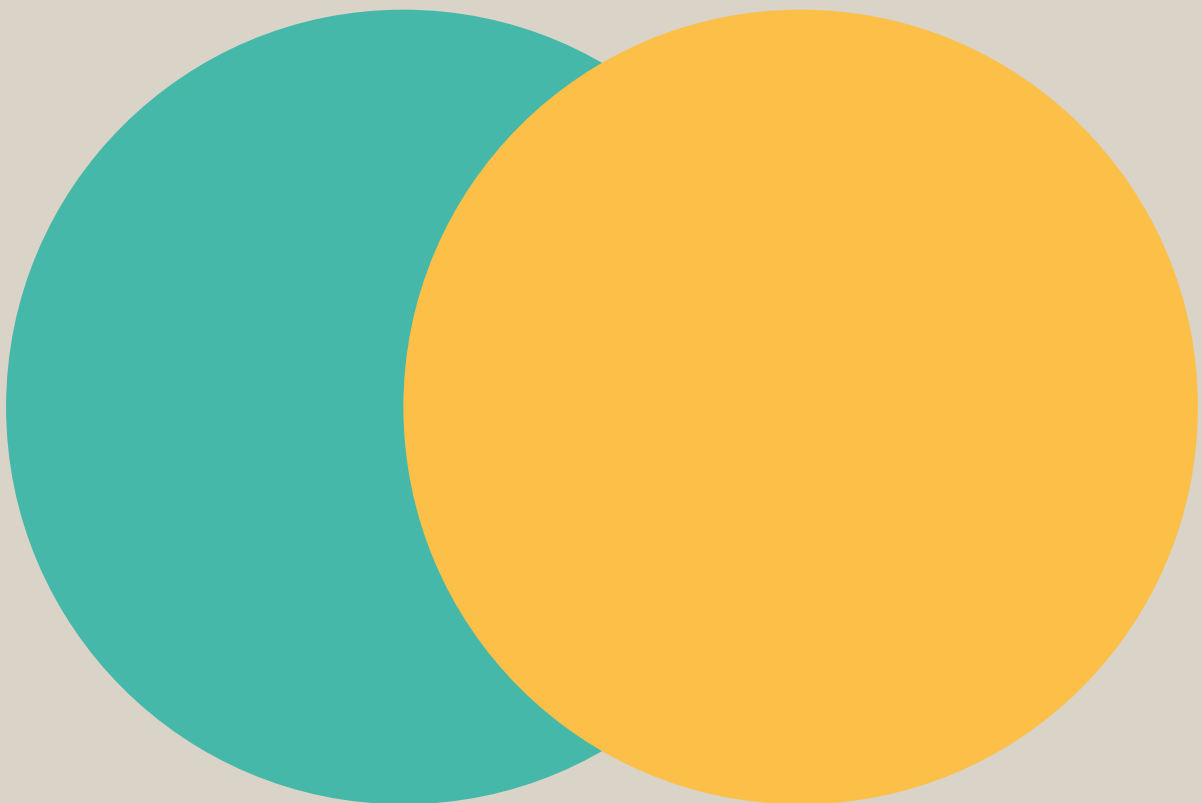


A Case Study Compendium; Contemporary Practices and Initiatives in Employability

Edited by **Stuart Norton** and **Maria Romero-González**



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Foreword

Employability remains a priority for the higher education sector. There is an increasing pressure to shift the focus of education provision from the traditional practice of knowledge delivery to enabling students to succeed and support them in life delivering a well-educated and highly skilled graduate population that benefits society. More and more, the emphasis of a good university education is not only on how well students do in a course but what skills and knowledge they have when graduate and get on afterwards, focusing on continuation, success and outcomes. This can be amplified for students from disadvantaged backgrounds too. Achieving personal growth and securing a future direction of their choice, with the necessary support to enable those that enter graduate level employment, further study or starting their own enterprise is arguably of even more critical importance as these are often cited as strong motivations for studying; and hence investing in skills development is a key driver for securing a more sustainable and stable future.

Building and embedding employability skills, values, behaviours, and attributes requires that higher education courses offer opportunities to acquire and practice the skills through placement and extracurricular activities. This creates pressures for education providers, requiring a re-thinking of how the courses are designed and delivered and how to ensure students have the required skills at exit. This can be perceived as onerous and difficult to achieve, however, in the past few years, there have been a wide range of examples of embedding employability in the curriculum from assessment in modules to programme level that have provided a pathway for providers to increase the practice of employability, as highlighted through compendiums such as this series. The best interventions require a re-thinking of the pedagogies used in and out of the classroom framed with a future look on how the knowledge and skills will be used in employment. This is often referred to as authenticity; and the most effective way to provide that experience in education is through equal active participation of all the members of the learning community.

We present here a collection of novel examples from across the sector of how sustainable and innovative pedagogies can be used in the delivery of higher education courses that will equip students with the skills needed after graduation. While we have presented the cases under the broad banners of career preparation, knowledge and soft skills and wider context, we could have easily presented them under different headings and re-categorised them. Additional strong themes from the symposium, which will undoubtedly be picked up on throughout these submissions, include inclusivity and equitable opportunities, in particular throughout the career preparation section. Further sub-themes include interdisciplinary, and sustainability. There will be a range of overlap with differing themes, but what binds them together is their propensity for helping to sector to find solutions to enhancing employability.

One other recurrent theme through the case studies is the need for authenticity of the experience provided. This is an essential ingredient that ensures students appreciate how the practice of skills in an educational environment can be translated into employment practices. Another aspect related to authenticity covered in the case studies is co-creation with students and prospective employers. This provides a sense of reality and ownership that is highly valued by all the participants, giving a more fulfilling experience. We hope the case studies support the academic community with the implementation of employability skills in higher education.

A final challenge remains to give employability the place it deserves in education and ensure such initiatives are scalable. For this to happen, a rebranding of 'skills' is necessary to shift the perception from the learning community that skills are less important than knowledge and initiatives need to be appropriately resourced. The employment sector already recognised that skills are essential to succeed in the work environment, it is time that we value the importance and relevance of developing the broad notion of professional skills, including values, to make wise decisions in life through education.

Dr Maria Romero-González

Director of Education, School of Engineering and Materials Science,
Queen Mary University of London

Career Preparation

ASPIRE for work readiness: creating equality of opportunity for Black people

Iwi Ugiagbe-Green, Manchester Metropolitan University

Background issue – racialised experience of progression into employment

The 'Access to What?' project (Blasko et al, 2002) shows that relative chances of selection are not the same for all students with equivalent qualifications and that some groups face systematic labour market disadvantage. Research shows how Black, Asian and other racially minoritised students are very often subject to social disadvantage and structural inequality (Arday, 2020) within education. In relation to employability and career development, these disadvantages and inequalities are experienced in areas such as access to industry contacts, understanding how to articulate experience or being in a position to undertake an internship or placement (McGregor-Smith, 2017).

A snapshot of the first graduate-outcomes dataset conducted by the Higher Education Statistics Agency (HESA, 2022), the experts in UK higher education data and the designated data body for England, shows that 61.6% of white graduates from 2017-18 gained full-time employment 15 months after graduation, compared with 53.5% of BAME graduates. 'Other Black students' are the ethnic group with the lowest proportion of graduates in full-time employment (47.4%). More Asian (27.3%) and Black (21.7%) 2017-18 graduates went into further education than any other ethnic groups. However, a white male undergraduate earns more than a Black postgraduate at the same point of their post-graduation lifecycle. Black graduates across all age groups are the lowest paid, with median earnings of £25,500, compared with the median of £35,000 for white graduates (Greaves, 2020).

