial skills’, whereas the third would be considered ‘personal entrepreneurial skills’ (Meldrum et al. 2018, p.3). The first two also align more closely with the QAA description of entrepreneurial competencies (vs. enterprise competencies). These are followed by ‘spotting opportunities’, ‘ethical and sustainable thinking’ and ‘creativity’, all of which are key to Sustainable Development competencies, attributes and behaviours which are increasingly critical to employability in the short and medium term (QAA & Advance HE 2021).

The competencies considered most important by most students are ‘learning through experience’, ‘motivation’ and ‘perseverance’, followed by ‘self-awareness’, ‘working with others’ and ‘self-belief in your abilities to perform particular actions needed to achieve particular results’ (self-efficacy). The former two, along with ‘self-awareness’ and self-efficacy, would conventionally be considered attributes and behaviours and can be associated with ‘self-starting’ behaviour, initiative, independent thinking and the ability to overcome problems, all of which fall into Elmuti et al’s (2012) ‘personal entrepreneurial skills’ category. It is notable that these prized attributes and behaviours perhaps reflect the specific challenges of living and studying through the COVID-19 pandemic, though a diachronic comparison would be needed to explore any such patterns in correlations. Also notable is the relatively high score of ‘working with others’, given the role teamwork plays as an attractor for some and a deterrent for others within feedback on summaries of different enterprise and entrepreneurial education activities below.

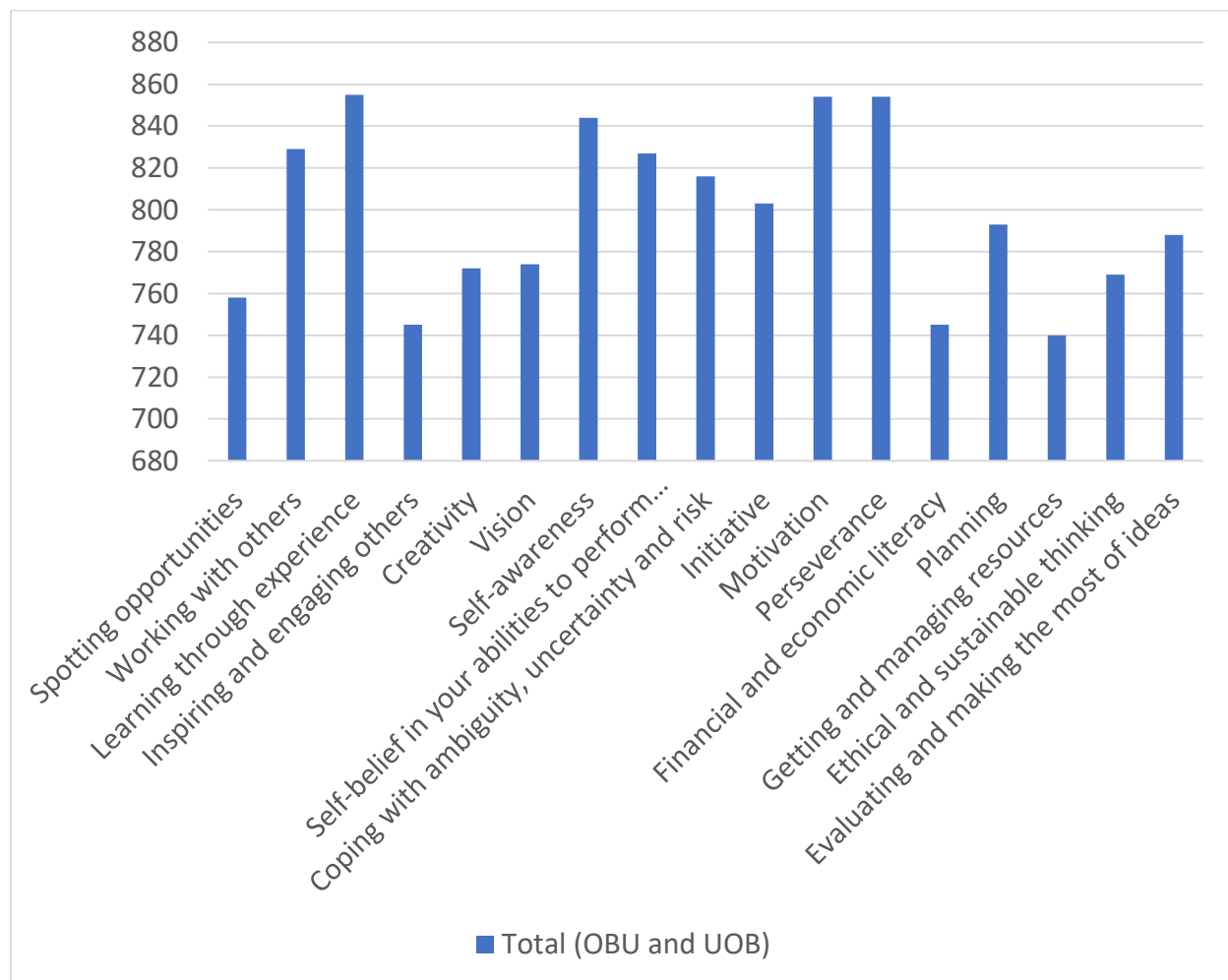


Chart 5. Aggregate scores for student views on the relative importance of enterprise and entrepreneurship skills and competencies

Overall, a high proportion of students rating a high number of skills and competencies as ‘very important’, indicating that a range of enterprise and entrepreneurship skills and competencies are felt by students to be important to them and to their identities, despite some perceptions of irrelevance manifest in responses to previous questions. This is potentially illustrative of a weak or problematic

understanding of the skills and competencies involved in enterprise and entrepreneurship education among students.