Approach

In November 2021, Research England and the Office for Students (OfS) announced the outcomes of a joint £8 million funding competition for projects to improve access and participation for Black, Asian and minority ethnic groups in postgraduate research (PGR). Thirteen new and innovative projects were funded, one of which is ASPIRE.

Accomplished study programme in research excellence: ASPIRE

ASPIRE is a seven-month programme of opportunity and life-wide skills development written specifically for Black and/or Black (mixed) heritage people.

The programme will have three annual cohorts (2022, 2023 and 2024) over the four-year life of the project. Thirty-four scholars were recruited to our inaugural cohort, which started on 31 January 2022 and finished on 30 September 2022.

Scholars range from undergraduate to postgraduate, with varying levels of work experience. All scholars are seeking either higher skilled/graduate employment opportunities and/or postgraduate research opportunities.

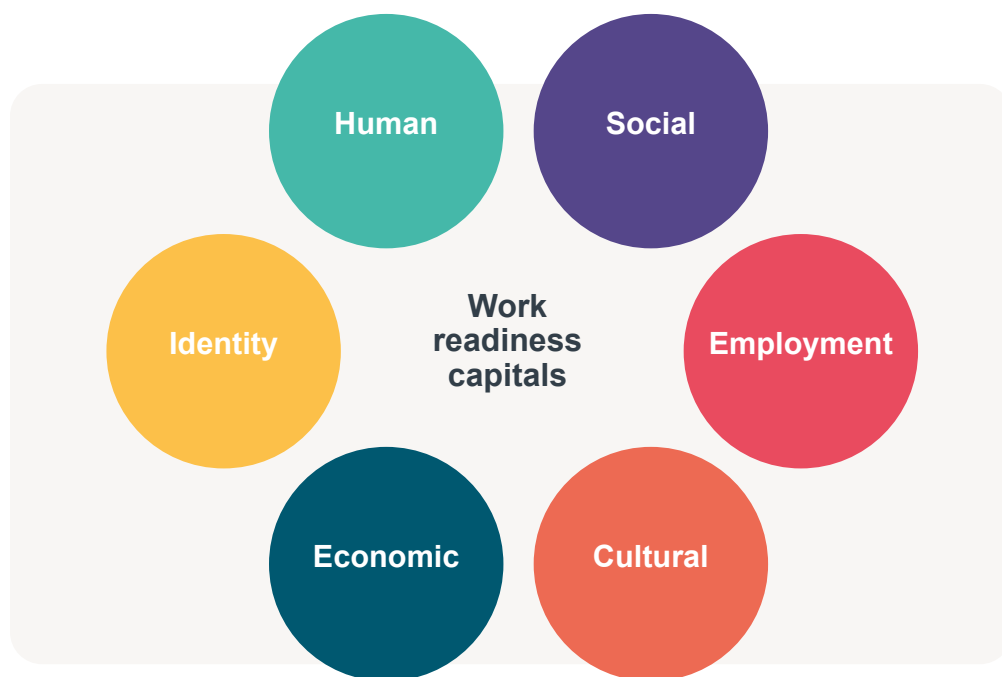
Programme design

The ASPIRE programme has five inter-related pillars; personal and professional development, employment and employability, academic writing, quantitative research and qualitative research. Although these pillars are inter-related and, in some ways, inter-dependent, the focus for this case study is on the employment and employability pillar. The programme is grounded in compassionate and liberation pedagogy and adopts interdisciplinary (social and applied sciences and arts and humanities) approaches to scaffold a range of learning activities: workshops, creative connections (using food, music, artefacts to build community), presentations, quizzes, affirmations, reflections, technical learning activities, mentorship and life coaching.

The design of activities in the employment and employability pillar of ASPIRE seeks to diversify and enhance routes into a range of careers. As such, central to the design and delivery of this pillar is the concept of work readiness.

Work readiness

A number of factors differentiate graduate recruitment and selection from other contexts, the most important being that graduates generally lack job-related experience (Caballero and Walker, 2010). Work readiness has emerged in the literature as a selection criterion for predicting graduate potential and capability (Hart, 2008). Work readiness is a high priority for employers (Keep and Mayhew, 2004) in graduate recruitment and is thus an influencing factor in selection (Chillas, 2019). The work-readiness capitals framework (Ugiagbe-Green and Southall, 2020), uses the concept of Bourdieu's capitals (as embodiment of something providing value), and frames six capitals (human, social, cultural, identity, cultural and employment) as critical, value adding aspects of a graduate life-wide skills, attributes, values and competences. It is these capitals that form the basis on which judgements about work readiness are made.



Ugiagbe-Green and Southall (2020)

While these capitals are conceptualised as being generalisable to all individuals, they do represent a framework that assumes some degree of individual agency of the student/graduate. In reality, institutional systems, structures, policies, practices and students' interactions within wider social systems outside of the field mean that students with different intersectional characteristics will experience access to opportunities in the field differently. Students will have differing levels of ability, opportunity and success in navigating 'the field' and their resultant transition to the graduate labour market.

ASPIRE is designed to create equality of opportunity for Black and Black (mixed) heritage people, who have inequitable access and experience of opportunities in employment spaces (as proven by the data presented). In addition, we seek to engage with key employment stakeholders to engage in critical thinking through discussions with our scholars about the need for structural change and to consider what they can do to action change.

The employment and employability pillar of ASPIRE focuses on three central themes:

- + development of graduate identity
- + creating access to employment opportunities
- + employer-focused support in navigating systemic racism in employment spaces.

Graduate identity

Holmes (2006, 9) explores the concept of graduate identity in response to a dissatisfaction with the prevailing concept of graduate employability in terms of skills acquisition. He observes that identity is to be taken “non-essentially, as relational, the emergent outcome of situated social processes [...] identity is thus socially constructed and negotiated, always subject to possible contestation and so fragile”. The socialisation of students who undertake placements and internships to adopt the accepted norms and behaviours of workers within the organisation is what Mats Alvesson (2001) refers to as “identity regulation”. Alvesson and Willmott (2002, 622) state that “through identity regulation, employees incorporate specific managerial instructions into their personal narratives of self-identity”.

Hinchliffe and Jolly (2011) suggest that graduate identity is made up of four strands: values, intellect, performance and engagement. They highlight the importance of the performative element of employability, as an employer’s view that a graduate will be successful in the organisation can only be based on perception of work readiness, not actual performance (unless they already work or have worked for the organisation).

ASPIRE supports and empowers scholars’ development of their work readiness by creating opportunities to develop their graduate identity and exposing them to the importance of the performative element of employability. Having knowledge about identity regulation by employers, empowers scholars to make informed choices about their identity development and projection of self and skills ie the performative element of employability.

Creating access to employment opportunities

ASPIRE30 is a micro-internship scheme on ASPIRE, that provides scholars with an opportunity to do baseline 30 hours paid work experience. These internships involved a range of work experience, sometimes operationalised in partnership with employers or research teams. Examples of ASPIRE30 internships include self-managed community-based projects, personal development projects, applied research projects, working in professional service firms and events management for ASPIRE. Additionally, the programme embedded existing opportunities available through [RISE](#) internship scheme at Manchester Metropolitan University. These opportunities provide students/graduates of Manchester Metropolitan University with non-credit bearing RISE points which go on their degree transcript as a visible signal of their employment capital.

Employer-focused support in navigating systemic racism in employment spaces

Systemic racism is a system of advantage that benefits some racially categorised groups and not others. The background information provided at the start of this case study highlights the systemic racism within employment spaces.