Three recommendations can be drawn from these findings:

- Enterprise and entrepreneurship education opportunities may engage more students if the development of the skills and competencies prioritised by students ('learning through experience', 'motivation', 'perseverance', 'self-awareness', 'working with others' and 'self-belief in your abilities to perform particular actions needed to achieve particular results') are explicitly foregrounded.
- When enterprise and entrepreneurship education opportunities involve the more commonly deprioritised skills ('getting and managing resources', 'financial and economic literacy', 'inspiring and engaging others', 'spotting opportunities', 'ethical and sustainable thinking' and 'creativity'), extra care should be taken with regard to explaining the value of these skills and competencies in order to incentivise engagement.
- The relationship between these skills and competencies and enterprise and entrepreneurship more generally could be constructively explained to support students in making the links between their priorities and these educational offerings.

Comparing responses across disciplines, only one of these skills and competencies manifested a statistically significant difference with respect to the relative importance ascribed to it: students in STEM subjects and students in the Arts, Humanities and Social Sciences evaluated the importance of 'coping with ambiguity and risk' differently, with a U-value of 3943, Z-score of 2.48777, and a p-value of 0.01278. The result is significant at $p < 0.05$. This result aligns with Bell (2019), mentioned in the introduction, which finds that attitude to risk is one of six characteristics which exhibit patterns of occurrence across different faculties. (Relatedly, one of the focus group participants, Pete, who had a working personal and family background in entrepreneurship strongly advocated for the inclusion, in enterprise education, of the risks involved, to expect them, and how to try to manage them, which he argued was an ethical obligation – see EEUK RPF OBU UOB Student Focus Group Transcripts, focus group 2, pp.28-29). This finding can be considered in the light of a study by Nabi et al. (2018) on the impact of entrepreneurship education on the entrepreneurial intent of business students. For some students, learning about entrepreneurship has the effect of reducing their orientation towards entrepreneurship, because an increased knowledge about the risks involved, and the complexity of entrepreneurship processes, serves as a deterrent. Nabi et al. (2018) argue that this outcome can be considered productive, as it can lead to more informed career-planning, but they also propose that tailoring entrepreneurial education opportunities for the kinds of students who are more likely to be deterred by increased awareness of the risks and challenges may enable entrepreneurial education to be more widely appealing and inclusive.

3.5 Student feedback on summaries of different enterprise and entrepreneurship education opportunities, and other attractors and deterrents.

3.5.1 Student questionnaire feedback on an enterprise and entrepreneurship-oriented module

The questionnaire presented all respondents with a summary of a module which involved enterprise and entrepreneurship skills and competencies, as follows:

The Product Development and Prototyping module is intended to emphasise the creative aspects of product/service design. It delivers the message that imagination, teamwork and responsibility are essential attributes for successful professionals.

Working in groups, students use brainstorming techniques to generate ideas for new products and services, while considering ethical, economic, and societal implications of these proposed innovations.

Each group will then filter these ideas and develop one or more to the point of producing a business plan for its realisation. Students who have completed this exercise have fed back comments such as ‘I enjoyed the creativity involved in this exercise’ and ‘This helped me learn about developing a business plan’.

Respondents are asked ‘Would you take this module as part of your degree?’ and are asked to choose one of the following responses: Definitely not; Probably not; Possibly; Probably and Definitely.

Table 5 shows the number of students who expressed different levels of willingness to take the module. A minority of students stated that they would “definitely” take the module (26 out of 238) with a high number of students declaring themselves “probably” interested in it (81 out of 238) if offered to them. Overall, two-thirds of the students (157 out of 238) said that they would be possibly interested in the module or gave an even firmer commitment, which shows the good potential for traction that such offering could have.

Table 5. Willingness to take the Product Development and Prototyping module relative to level of university experience of enterprise and/or entrepreneurship education opportunities.

Product development and prototyping module	Definitely not	Probably not	Possibly	Probably	Definitely
Experience of enterprise and entrepreneurship education	1	15	19	17	11
No experience of enterprise and entrepreneurship education / not sure	19	46	64	31	15

It is worth noting, however, that levels of commitment were higher for those participants who had experience with enterprise and/or entrepreneurship education (z-score = -2.70703. p = .00672) across the board, which would suggest that this educational opportunity may function better as a means of increasing the diversity of the range of options available to these students, as opposed to engaging new students with enterprise and/or entrepreneurship opportunities.

As mentioned in section 2, a detailed report on questionnaire feedback on four enterprise and entrepreneurship education opportunity designs, and focus group feedback on a further four designs, is available in the EEUK ECT toolkit, entitled ‘Student views on different in-curricular entrepreneurial education opportunities (QAA1234567) #EERPF’, available at <https://www.etctoolkit.org.uk/all-etc-how-to-guides-case-studies/>. However, summary findings and resultant recommendations are presented below.

3.5.2 Student questionnaire feedback on four enterprise and entrepreneurship education opportunity designs

Feedback on the four designs presented within the questionnaire is as follows:

Entrepreneurial Skills module:

Summary:

Students work in groups to design a products/service, from ideation up to pitching to a panel of industry experts. The module covers all stages of business development, from creating a business concept, to customer discovery, financial optimization, digital marketing and prototyping. The assessed output is a Business Plan for the product/service.