Importantly, development of graduate identity takes place in the context of engaging with employers and organisations that acknowledge systemic racism and bias in graduate recruitment and selection. This is crucial as part of designing safe space on the programme.

Employers engage in conversation with our scholars about this and work with scholars in different activities to help them better navigate employment spaces.

In turn the ASPIRE programme encourages employers to engage with our scholars' community cultural wealth (Yosso, 2005) to learn more about the experiences of Black and Black (mixed) heritage graduates in employment spaces and reflect on their own personal biases and that of recruitment/selection practices operationalised in their own organisations.

Outcomes

ASPIRE has been transformative for the scholars on the programme, in many different ways.

Success for scholars from our inaugural 2022 cohort includes being the recipients of degree award prizes (at both undergraduate and postgraduate level), graduate employment, a successful fully funded PhD studentship, entry/acceptance to postgraduate study promotion/secondments, and the founder of a CIC.¹

The main message from this case study is that systemic racism exists in social structures both within and outside of the academy that impact on the life opportunities of Black and Black (mixed) heritage people. This is a pervasive, persistent ugly truth, proven by the data and lived experience of racially minoritised people, that requires deep, structural change.

However, the central issue this case study highlights is that in creating interventions that are compassionate, targeted, resourced and supportive of graduate identity development and do not just focus on skills development, the conditions in which Black people (and potentially other minoritised groups), can access and thrive in employment spaces is created.

1 See www.mmu.ac.uk/news-and-events/news/story/15455/

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The development of an inclusive and collaborative programme to support, encourage and embrace Black diversity in industry

Nigel Page, Amanda Baker, Zion Sengulay-Thomas and Martha Mador,
Kingston University London
Jacqui Piner, GlaxoSmithKline

Background

Black students face significant disadvantages when it comes to achievement at university, including differential degree awarding outcomes and poorer employment prospects than their white counterparts (Universities UK and National Union of Students, 2019; The Centre for Social Justice, 2020; Office for Students, 2021). These differences not only exist at every stage of the student lifecycle but persist beyond higher education (Hooley, 2021; Konotey-Ahulu, 2021). Many Black students report feeling excluded, unclear where to start on job applications, or lack the soft skills, confidence, commercial awareness and professional networks crucial to their future employability (Department for Business, Innovations and Skills, 2015; Wakeham, 2016).

It is disappointing that, despite the evidence base, disparities in university achievement not only remain between ethnic groups and their white counterparts but have grown nationally for Black students (by 17%) (The Centre for Social Justice, 2020). This was found even after controlling for several factors such as prior attainment, age and gender (Universities UK and National Union of Students, 2019), indicating something within the university experience impacting on overall outcomes rather than student abilities. The McGregor-Smith review (2017) likewise highlighted the issues faced beyond university into the workplace in developing Black talent stating, “it’s time to unlock talent” and the “time for talking is over”. These disparities are set against an underlying systemic racism routinely experienced by people of Black heritage worldwide that was tragically reinforced by the recent deaths of George Floyd, Breonna Taylor and Ahmaud Arbery among others, emphasising the need for change across all spheres of society, industry and life.

Consequently, we have taken action to tackle these injustices with proactive steps to enhance the student experience, support and unlock the talent of our Black students. Our approach was informed by the CareerEDGE model, especially in developing higher levels of self-efficacy, self-confidence and self-esteem linked to employability (Dacre Pool, 2016); and Kingston University’s ‘inclusive curriculum framework’ (Kingston University, 2016). As part of this, an institutional ELEVATE accelerator programme was initiated at Kingston University London aimed directly at empowering and upskilling Black students and which included working with partner employers. Within the discipline area of the life sciences, chemistry and pharmacy at Kingston, we partnered with GlaxoSmithKline (GSK) to develop and provide a year-long holistic employability support programme. This supported our tangible steps towards racial equality and tackling Black Lives Matter head-on – recognising diversity and creating equal opportunities and access for all.

This case study reports our dedicated university/industrial partnership programme that directly supports our Black students in their career journeys in engaging and embracing careers within the pharmaceutical industry.

Approach

Our holistic employability approach has been to deliver a targeted programme concerning the pharmaceutical industry through developing a partnership between our institution and industrial partner, GSK. This involved linking up with EMBRACE (GSK's Employee Resource Group focused on Black, Asian and minority ethnic diversity) enabling us to develop more meaningful and wider industrial engagement informed by the lived experiences of Black students and employers. This went hand in hand with developing our institutional ELEVATE accelerator programme for Black students through a collaboration between our School of Life Sciences, Pharmacy and Chemistry, careers and employability service and the university's enterprise education team. We also collaborated with Black undergraduate, postgraduate students and alumni by bringing four student volunteers onto the planning committee to hold regular meetings with EMBRACE to ensure co-creation of something meaningful for everyone. The initiative furthermore represented a novel partnership that evolved between higher education and industrial ambassadors of the Royal Society of Biology (*"The Royal Society of Biology are delighted to support innovative collaboration between our Ambassadors working in industry and higher education"*).

Our programme was delivered across an academic year, being designed to be an immersive experience, where students learnt about the multifaceted roles available while considering how industry works through engagement with role models. We took a scaffolded approach in designing the programme from introducing the pharmaceutical industry, to the professional skills required and concluding with a contextualised networking experience. The first stage was in December 2021 with an introduction to business at GSK and the wide variety of career options available, including an overview of diversity within GSK, the recruitment process and how it works, along with tailored advice. We were joined by GSK's Global Head of Diversity, Equity and Inclusion, and the Early Talent Recruitment Inclusion and Diversity Manager.

The second stage (January 2022) focused on an interactive workshop exploring motivations, enterprising growth mindsets, and values. We were joined by eight Black storytelling employees from EMBRACE representing various GSK roles (from apprenticeships to senior scientists). We were impressed at how honest and generous the narratives of the role models were, including their trials and tribulations.

The final stage (February 2022) was a Discover Industry hackathon, where students worked alongside role models to develop their enterprise skills/attributes. The hackathon, designed to be imaginative, involved contextualised problem-solving, where breakout student teams worked on real-world industrial challenges in drug creation. We choose to run a hackathon as the university has successfully run these with different businesses and has its own established HackCentre (Kingston University, 2018). These were delivered in a way to enable students to consider the various aspects of how industry works – from research to project management, design and implementation through to the resources required, potential market and any ethical or policy implications. Teams then pitched their ideas for feedback to a judging panel of GSK employees.

Outcomes

We successfully developed a targeted approach with industry to empower and make real change for our Black students that translated into impactful student outcomes. It provided support and encouragement to embrace diversity in the employability market, which we hope will be inspirational to the sector. In our strategy, we have grasped the importance of students not only seeing themselves belonging and reflected within the curriculum but also their talents demonstrated to their wider scientific community. Through providing these opportunities linked to the wider community, we have afforded first-hand experiences for our students through direct interaction with employers to help navigate the world of industry. This has provided ‘tasters’ of what it is like to work for a business, enabling insights into the actions required, and developing the appropriate skills through vital networking opportunities with role models. This is especially advantageous when getting any experience or growing good connections with an employer, whose time can be at a premium or seemingly unobtainable for many students. Our sustained delivery across the academic year also helped ensure students were given time to reflect and build relationships.