Attracting factors:

- Value for job market
- Group work
- Potential for creativity
- Valued pitching
- Relevance of digital skills
- Contact with panel of industry experts
- Difference from other modules
- Relevance to aspiration to own a business
- Wide-ranging skills involved
- 'Practical' and 'hands on'

Deterring factors:

- Irrelevance to short-term career plans (though some note likely relevance later in career)
- Dislike of group work and/or pitching (with references to social anxiety)
- Lack of confidence due to lack of related knowledge and experience
- Irrelevance to degree course

Use of authentic assessments within some modules:

Summary:

Modules use assessments which are directly relevant to the world of work, e.g., writing a blog post to communicate complex concepts, curating an exhibition, creating a strategy document, writing a policy white paper.

Attracting factors:

- Provides experience of world of work / relevance to employment
- Variation from standard assessment
- Have experienced it and found it valuable
- Potential for creativity
- Expected to be engaging
- Different way to show learning
- Not too far from current degree content, integrates well with this, and doesn't distract from valued course content

Deterring factors:

- Least practical of the four educational opportunities
- Low confidence in the assessments being genuinely/accurately relevant to work
- Least relevant to employment
- Least novel - 'Not a bad option, but' less interesting by comparison
- Already do it – nothing new
- Seems likely to be irrelevant to degree course

Sustainability Challenge module

Summary:

Students work in groups on a sustainability challenge situated within the local context. The module covers researching a sustainability issue in a local context, considering key stakeholders, and evaluating existing initiatives. The assessed output is a Proposal for a new development or initiative to address this challenge, directed towards relevant stakeholders.

Attracting factors:

- Relevance to urgent planetary needs
- Relevance to degree (explicitly mentioning Geography, Design, Nursing...)
- Valuable for awareness-raising
- Wide range of skills
- Relevance of sustainability to all career paths

Deterring factors:

- Unlikely to have real impact (which is needed)
- Limited in scope
- Group work
- Uninteresting
- Irrelevance to employment
- Irrelevance to degree course
- Do a lot of sustainability-oriented work within degree already

Civic Engagement module

Summary:

Students work in groups and in collaboration with external stakeholders on a challenge set by a community organisation. The module covers principles of civic engagement and leadership, researching a social issue, evaluating existing provision, and designing recommendations. The assessed output is a Policy Brief to be submitted to the community organisation.

Attracting factors:

- Covers leadership
- Covers civic engagement
- Focus on making a real difference to local communities
- Critical to sustainability

Deterring factors:

- Uninteresting

- Irrelevance to career
- Group work
- Irrelevance to course
- Seems complicated
- Comparatively less room for creativity
- Feels too 'high stakes'
- Too narrow/niche

Finally, a chi-square test for goodness of fit shows that participants preferred different offerings as their first choice ($\chi^2 = 36.92, p < 0.0001$), with Authentic Assessments and the Entrepreneurial Skills module being generally more frequently chosen as the preferred option (see chart 6). Interestingly, no such differences were found when it came to the least popular options ($\chi^2 = 4.319, p > 0.05$).