Our inclusive programme reached more than 250 students in the first year of delivery (from a total population of just over 600 Black students in the school). Surveyed attendees stated either “exceeded/met completely” (100%) their expectations or presented an “excellent/very good” (100%) opportunity to develop their enterprise skills and networking. Student qualitative feedback demonstrated impact – *“I want to take this opportunity to let you know the workshops were beyond my expectations and the testimonies were outstanding. I really enjoyed the sessions”; “I was wondering if there was any way I could contact [the GSK employees] for further conversation on the topic. I share similar concerns and challenges as their backgrounds, and I was hoping to reach out for some advice as a new international student”; “The GSK discover industry event helped me to understand the many different roles and opportunities available to me as a graduate scientist – a great opportunity for networking!”; “It was so good to meet some of the people at GSK”; “I really liked that they give you a ‘taste’ of what industrial workplaces are like; I been able to connect with several GSK employees since on LinkedIn”.* The success of the programme was evaluated through student feedback, which demonstrated evidence of improved self-efficacy, self-confidence, and networking opportunities for our students.

Commentaries from GSK employees were equally enthusiastic: *“I asked an I&D senior member of Pharma R&D to take a look and he is really interested in ELEVATE and these events and wants to find out more. This is great news as he is US based and this could be a way to get better engagement between GSK and a wider set of academic institutes”; “the programme described exactly the right things for students to consider as they prepare to apply for jobs. I was truly inspired by my colleagues and was not aware of their career journeys”.*

This is the first dedicated partnership we are aware of between a university and industrial employer that has set out to directly prepare students for diverse workplaces, turning recruitment into a force for equality and maximising the position of Black students to land creative graduate roles in the pharmaceutical industry. The approach, we have taken is versatile and can be easily adopted to not only support authentic inclusion and diversity in preparing graduates for the workplace but delivering greater opportunities/knowledge transfer between the pharmaceutical industry and higher educational sector. In collaboration with Black Pharma, GSK is now delivering a similar online national programme, ‘Cultivate’, from September 2023 (Black Pharma, 2023).

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Live Briefs: an inclusive work-integrated learning approach to employability

Stef Foley, Marina Boz and Zoe Mogridge, Anglia Ruskin University

Background

Spending approximately £250m a year on widening participation programmes (Hutchinson, Reader and Akhal, 2020), the higher education sector has been transformed by its motivation to widen access for students from disadvantaged backgrounds. After initial access, the university has a responsibility to ensure societal inequalities and stratifications are not replicated within the student journey

(Torabian, 2021). This journey, as for all students, is often begun with the intention of accessing the career ladder (Neve and Hewitt, 2020) and employability provision is regarded key to student success in HE (Norton, 2020). Careers services, as central resources for improving student employability, are often underused by underrepresented students who face barriers to engagement with extra-curricular activities, such as time constraints, lack of financial resources and caring responsibilities (Dickinson, et al, 2020). These barriers can also prevent students from accessing internships (Hunt, 2020), which consequently impacts graduate employment success (HFRL, 2020).

With an inclusive approach to employability provision, the Anglia Ruskin University (ARU) Live Briefs programme provides the opportunity for all students to have access to authentic experiences within the classroom that would not otherwise be accessible to all. The programme was introduced in 2019-20 and its initial development presented in the Advance HE compendium article 'Work-integrated learning as an inclusive pedagogy for employability: the case of Live Briefs at Anglia Ruskin University (ARU)' (Boz et al, 2021).

Live Briefs are a form of work-integrated learning, which integrates theory with practice (Dollinger and Brown, 2019), and enhances student career development and employability by developing self-efficacy, self-awareness, graduate skills and work-readiness (Smith et al, 2009; Redden, 2015; Berndtsson et al, 2020). Co-created and delivered collaboratively by multi-disciplinary stakeholders including academics, professional service staff and professional partners, Live Briefs also provide direct access to industry insights.

At the time of their article, Boz et al (2021) were anticipating Live Briefs to be integrated in stages across two years. A diverse pool of professional partners had been established, Live Brief design processes were being developed and Live Brief critical attributes had been agreed by drawing on identified good practice in work-integrated learning, adapted from Schonell and Macklin (2019).

Approach

Following a curriculum review and endorsement by senior leadership, the Live Brief programme was announced as a compulsory curriculum initiative to be offered in every non-practice-based undergraduate course at levels 4 and 5. Beyond accessibility to opportunity, the design of Live Briefs intends to be student-centred, inclusive and equitable. Collaboration between module leader and partner is driven by the module learning outcomes and, within the design process, student voice is advocated by the module leader. Live Briefs are designed with opportunity for personalisation, such as choice of topic and team role. Live Briefs inform formative and summative assessments, including individual reflective practice.

Operational processes were implemented to support the ambitious scale of delivery. A toolkit incorporating a Live Brief Lifecycle was designed to highlight the key stages involved in designing and delivering a Live Brief. The Live Brief team support module leaders in the form of 1-2-1 and group information sessions, partnership brokering and curriculum development. Since implementation, the programme has been continuously evaluated. In addition to anecdotal feedback, following each Live Brief, students, professional partners and module leaders are surveyed anonymously via onlinesureys.ac.uk using Likert scale questions and a free text option.

Outcomes

To date, the Live Brief programme has successfully achieved large-scale implementation across all faculties, with a total of 109 Live Briefs delivered, reaching 6,692 undergraduate students. Twenty-nine Live Briefs were delivered in the first year of the programme, resulting in collaboration between 29 module leaders and professional partners, and 2,025 students. This increased significantly for the second year of delivery, which saw 80 Live Briefs delivered, with 80 professional partners and module leaders and 4,667 students.

Table 1. Student feedback 2020-21 and 2021-22

On reflection, after working on a Live Brief, to what extent do you agree it has helped you to:	Agreement % 2020-21	Agreement % 2021-22
Better understand employer expectations	58%	71%
Gain authentic experience of using skills and learning in a professional context	69.5%	81%
Gain authentic experience to use as examples in future job applications and interviews	66%	74%
Increase confidence in your skills	69%	70%

Free text survey comments identified common themes including insight into industry expectations, an increased interest in industry-specific skills, the opportunity for skill development and an overall enjoyment of the experience. For example, one student stated: *“The live brief was a big opportunity for me to learn to work with other people and present in front of an external body. It was an amazing experience for me.”* A common dissatisfaction was that of low opportunity for engagement between partner and students in various forms, including lack of opportunity to network with the partner. While an area for development, this demonstrates students’ appetite for engagement with professional partners.

Feedback demonstrated an increased perceived impact of authenticity of experience, increased confidence, and a better understanding of industry-related skills and expectations. Many professional partners have used work created by students, and in some cases, offered extended work experience opportunities. These outcomes indicate the potential of the Live Brief programme to have a high impact on employability development at scale. However, fully capturing this impact has been challenging, with low survey response rates from stakeholders, in particular students, at 9.9% (2020-21) and 9.1% (2021-22). The low response rate can be reasonably tracked to the various methods of the survey distribution. Acknowledging the value of the student voice in Live Brief design, the evaluation process has highlighted opportunities for furthering this. One example is via Live Brief reflective activities, which are integrated in the curriculum by the Careers and Employability Team as part of an evolving element of the programme that offers Live Brief preparation sessions for level 4 students, and post-Live Brief reflection sessions for level 5 students. As well as being a potentially rich source of feedback, these sessions provide space for students to acknowledge the impact of their Live Brief experience and link their experiences between the levels.

Other areas identified for future development include further developing the Live Brief critical attributes and supporting the Live Brief design and delivery to reflect the essential idea of a Live Brief module, ensuring an authentic and rewarding experience for all stakeholders. Beyond delivery at levels 4 and 5, Live Briefs are also being integrated into modules at levels 6 and 7, providing scope for a Live Brief journey throughout the undergraduate experience and extending to postgraduate level.