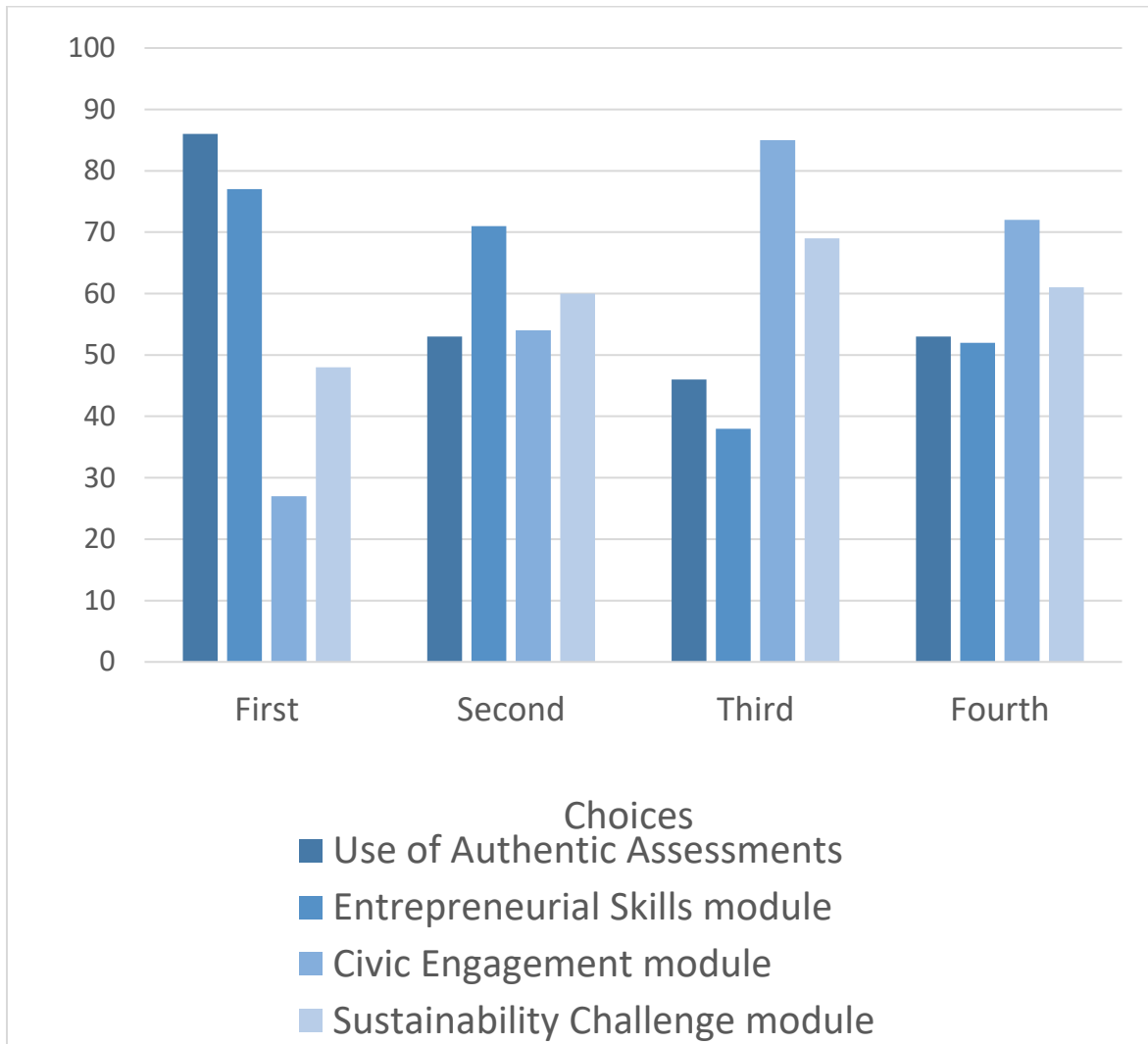


Chart 6. Distribution of educational offerings from first to fourth ranking - all participants.

3.5.3 Student focus group feedback on four enterprise and/or entrepreneurship education opportunities

Four examples of in-curricular entrepreneurial education activities were presented in the student focus groups (n=13). Students were asked to give feedback on what they perceived to be more and less appealing about each activity. Students were also asked to comment on the ways in which each activity was presented, e.g., the ways in which aspects of the activity were selectively foregrounded, the level of detail, etc. They were asked to suggest any ways in which the design and presentation of the activity could be improved to appeal to more students.

The four enterprise and/or entrepreneurship education opportunities presented in the focus groups were:

Entrepreneurial Start-Up model

Activity:

- Concept: Students work in group to come up with an innovative, digital start-up solution to problem-statements
- Assessments: Business Pitch, Business Plan and Mock Job Interview

All stages of the business cycle are covered:

- **Ideation** - Design Thinking strategies
- **Optimization** - Business Model Canvas, financial modelling for the first 3 years
- **I.P. and Patenting**
- **Rapid Prototyping** - 3D printing and AutoCAD
- **Digital marketing** - Website design and online advertising
- **Pitching** - training on pitch deck and formats for Business plans

“Four clear priorities for Birmingham and its citizens” (Birmingham City Council):

- Children: Make the best of our diversity and create a safe and secure city for our children and young people to learn.
- Housing: Providing housing in a range of types and tenures, to meet the housing needs of all of the current and future citizens of Birmingham.
- Jobs and Skills: Build upon our assets, talents and capacity for enterprise and innovation to shape the market and harness opportunity.
- Health: Help people become healthier and more independent with measurable improvements in physical activity and mental wellbeing.

Credit: This module was co-designed between Dr. Mircea Scrob (Liberal Arts and Natural Sciences, University of Birmingham), Helen Hook (Careers Network, , University of Birmingham) and various industry partners. The problem statements were provided by Mr Raj Mack, Head of Digital City and Innovation for Digital Birmingham.

Consultancy model – sector/industry projects - Professional Research Skills module project

Activity:

West Midlands Police Positive Action Coordinator: "How do we re-brand WMP and our positive action team to make it more appealing to our BAME communities and younger generation, as the current entry

routes are most certainly more preferential to the younger applicant? This is to recruit 1000 more BAME officers for the West Midlands."

Students apply **research skills** along with **creative problem-solving** through **design thinking methodology** to conduct a piece of research and **analyse data** in a **problem-orientated** manner in order to provide **innovative solutions**.

Assessment:

- 50% Group employer report with findings of research
- 50% Individual digital presentation

Credit: This module was designed by Dr. Ruth Page (Department of English Language and Linguistics, University of Birmingham) supported by Helen Hook (Careers Network, University of Birmingham) and various industry partners. The problem statement was provided by Adeeb Redman (Positive Action Coordinator for West Midlands Police).

[Consultancy model – sector/industry projects - Global Enterprise Project with authentic assessment](#)

Activity:

- Full partnership with Department for International Trade
- Live SME (Small or Medium sized Enterprise) business looking to export
- Group work – experiential / Inquiry Based, hypothetical
- Students creatively formulate a project plan including scope, costings, communications plan, and business case
- Assessments: white paper report & consultancy client presentation
- Learning Outcomes; applying **creative thinking, utilising resources** and **finding information, presenting findings**

Assessment information [provided in detail for University of Birmingham focus groups only]

The white paper should mirror your presentation. Only point 7 is different.