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Sustainable and innovative approaches to employability in higher education

Amy Brown and April Kingswood, Newcastle College University Centre

Background

This paper provides a brief history of developing students' employability at Newcastle College Group Higher Education (NCG HE). We aimed to improve our students' ability to secure meaningful employment after graduation while also supporting students to better understand the skills and knowledge outside their discipline they require to be successful in the world of work. Higher education (HE) can transform the lives of individuals by providing access to higher status jobs (Fotiadou, 2018). Therefore, developing employability skills (as in the planning and preparation of skills required for work) is now HE's core business with the expectation that not only are graduates skilled to move into employment but that they are able to obtain graduate-level jobs in a fiercely competitive jobs market.

Students from college-based higher education (CBHE) tend to be from lower socio-economic backgrounds and are first generation higher education students, which provides several barriers and challenges to our students. Young people from poorer backgrounds are less likely to graduate and less likely to achieve the highest degree classification. These differences continue into the labour market, where graduates from poorer families are less likely to obtain a professional job and they earn lower than average graduate pay (Crawford et al, 2016). People from working class backgrounds are 80% less likely to get into professional jobs. Even if they do, class plays an important role in pay and progression; within professional occupations, those from working class backgrounds earn 17% less than people from middle class backgrounds (Bathmaker, 2021). Ultimately, class plays an outsized role in a person's ability to progress up the income and jobs ladder, and there has been no measurable improvement in recent years (Social Mobility Commission, 2019, 19). The earnings of graduates from lower income households remain lower than their peers from higher income backgrounds long after graduation, even after allowing for differences in subjects taken and the institution attended (Britton et al, 2019). Simply, employability has become a key concept in differentiating the value of higher education in supporting graduates to succeed and flourish in the labour market and beyond (Norton and Dalrymple, 2020). The demographic profile of NCG's CBHE students mirrors the national profile, so a strategy was developed to improve their social mobility and earnings potential. The NCG HE Employability Strategy enhances the employability and career prospects of students through the development of a range of technical, professional, vocational and transferable skills enabling social mobility and economic prosperity.

The employability strategy was adopted across college from Level 4 to Level 7, as the lack of employability skills and work readiness was not a discipline-specific or level-specific issue but rather a whole college need. NCG HE often has direct entry into Level 5 and 6, and it was recognised that it was not just the responsibility of the careers and employability coaches but rather an institution-wide responsibility. There was a need to ensure students – regardless of the level – recognised the importance of developing employability skills that were not discipline specific but were contextualised to each discipline. We used the Advance HE framework for embedding employability in higher education, which in turn supported NCG HE in developing an effective approach to developing employability skills in our students.

Approach

According to Jackson and Wilton (2016), employability skills may be developed through a variety of student learning opportunities and activities which are part of the general higher education experience – for example, self-study, participation in lectures, attending specialised career advice workshops or participating in work-integrated learning (WIL) programmes. However, at NCG we wanted to go beyond the general HE experiences and embed employability skills in small-group teaching activities that encouraged problem solving, self-management and resilience – soft skills sought by employers (Ritter et al, 2017).

A working group was formed to tackle embedding employability skills across NCG HE. It was recognised that not enough focus was given to preparing students for work beyond their studies, and there was also a lack of focus on preparing our students for graduate-level jobs and meaningful, prosperous employment. There was staff representation from across 50% of the curriculum areas – health, sport, hair and beauty, art and design, digital art, engineering and business – which formed the working group, and 100% of staff were involved via the consultation process to provide feedback on the resources produced.

Firstly, we had to define our approach to embedding employability so the group reviewed existing skills being developed within modules and explored ‘what skills do our students lack, how and why these should be developed’. The focus group identified 11 core employability skills to be developed.

Table 1. Eleven core employability skills

Resilience	+ Be able to work under pressure + Ability to overcome potential setbacks + Willingness to seek out challenges + Ability to manage risks + The ability to cope with change, or respond well to change	Application of IT	+ The use of information technologies ie Microsoft packages + Ability to identify the appropriate IT package or tool for a given task + Be able to use word-processing and databases
Application of number	+ To have an understanding and be able to work with numerical and graphical information, drawing conclusions, explaining findings, making deductions These are in tune with the skills that employers value from good graduates in all subjects, such as critical thinking and independent reasoning.	Creativity and Innovation	+ Ability to generate ideas and think laterally + Ability to identify and take opportunities + Capacity to observe and evaluate trends and create appropriate opportunities
Social, cultural and global awareness	+ The ability to relate with people from a range of different backgrounds is important in the commercial world, but also on a personal level with colleagues or team members. + Ability to work in an international context + Appreciation of diversity and ethical issues + Understanding of cultures and customs in other countries	Commercial awareness	+ Interest in business operations + An understanding of the wider environment in which an organisation operates + An awareness of the need for efficiency (current economic climate and major competitors, for example) Is it only relevant to business careers? It is relevant to EVERY career!

Communication	+ To be able to express ideas and views clearly, concisely, and confidently, tailoring content and style to the audience and promoting free-flowing communication. + Be clear and concise. Vary the tone, pace and volume to enhance the communication and encourage questions + Persuading and negotiating: arriving at an agreement that is agreeable to both sides. Back up points with logic, and show tact to those who may disagree	Teamwork	+ Ability to cooperate with others on a shared task + Ability to lead and motivate others + Ability to work in an interdisciplinary team + Demonstrate leadership skills
Planning and time management	+ Being able to estimate how long tasks will take to complete + Manage personal workloads + Developing timetables with clear milestones and deadlines + Being able to monitor and adjust timescales as necessary	Problem solving	+ Identifying that a problem exists and be able to define it + Capacity for applying theory to practice + Ability to retrieve, analyse and evaluate information from different sources

Self-awareness and self-management	+ Be able to accept responsibility to improve one's own performance and learning + Be proactive and seek out opportunities. + The ability to plan and manage time + The ability to work using initiative and without supervision + Having the determination to succeed.		
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These skills were born out of research and we consulted with employers from several different industries, which reflected the disciplines of the working group, to seek feedback on the suitability of these skills and whether the skills NCG HE identified are the skills that employers seek in their graduate employees. The consultation period with all stakeholders lasted about two months. Once the consultation had taken place with staff, students and employers, amendments were made and a final list of the 11 employability skills were confirmed. Templates and resources were developed to help support staff in embedding these skills in each of their modules.

The roll out of the strategy began with 100% of 140 staff being trained on how to effectively embed the 11 employability skills and how to use the resources which were produced. An explanation of each of the 11 employability skills were provided to staff, alongside a PowerPoint template with icons. Each of the 11 icons represented the 11 employability skills. The roll out of the training took approximately three weeks with one-hour training sessions delivered via Teams and exemplars provided to staff as a point of reference. A recording was also stored in our training hub for staff to access when needed.

Module delivery plan templates were updated with a section which highlighted the skills to be developed that week and some narrative around why those skills fit with the topic. In addition, all validation documentation now has the 11 employability skills embedded, with a focus on which skills are either being developed or assessed as part of each module. The embedding of the resources took one academic year and is still being promoted to staff. Focus groups were held throughout the academic year with both staff and students to carry out an evaluation of the embedding of these skills. Further evaluation will continue based on students' progression into meaningful employment, which will be classified as either professional employment or employment linked directly with their subject discipline. The graduate outcome survey will also provide an indication of the impact of these skills. On a local level, the evaluation of the skills will be via our career readiness survey, which will be issued at the beginning and end of a programme to enable an evaluation of the impact based on the results.

Outcomes

Although an ongoing project there are a number of early outcomes that can be reported.

Firstly, all curriculum areas have now embedded the 11 core employability skills within their modules for first delivery 2022-23 across NCG HE. Each taught session focuses on developing a particular employability skill(s), which the student is made aware of at the start of the session. For example, public health students develop their 'application of number' skill within a taught session by considering the spread and distribution of disease across a community. They use local data – charts, graphs and tables – from which they extrapolate meaning, explain their findings and draw conclusions. This new numerical understanding is assessed formatively throughout the taught session by tutor observation, student engagement in in-class activities and student feedback. The application of number employability skill is then summatively assessed at the end of module to check how much the students have learned.

Secondly, each curriculum area has engaged with local employers/industry advisors within their field and, working in partnership with these industry advisors/experts, have identified the core employability skills that are key to that specific profession or discipline. From this, 'live briefs' have been developed based on contemporary work-based scenarios and used for both formative and summative assessments in the class setting to prepare students for future workplace practice. Using real world examples like this has had a profound impact on our students by increasing their motivation to engage with the content and problem solve.

Additionally, our students have also benefited from the opportunities of employer/CBHE enrichment activities, including volunteering, placements, guest speakers, symposiums and so on. Engaging with local industry advisors/experts can be transformative for the curriculum, the student and the industry. For example, prior to the development of a new integrated health, social care and wellbeing degree programme, an informal needs assessment was conducted with local health and social care providers to identify the core employability skills/understanding they would require from future employees (ie our students). Feedback suggested that many potential employees lacked basic awareness of how to communicate effectively with clients and colleagues and lacked the practical understanding of supporting people with physical and/or learning disabilities. This resulted in lost client-focused support time as new employees needed training and basic skills development before being able to work with individual service users.

This feedback led to the development of a partnership with a local specialist college and, from this, a disability awareness module for a new BA (Hons) and FdA integrated health, social care and wellbeing course was proposed. Students from the specialist college provided content informed by their individual experiences. This user informed content was then used as the basis of the new disability awareness module. Students from the specialist college were supported to produce a presentation they delivered to health and social care students at Newcastle College University Centre (NCUC) which provided opportunities for the IHSCWB students to ask questions.

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Employability and work-integrated learning

Filippo Nereo, Keele University

Background

This contribution focuses on employability in the context of ‘work-integrated learning’ (Dalrymple et al, 2021) using Keele University’s postgraduate Academic Professional Apprenticeship (APA) for early-career academics as a case study. Employability is often framed in deficit terms with corrective action being required for individuals to achieve graduate employment. By contrast, academic professional apprentices are, by definition, already employed in the higher education sector in highly specialised disciplinary roles but wish and are required to enhance their pedagogic skills to develop their careers. The APA, with its highly specialised, qualified students and – following the Augar Review (Augar, 2019) – under a new regulatory framework (Ofsted), therefore offers a unique lens through which to explore the notion of employability. Underpinned by Human Capital Theory (Becker, 1964), which frames participant outcomes as the result of investment and leading to greater productivity in their roles, this contribution shares experiences of launching a reformed APA in the 2021-22 academic year, which sought to align the programme more consistently with the needs of participants and employers (home departments). It also identifies ways in which the programme supports participants’ career trajectories and ongoing development in their roles.

Approach

The reformed APA sought to maximise employer and student co-design, involving both partners in a root-and-branch review that took place over the 2020-21 academic year and culminated in a proposal for a reformed APA to the university leadership team. The review took the form of a series of meetings with key groups (alumni, existing participants, external examiner, deans of education, pro vice-chancellors, curriculum developers and senior curriculum developers), seeking input and reflections on opportunities to enhance the programme and align it with participants’ and employers’ needs. As part of this process, we noted opportunities to develop understanding of the apprenticeship model as a programme co-created and co-developed with employers. Emphasis on this symbiotic relationship, with participants’ home departments and the programme team working in partnership, and developing a shared understanding of both the ‘programme’ and home departments as sites of learning, has helped to strengthen relationships and develop trust.

Our consultation revealed that opportunities to exchange ideas, perspectives and approaches to education are highly valued by APA participants but the structure of the APA, as an English qualification delivered within the university setting and drawing on learning from within the ‘home department’, can often militate against the very multi-perspectivity that participants say they value most. We addressed this in different ways, and a selection of these curriculum interventions is sketched out here.

First, the APA is, in principle, accessible to individuals teaching and supporting learning in any higher education setting. The APA might therefore be considered something of a misnomer, since recruitment is possible from a much broader pool than those who consider themselves university 'academics'. The sharing of these different perspectives on higher education can be a source of rich discussion, enabling participants to understand the wide range of contexts of higher education learning and teaching outside of universities and to engage critically with key questions of delivery, assessment and inclusion. Second, while participants' learning within their home department is a valued part of the programme, the APA has its most transformative potential when participants can challenge and critique the status quo and share alternative approaches. This is best done in a supportive environment with individuals who have experience of other disciplines and alternative epistemological approaches. Third, guest speakers, particularly those from different higher education systems such as non-UK, non-Anglophone, can help situate discussions in a global context. The appreciation for other systems of higher education can then have applications in the classroom, such as understanding international student-specific issues.

We wanted our programme to model assessment that was authentic to the 'discipline' of teacher education and the needs of participants in their professional lives, so the question of modes of assessment was a key discussion. The idea that APA assessments could be anything other than authentic sits awkwardly with the ethos of apprenticeships as 'work-integrated' learning. However, traditional modes of assessment can be pervasive, particularly given the relatively young age and inconsistent understanding of degree apprenticeships across the sector. While teaching observations are a common mode of assessment for teaching-route APAs, these can be rather narrowly defined. In particular, given the range of disciplines and contexts of higher education and new, especially post-pandemic, modes of delivery, we came to the view that it is crucial to adopt an inclusive, flexible definition of this important part of the assessment. Indeed, the most valuable 'observations' may not be undertaken at the back of a lecture theatre, as they perhaps once were, but could take the form of an observation of teaching materials, or teaching platform with asynchronous resources, or indeed of other student-facing activities or resources. The point here is that the most effective observation policies are not prescriptive but, rather, should allow the observee to identify elements of their teaching on which they would benefit from having a critical friend offer constructive and developmental feedback. Clearly, peers from the same discipline can offer helpful subject-specific ideas, expertise and experience. But observations by individuals from other disciplines can provoke different, sometimes more searching questions for the observee and lead to greater experimentation with alternative approaches.

Beyond engaging with teaching observations, it is necessary to consider two key questions in relation to what 'authentic assessment' may mean for an APA. First: what are the expectations of individuals delivering higher education, and second: what are the requirements of the APA as a postgraduate degree apprenticeship. A key defining feature of higher education, particularly at postgraduate level, is the level of criticality required. In this sense, the notion that programmes like the APA can help disseminate a singular and unquestioning 'best practice', which will be dutifully implemented by its graduates, is undesirable and quite out of step with claims to promote critical thinking and enquiry.