1. Essentials (20%). To provide a compelling yet balanced case for internationalization, highlighting key pros and cons. This should include fact-based evidence including:

- Competition analysis
- SWOT analysis
- Statistics on cross-border sales

2. Market research / Route to market (20%). To demonstrate an understanding of:

- How to use a practical module for selecting and prioritising export markets and the benefits of undertaking market research
- Outline the decision-making process and how this has been validated

- Different market entry vehicles to overseas markets (partnering, direct sales, agents/distributors and e-Commerce)
- The benefits and pitfalls associated with selecting a market entry route

3. E-Commerce (20%). To demonstrate an understanding of:

- The importance of international e-commerce and the opportunity this presents
- To highlight potential suitable marketplaces
- To highlight brand builders including social media

4. Language / Culture (20%). To demonstrate an understanding of:

- Cultural values (cross-cultural elements)
- The importance of language
- Negotiation styles
- Business conduct
- Personal communication
- International communication models

5. Financial awareness / documentation (5%). To demonstrate an understanding of:

- The implication of cross-border transactions and the potential impact
- Summary of required documentation for selected markets

6. External support (5%). To highlight:

- Potential areas of external support and how this would be deployed

7. Reflexive part (10%). To reflect on:

- How you engaged with the project (individually and in your group)
- Which difficulties you encountered
- Which solutions you found
- What you learned from this experience
- How you are going to put this into practice in a future project

Credit: This module was originally designed collaboratively between Marie-Beatrice Boucheny (Department of Modern Languages, University of Birmingham), Helen Hook (Careers Network, University of Birmingham) and Patrick McCarron (Business Development Manager, Department for International Trade). The authentic assessment example was designed by Patrick McCarron and his colleagues.

[Authentic Assessments model - NGO Style Advocacy Briefing \[used for Oxford Brookes University focus groups only\]](#)

Activity:

Assessment: NGO Style Advocacy Briefing (2000 words) [related to subject discipline, embedded within module]

What are Advocacy Briefings?

A number of development NGOs (non-governmental organisations, usually non-profit, focused on a social, political or environmental issue) carry out advocacy work. Advocacy Briefings often have the direct aim of changing national and/or international policy or they can be more broadly concerned with raising awareness of an issue.

How do I write an Advocacy Briefing?

You should write your briefing with the general public as the intended audience. Hence, there is a need for clarity and an engaging presentation style (you may want to use images, diagrams, tables, boxes, etc.). However, to be credible it also needs to be research-based and you should therefore include references to academic literature in the same way as you would for any other piece of academic work. Your briefing should be analytical and not simply descriptive. It also needs to be persuasive but must acknowledge and engage with different perspectives or approaches to the issue you are looking at. Samples are available online.

Credit: This activity was developed by Dr. Stephen Hurt, Reader in International Relations, Oxford Brookes University, for use in a Politics module. What is shared here is a truncated version of the original assignment brief.

Focus group feedback on these options foregrounded the following points regarding pedagogical design:

- Some respondents expressed a preference for creative problem-solving.
- Real-world relevance and impact was a priority for some: some voiced a dislike of hypothetical live project and authentic assessment (perceived as 'inauthentic'), and some stressed the need for commitment from industry partners regarding impact.
- Working with industry partners was perceived as a strength by some (i.e., it facilitated real-world experience, networking, a non-academic angle, etc.) and as a risk by others (e.g., re. the reliability of instructions and of assessment marking where this was collaborative, the difficulties the university may face sustaining sufficient numbers of partnerships, etc.).
- Where assessment weighting was included, and where this was relatively high, some students expressed concern about the risk of the potential impact of a novel assessment, with potentially more subjective or ambiguous marking criteria than usual, on their degree class.
- Some respondents felt that real-world projects can ultimately be more time-consuming and resource intensive than standard module with equal weighting, and therefore constituted a risk to broader engagement and performance.
- Some students were deterred by opportunities which they perceived as requiring more extensive enterprise/entrepreneurship knowledge which they felt they lacked.
- Scope for choosing or being able to design projects which were closely related to one's degree subject was considered a strength.

With regards to the presentation/communication of information, some students made the following suggestions:

- Foregrounding the skills involved, and what the students would get out of the experience, e.g., via clear bullet points, would enhance the appeal.

- Tailoring the communicated level of challenge implicit in the description to the target year of study was regarded as important, particularly with respect to types and levels of skills and competencies.

Key recommendations arising from this data are:

- The wide variety of responses given to these activities illustrates the significant variation in what different students find appealing and deterring with respect to difference aspects of enterprise and entrepreneurship education opportunities. Therefore, there is value in providing varied opportunities.
- One of the most significant factors which appears to deter students is perception of risk, in a number of different ways, e.g., the reliability and consistency of instruction and assessment marking when industry partners are involved in delivery; the weighting of relatively novel and unfamiliar content/assessments; expectations regarding the need for background knowledge and the potential impact of not having this knowledge, etc. This suggests that the more that staff can reduce or mitigate these perceived risks, the greater the likelihood of student engagement.
- Clarity of communication with regards to the skills involved in the educational opportunities, and what students will get out of the experience, should enhance uptake.

Section 4 Findings of phase 2: Staff focus groups

As described in section 2 of this report, the research team conducted focus groups or interviews with 18 members of staff at Oxford Brookes University and at the University of Birmingham. The aims of these focus group discussions were to solicit data which can facilitate a better understanding of:

- The more common and/or powerful motivating factors driving staff to engage in with providing enterprise and/or entrepreneurship education.
- Critical barriers and challenges to providing enterprise and/or entrepreneurship education.
- Significant enabling factors which could enhance engagement with providing enterprise and/or entrepreneurship education.

A better understanding of these matters can enable institutions to better leverage motivating and enabling factors, and better address and overcome barriers and challenges, in order to increase staff interest in, and staff and institutional capacity for, providing enterprise and entrepreneurship education.