Instead, opportunities to reflect critically on pedagogical approaches will be more authentic. In this spirit, reflective tasks and opportunities for the critical, scholarly exchange of ideas are far more likely to meet this need: we therefore established smaller cross-disciplinary tutorial groups which meet regularly, build confidence and support the preparation of abstracts, and poster and oral presentations enabling apprentices to disseminate their work to peers and external delegates at conferences. The conference opportunities facilitate conversations and increase the visibility of apprentices' work, in some cases leading to invitations to contribute to others in university working groups and project work in related areas. These new opportunities, in turn, can contribute to the APA itself by being recognised as part of the requisite learning hours and support the apprentice to build a more personalised and developmentally richer learning experience.

Outcomes

Module and programme evaluations do not typically engage with questions of impact, partly as they tend to take place immediately at the end of the course and focus rather narrowly on immediate student satisfaction rather than outcomes. The impact of APAs and similar programmes is, therefore, often anecdotal in nature and shared through education champions within institutions, despite some exceptions such as Butcher and Stoncel (2012) and Sadler (2013). The former had 21 survey respondents, five interviewees and nine focus group participants.

In 2022, we undertook a mixed-methods study involving graduates of Keele University's APA (Rowan, 2022). Given the APA's relatively young age in the sector, our study necessarily focused on shorter-term impacts. Our study, with 14 survey respondents, 11 interviewees and nine focus group (roundtable) participants, had a comparable number of respondents to Butcher and Stoncel's (2012) investigation. Sadler's study was methodologically different, and longitudinal in nature, so not directly comparable. In our work, the employability of graduates was defined by participants in our study in terms of career development and progression, and the development of scholarship profiles.

In common with Butcher and Stoncel's (2012) findings, almost 80% of our study participants said that completion of the programme had led to new roles, increased responsibilities and, especially, promotions. The key enablers of this career progression were cited as being achievement of HEA Fellowship, being part of a community of practice, securing funding for educational projects, a feeling of empowerment and confidence, and increased reflective skills. The opportunities and encouragement not only to engage with scholarship but, crucially, to contribute actively to sector discussions and scholarly debates as well was also raised by respondents as a contributor to employability. Graduates shared that the programme had revealed a new focus for their scholarly work, provided the tools and knowledge to contribute authoritatively to scholarly discussions, underpinned scholarly outputs and fostered networks and collaborations.

Beyond the outcomes for the participants themselves, the ongoing collation and improved understanding of the APA and its impact, notably its contribution to enhancing employability, is essential for the sector's wider understanding of this relatively new provision and can contribute to the apprenticeship reform underway in England and the review of the UK Professional Standards Framework, which underpins the APA Occupational Standard.

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The Value Me framework: increasing identity capital and self-confidence

Charlotte Harrison, University of Portsmouth

Background

Work experience and employer encounters are acknowledged as being crucial for the development of social and cultural capital (Tomlinson, 2017, 343), and are recognised as a key factor in enhancing graduate outcomes (Smith et al, 2018). The Value Me framework was developed to help students present themselves convincingly and confidently to employers when such opportunities arise. It offers a practical approach to help students identify the hallmarks of their personal brand, while developing skills to help them navigate the recruitment process and present themselves more confidently to employers. In short, it supports students in the essential development of a compelling employability narrative (Tomlinson, 2017; Tomlinson and Anderson, 2020) and offers a vehicle to capture reflection around their emerging graduate or pre-professional identity (Holmes, 2015; Jackson, 2016).

The broader aims of the Value Me framework are to:

- + help students appreciate the relevance of their skills and experience to employers
- + encourage students to enhance their self-awareness and consider how they relate to others (Johari window model [Luft and Ingham, 1961])
- + prepare students for confident employer encounters and enable them to differentiate themselves in the competitive labour market
- + help students develop the language to communicate their value to employers
- + encourage students to think about who they are and what success looks like to them
- + empower students to decide the story they want to tell about themselves and learn to project it confidently, persuasively and authentically
- + ensure students are proud of what they have to offer an employer, rather than feeling they have to shoehorn themselves into a certain mould
- + help students develop strategies for self-presentation in interviews and assessment centres
- + prepare students for strengths-based interview questions, and the inevitable “tell me about yourself” question.

Approach

The Value Me framework was developed initially for Level 5 students on the suite of LLB Law degrees at the University of Portsmouth within a core employability module. The design was heavily influenced by the CareerEDGE model of employability (Dacre Pool and Sewell, 2007) and draws lightly on contemporary conceptualisations of graduate employability based on capitals (Holmes, 2015; Clarke, 2017; Tomlinson, 2017). It was evaluated as a career management intervention (then called Brand Me) and the resulting paper was published in *Studies in Higher Education* in 2020 (Tymon et al, 2020).

The CareerEDGE model of employability identifies career development learning as one of the five foundation elements, which should be supplemented with opportunities for evaluation and critical self-reflection, to increase the 3Ss (self-confidence, self-esteem and self-efficacy) and ultimately enhance employability. In recognition of this, career development learning, and reflection and evaluation, are at the heart of the Value Me framework. As they move through the various activities, students enhance their self-awareness and understanding of what employers are looking for. This provides a framework for future career decision-making and provides practical support with personal development as students identify gaps or areas for development in their offer to employers.

The Value Me activity framework centres around the creation of a poster initially, followed by a series of repeated Value Me presentations. Crucially, these are linked by practical workshops focusing on the foundation elements of the framework (Figure 1). As students shape and deliver the poster and presentations, through various iterations, they reflect on their value to a future employer, curate their employability narrative and develop their presentation skills. Essentially, the learning and reflection around foundation elements directs students towards the creation of a presentation which addresses the question “an employer should Value Me because.....” They will need to think about how to structure their pitch, the key messages they want to convey, and the language and style they will use to communicate those messages in a way that feels authentic to them. It is unlikely they will actually deliver the presentation verbatim to an employer, but the underpinning reflection, and creation of the narrative, means they are more confident about their personal value proposition and better equipped to promote themselves to employers whenever, and however, opportunities arise.