This section of the report will briefly discuss key themes arising from analysis of the focus group transcripts, contextualising these themes in relation to relevant scholarship, and drawing selected recommendations based on these findings.

Respondents' comments are quoted from 'EEUK RPF OBU UOB Staff focus group and interview transcripts', which is available online as part of the project dataset, at <https://doi.org/10.24384/epye-sj79> (Macrae et al. 2022). All references below are to this document.

4.1 Professional and disciplinary identity

Several staff discussed their professional and disciplinary identities in relation to their motivation for providing enterprise and entrepreneurship education. Among staff who are engaged in provision, some have come from industry into academia, and are thereby keenly aware of the needs and priorities of the industries in which graduates of their disciplines are likely to seek employment (cf. Carey and Matlay 2007). Some are themselves involved in academic enterprise and entrepreneurship in the form of consultancy and start-ups in association with their institutions, and as such have a more direct day-to-day engagement with the relevance and transferability of discipline-related skills into other contexts. Some are keenly aware of and invested in the employability agenda for other reasons, such as roles in programme leadership and thereby engaging with Graduate Outcomes data, or roles in Careers support and placement provision. One participant also discussed academic research as a form of entrepreneurial practice, whereas others reflected on the agility and creative thinking involved in course design, course adaptation, and responding to shifts in markets with respect to recruitment. In different ways, then, various staff identified as having experience of enterprise and/or entrepreneurship as part of their working lives and/or having an entrepreneurial mindset as part of their own professional identities. Most of these staff manifested more willingness, confidence and prior engagement with providing enterprise and entrepreneurship education to students. Indicative participant comments include:

- "We need to teach them the skills to do the job - to go into the industry to do it. And that kind of... I mean, that's the motivation. My motivation, when I took this job, was to give students the new skills to change the industry" (Leanne, p.10, ll.40-41)
- "For me it was that I came from industry and into a world of not really knowing academia very well and thinking these guys have no clue what's out there, and I've got to show them. [...] I worked in the fashion industry, and I needed to show my students what the fashion industry was like" (Faye, p.8, ll.9-10)

- “it stems from the type of research that I do [...] we work a lot of industry to take forward innovative health care products or materials, and so I think, as a result of that, I felt like I had a unique skill set to offer in delivering these type of modules because I would like to think that I have, umm you know, a skill set that’s akin to what we’re looking to develop through the educational programs [...] I think I perhaps choose to embed more entrepreneurial aspects because they link with my own mindset, they link with my own kind of research motivation and drive.” (Sarah, pp.28, ll.34-40, p.30, ll.21-23)
- “some academics would love to just talk about the research and kind of develop that student’s theory and knowledge, etc., ... not applying that, then, I think I feel like we’re giving them half a job. We haven’t shown them how to apply what they’re learning in different situations.” (Faye, p.8, ll.22-25)
- “Now I still see that as being the fundamental deficit in some of our students in my part of the university - that they are massively skilled when they leave the university, by way of writing presenting ideas, critical thinking all of those things, but they don’t always have tangible ways to demonstrate that on a CV or job application, so it was partly to try and empower students, give them a bit more confidence in being able to narrate their skills and competencies, the things that they’ve developed as part of an English degree” (Thomas, p.27, ll.29-35)
- I suppose graduate outcomes and things we’ve been talking about in terms of students successfully being able to get employment when they leave the university is probably one of the main reasons why we’re looking at our graduate attributes and how we help students to reflect on sort of qualities and skills that they’re developing whilst they’re at university (Karen, pp.49-50, ll.39-41, ll.1-2)

One implication of this is that such staff may commonly find their own way to design and deliver such provision, without external (i.e., institutional) drivers. However, this does also suggest that there may be scope for institutions to identify staff that don’t already provide enterprise and entrepreneurship education and who fit these kinds of profiles (ex-industry, professionally enterprising, etc.) (c.f. Matlay 2009). This potential likelihood of greater openness to enterprise and entrepreneurship can be explored and leveraged to attempt to engage those who may already be more amenable and appropriate in such provision. A further implication is that these pro-enterprise and entrepreneurship voices could be used effectively to engage and shift the perceptions of peers with respect to the relevance of enterprise and entrepreneurship to shared professional identities.

Conversely, where professional and disciplinary identity arises as a barrier to engagement with provision of enterprise education within the data, this tends to be in connection with staff expressions of staff lack of direct experience, knowledge and confidence with teaching enterprise and entrepreneurship (cf. Hegarty 2006). Academic staff, in particular, tend to have a narrow employment history within Higher Education, with little direct experience of enterprise and entrepreneurship as it is stereotypically conceived. Academic staff are also traditionally used to teaching conventional academic content about which they are often an expert, and thus teaching content that is significantly beyond the scope of this expertise can engender feelings of fraudulence or incompetence (Henry 2013). Moreover, some respondents expressed a strong alignment with their discipline, and a view that enterprise and entrepreneurship are not relevant to their discipline, or, therefore, to themselves. Additionally, enterprise and entrepreneurship teaching requires students to learn via processes, included experimental processes, processes of trial and error and ‘failing fast’, which can be not only unfamiliar pedagogic practice for some academics in some disciplines, but it also runs counter to dominant schema and long-standing institutional norms of what appropriate and successful teaching looks like (Jones and Iredale 2010; Mwasalwiba 2010). Indicative participant comments include:

- “I think there is a tension between the kind of purity of the academic subject in and of itself and these kind of applied or, you know, entrepreneurial or employability dimensions to a programme.” (Thomas, p.22, ll.14-16)
- “it's [entrepreneurial education is] not necessarily going to help you be a better engineer in terms of delivering on something technical. Because I think that's predominantly how we think about our courses” (Sarah, p.21, ll.33-35)
- [in relation to an entrepreneurial module] “I think it would be shocking if you tried to make this compulsory. I think students would be very, very, very upset from past experience, if you tried to push this and say this is compulsory, we would have a riot if we tried to do this [...] I think I couldn't see any way I could fit this into our curriculum, and I know our curriculum pretty well in physics, this wouldn't fit in, not as a compulsory towards academic module. [...] I don't think it would even fit in as an optional module for us, it wouldn't pass the laugh test in our School to make this a module.” (Bruce, p.65, ll.15-17, ll. 21-23, ll.28-29)

The expression of such views and feelings within the data suggests that there is value in supporting staff in recognising connections between their pedagogical and research practices and the key competencies and skills involved in enterprise and entrepreneurship, and between common professional academic goals and the objectives of enterprise and entrepreneurship in terms of adding value (including cultural and social value) (Bacigalupo et al. 2016). Beyond this shifting understanding, building of confidence may also be achieved, through peer-mentoring and the sharing of teaching resources.

4.2 Beliefs about student interests

One significant barrier appears to lie in staff seemingly feeling that, by preventing enterprise and entrepreneurship education taking up space in already constrained curricula, they are defending the true interests and priorities of students. Several staff asserted strong beliefs about the disinterest of their students in learning about enterprise and entrepreneurship education. Indicative participant comments include: “I would refuse to have this in our curriculum. [...] Because it's not Physics. The students come to School, the university to learn physics, for us, and this is business management, and this is trying to get a job” (Bruce, p.65, l.32, ll.34-35,)

The evidence reported in section 3 testifies to a widely shared desire among students for more enterprise and entrepreneurship education, and high student interest in developing many of the skills and competencies identified in Bacigalupo et al. (2016) as inherent to enterprise and entrepreneurship. This is reflected in a comment by Thomas: “when I've had conversations with our students about it, their opinion is the opposite perhaps of some of the staff members that I've spoken to.” (p.22, ll.39-40) Such data can create a powerful counternarrative that may help staff to recognise that many students are indeed interested in such provision.

On the other hand, some of the student feedback on enterprise and entrepreneurship education activities does confirm that content closely specific to one's discipline is paramount to some students. In order to better engage academic staff with similar attitudes, the starting point may be persuading more of their students of the relevance of enterprise and entrepreneurship skills and competencies to their discipline. This is reflected in one comment by a respondent: “motivation would have to come from the students because they're in every sense of the moment, they're customers, that need to be convinced that a significant fraction were really interested in wanted to do this” (Bruce, p.83, ll.1-3).

4.3 Structures, gaps and shadows

Institutional constraints featured frequently as a barrier to the growth of enterprise and entrepreneurship education. This could relate to the tensions between academic annual timetables and the needs of industry live projects work, or between assessment structures and entrepreneurial experiment and risk, for example. As described in Michels et al. (2018, p.441), educators ‘may be working in isolation in their own organizations, often against institutional and administrative norms. Enterprise educators face the challenge of trying to introduce innovative practices (Pittaway and Edwards 2012), whilst balancing often contradictory demands – such as institutional and student demand for certitude (Gordon 2006), inflexible classroom sizes, and rigid workload planning policies.’ Several staff reporting working against or outside of institutional structures in order to make their provision work. One respondent described the ‘cracks’ in which they had been able to seed enterprise end entrepreneurship education, out of sight of senior leadership. Additionally, peer resistance and hostility were further reported barriers (in line with Gibb 2011, p.149). Indicative participant comments include:

- “we’ve managed to do it because we’re a tiny bit off radar – we’re tiny bit more marginal. [...] I was able to do it because, quite frankly, nobody really cared about it. It was kind of me and my team doing it. [...] we’re outside of some of the systems - not all of the systems, but it means we've got a little bit more freedom. So, I think, to really deliver entrepreneurial education, you have to have a bit more freedom than what currently the system and our bureaucracies give us, I think.” (Alice, p.13, l.9, ll.17-22)
- “I argued for this, but I was shot down by the other module leads” (Darren, p.86, ll.6-7)
- “the university itself has so many administrative layers that teaching innovation around building a better idea for the students is extremely limited and a lot of the stuff that I want to do is focused around getting them to be more employable is shot down or is told explicitly told not to do it [...] there's not much flexibility here it's just very rigid in its mindset and this and we can't change anything we cannot change a thing.” (Darren, p.87, ll.5-6)
- “I think that the traditional ways in which students are assessed on a module that has you know, a strong entrepreneurial aspect to it just runs counter to that [...] our assessment model in the university, [...] the assessment criteria and things like that, don't make it always that easy to do to do. (Thomas, pp.33-34, ll.21-31, ll.42-1)
- “devolving a bit more flexibility to Schools will probably be the one thing would enable us to engage more with these things, and at the moment, universities [have] got a rather one size fits all approach which, sadly, is not working.” (Bruce, p.83, ll.22-24)

Therefore, though many institutions are increasingly heeding a growing national emphasis upon enterprise and entrepreneurship with respect to student employability, the data suggests that in practice a lack of institutional support and requisite flexibility may remain a hindrance. One caveat to this is that in circumstances in which staff are driven to work around constraints and overcome barriers, some recognised the impelling impact of these constraints in pushing their own enterprising creativity (Beresford & Beresford 2010, p.278). Indicative participant comments include:

- “I found myself in a sort of intervening space. [...] there was obviously a lot of pressure. [...] we found ourselves kind of... a little bit in a sort of space where we weren't that supported. [...] we had to... economically, we had to find a way of trying to put all those courses together. [...] we ended up not having a space to deliver them... not having the space to do things. So, we went out and we found new space [...] I don't think I consciously suddenly thought “I'm now going to do entrepreneurial education”. It came out of the space I found myself in which was a sort of confluence of many, many different factors. [...] and we were really frustrated about the fact that

we weren't being supported within our institution - within our context, if you like. So it was... it's kind of interesting - it came out of a space, and I remember once being at a conference and we talked about these [...] these inter-spaces, these little spaces, these little cracks, and out of these little cracks grow these little weeds and these weeds grow into amazing flowers. [...] I think that's how I found myself - I fell into a crack, found myself in a space, had to get out and then created quite a lot of courses that embedded enterprise.” (Alice, pp.9-10)

- “I think what Faye is trying to do is find ways round a very bureaucratic system and an institution that can enable staff to work more freely and more in a more agile way, which actually is an employability skill in itself” (Alice, p.17, ll.38-40)

Nonetheless, the prevalence of reports of ongoing institutional structural and cultural barriers to development of enterprise and entrepreneurship provision suggests that institutions may need to more fully address these constraints to achieve any significant developments.

4.4 Resources

Resources repeatedly arose as a barrier or challenge to increasing provision. One key element of this is the time cost of establishing and maintaining partnerships with industry, and of liaising with external partners to ensure that any co-delivery is in line with institutional and student needs and expectations, and supporting students to ensure that the expectations of the partner are met. This barrier was repeatedly stressed as one of the most significant impediments to the sustainability of established enterprise and entrepreneurship education, and to new initiatives coming into fruition. Indicative participant comments include:

“connecting with industry is difficult [...] and time consuming” (Claire)

- “I've been shut down because the amount of work it requires, the amount of manpower it requires, the amount of effort it requires” (Darren, p.87, ll.3-5)
- “more recognition of the time” (Claire, p.16, l.20)
- “you have to spend a lot more hours on a live project than you would just your standard teaching, and I don't think that's acknowledged as a thing, you know, in terms of workload. And so I think that is a real, real challenge in getting people to engage in live projects year on year, because they just haven't got the time (Faye, p.13, ll.14-18)
- “time was a big issue [...] it's quite hard to devote time to the modules like this which take a lot of organizing” (Thomas, p.35, ll.10-13)
- “its time. Having embedded you know authentic assessment and all that sort of stuff and done the placement module and all that sort of stuff it takes an enormous amount of time to put those things in place and also it's not just about the sort of logistics and all that sort of stuff and the thinking time to make it work well, it's providing the things like the assessment criteria and making sure that your markers know what they're doing, and all of that stuff so yeah, the time it takes to develop this stuff is huge” (Ethan, p.82, ll.31-36)

Institutional investment in terms of appropriate workload allowances which recognise the true time costs of this kind of work are therefore critical to long-term provision.

4.5 Communities of practice

A final factor which repeatedly occurred in the data, albeit in a more implicit way, as an enabler, was the positive impact of a community of practice (Wenger 1998), sharing resources, providing models, and pioneering workarounds in overcoming shared barriers (cf. Beresford & Beresford 2010; Carey et al. 2009). Indicative participant comments include:

- “sharing best practice, by giving colleagues a sense of okay, this module is running in chemical engineering, this module is running in liberal arts and social sciences, gets the kind of juices flowing” (Thomas, pp.37-38, ll.38-1)
- “we could set up a hub setup whereby we could share experience and maybe resources across cross those Schools and colleges” (Teresa, ll.38-39, p.59)
- “sharing best practice [...] Helen provided me some example rubrics, and that meant that I didn't have to create my own from scratch, as I was given kind of a template. Even just having the discussion today it's nice and more comforting to know that you know the challenges I've experienced in my own discipline are universal across, quite widely across and different not even just different Schools within a single college, but across colleges too” (Sarah, p.37, l.18, ll.21-25)
- “the more we can share experiences and things like marking criteria and stuff amongst ourselves, I think, would be very helpful to people so more of the sharing of best practice” (Ethan, p.82, ll.36-38)

As argued by Michels et al. (2018, p.443), ‘a community of practice in the form of a professional network may offer important support: a liminal space for development of identity as an enterprise educator as well as for innovation in practice’. Where institutions can facilitate and foster a community of practice around enterprise and entrepreneurship education, the data suggests that this this can be a critical accelerator of growth in staff confidence and capacity.

Section 5 Limitations of the study

Finally, this study has some limitations which should be considered when employing the findings:

- Student responses to questions within the questionnaire were based on their own prior understanding of enterprise and entrepreneurship, which may be limited or erroneous. The decision to avoid defining these terms before or within the questionnaire was taken in order to avoid distorting participants' own explanations of what they understood by these terms.
- Separate enterprise education and entrepreneurship education within the questions would have allowed for more nuanced data, but would have added to the time cost of student participation in the research and therefore reduced questionnaire completion rates.
- The small numbers of focus group respondents require that the focus group related findings are treated with caution with respect to generalisability.

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