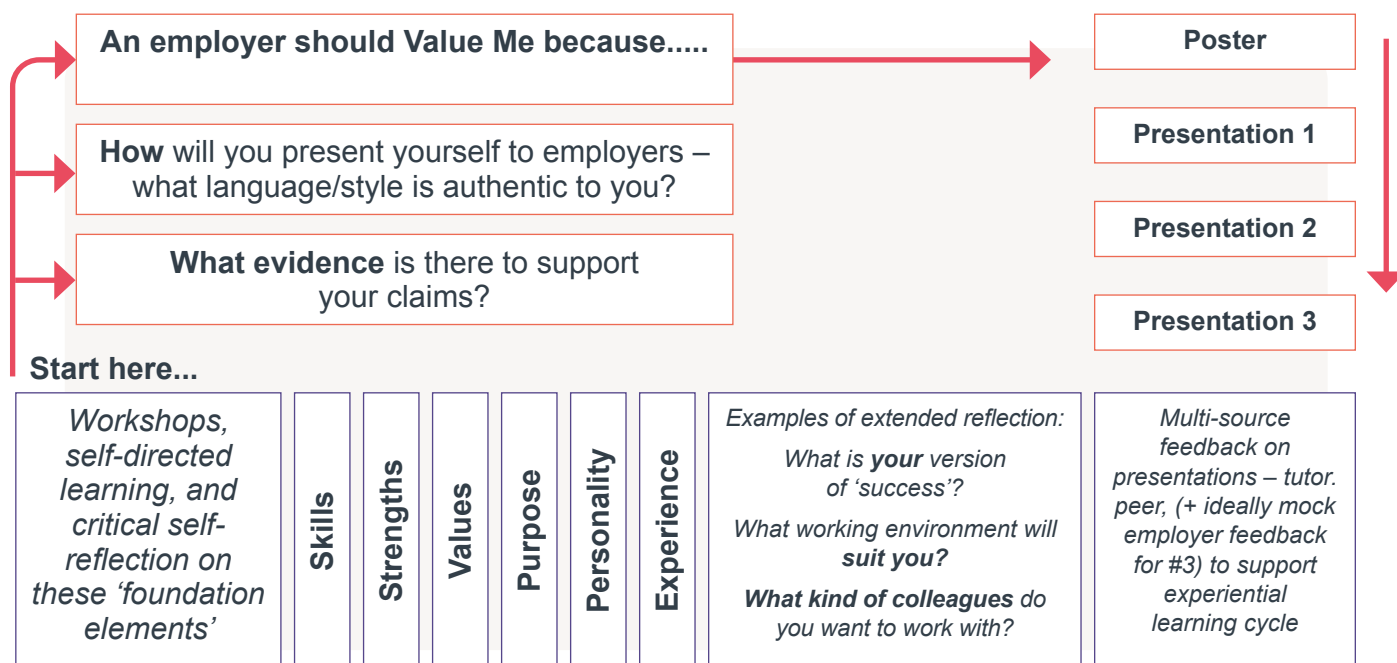


Fig 1. © Charlotte Harrison, University of Portsmouth 2022

The Value Me framework emphasises reflection and the experiential learning cycle (Kolb, 2015; Kolb and Kolb, 2009). The poster and each presentation are individual concrete examples for students to reflect on through the iterative process. This is supported by self-assessment and feedback from tutors and peers. The number of presentations will be dictated by how and where the activity is delivered. If the activity is embedded, I would suggest at least three presentations through the year. However, the presentations could continue through the whole course cycle. I have also implemented it over a shorter period, with fewer presentations, when it is delivered outside of the curriculum as a standalone programme, or even an intensive day-long course.

When the activity was first implemented for Level 5 students in Portsmouth Law School, mock employers were used for feedback on at least one of the presentations (alongside tutor and student feedback) to increase the authenticity of the exercise. This mode of delivery operated successfully for four academic years. However, this is not an essential component and the framework can be delivered effectively without mock employers. If you wish to adopt the ‘mock employer’ mechanism, the feedback could be provided by careers advisors, placement officers, or members of your employer advisory forum. In all cases, they should remain anonymous and there should be a training and calibration process at the beginning of the feedback stage so that all mock employers (and tutors if it’s a large teaching team) are reviewing presentations consistently and in compliance with confidentiality and other ethical obligations.

Outcomes

The first iteration of Value Me (previously Brand Me) was evaluated via a longitudinal mixed-method study, which considered the impact of the intervention on employability-related-self-confidence (ERSC) and impression management skills as perceived by others (Tymon et al, 2020). Measurements of ERSC were taken at three points in time from a sample of 105 students in the 2015-16 cohort where every presentation was reviewed by 'mock employers' against a five-point Likert scale measuring items relating to self-promotion and effective face-to-face communication. In addition, qualitative data was collected from semi-structured interviews with the lecturing team, student feedback, students' reflective artefacts, and semi-structured interviews with nine students from the cohort. Some of the relevant findings are summarised below, but the original paper provides full details (Tymon, 2020):

- + indications that employability-related self-confidence had increased over time
- + recognition from both lecturers and students that students had learnt the skills of confident self-promotion and transferred the learning to other contexts eg placement interviews, placement presentations, and other interviews

Since the evaluation of the framework was published, Value Me has been adopted successfully with students across a range of undergraduate courses, including initially BSc Biomedical Science and the Certificate of Higher Education Professional Studies.

Date of first implementation	Course	Number of students (approx)	Level of study	Notes
2015/16	LLB Law programmes	160	5	Embedded in a 20 core employability module
2020/21	Msc Innovation Management and Entrepreneurship	17	7	Embedded in a zero-credit placement preparation and career management module
2021/22	BSc Biomedical Science	120	5	Embedded in the personal tutoring programme across 13 tutor groups within a zero-credit module focusing on careers awareness and placement applications
2021/22	Professional Studies Certificate of Higher Education	3	4	Embedded to support portfolio development linked to taught modules and work-based learning projects within this 2-year course comprising 120 credits developing knowledge, skills, and behaviours to enhance performance at work and/or as a gateway to further study.

Most recently, Value Me was embedded as a core activity in the spiral curriculum for the University of Portsmouth's Personal Tutoring and Development Framework (Dunbar-Morris, 2022) which has been rolled out across all undergraduate and taught masters courses. Thus, this intervention is presented as a transferable and scalable intervention to support graduate employability through development of employability-related self-confidence and identity capital.

The impact of the intervention is perhaps best illustrated by quotes from students and lecturers who have participated in the activity.

"I have used this [learning] in all the interviews I have been to ... it has improved my first approach for an interview ... not trying to pretend I have other skills, but to actually use the experience I have got."

Level 5 law student (2015-16)

"The students found [Value Me] a really engaging way to consider their current 'worth' to their organisation and helped me as their tutor to develop their confidence in recognising and reflecting on the knowledge and skills they had already gained during their employment to date. It gave them more confidence in their capabilities and helped them to consider how their values align to their existing roles and future career aspirations."

Course leader, CerTHE professional studies

"I wanted to introduce VM into our year 2 tutorial programme as I felt the iterative approach to developing the pitch was an important way for students to develop confidence in talking about themselves in front of others. By going through the process, students were able to respond to feedback from their peers (and academics) and refine their pitch to focus on the salient points. They also developed greater confidence both in terms of body language and vocabulary. By far the most powerful part seemed to be the feedback students received from their peers and the accompanying reflection on their approach. While we still have work to do in standardising the approach between tutor groups, I felt VM was an excellent addition to our course."

Programme lead, biomedical sciences

"I just wanted to let you know that my interview with [company name] went really well...the tutor session we had with our [Value Me] pitches was amazing because, of course, the first thing they said was "tell me about yourself" and thanks to that session I actually felt prepared!"

Level 5, biomedical science student (2021-22) reporting on a successful interview for an industrial placement year position.

In terms of continued development, I have worked with colleagues at the University of Portsmouth to develop a digital toolkit to support independent learning relating to the foundational elements of the framework. I am now exploring whether there might be scope to engage and train 'Value Me' student ambassadors to support delivery across the university.

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Encouraging an employability mindset in undergraduate students

Aileen K Ho, School of Psychology and Clinical Language Sciences, University of Reading

Background

In our psychology undergraduate programmes at the University of Reading, employability-related skills are embedded in the curriculum. In the students' first year, they also take the Applied Psychology and Professional Practice module in the spring term, which covers professional ethics, reflective practice and pathways to different areas of professional practice. In the second year, they take the Professional and Clinical Practice module in the autumn term, which exposes students to communication and interview skills.

Alongside the curriculum, students are supported by the academic tutor system which, among other functions, also includes the support for personal and professional development. Support in this specific area typically includes ad-hoc individual conversations usually initiated by students/tutees, usually towards the latter part of the degree programme, as well as signposting to and linking with the university careers service where appropriate. In reality, this may not happen as a lot depends on students' levels of confidence, initiative and readiness to proactively engage with academic tutors on this topic. Students also may not realise employability-related personal and professional development is something they can discuss with their academic tutors, hence missing out on this element of academic tutor personal support.

Another reason why employability-related aspect of academic tutoring often gets overlooked repeatedly over the course of the programme is the domination of teaching and learning issues, which are deemed more pressing. Conversations around personal and professional development, as well as related employability readiness reflection and support, while integral in the role of academic tutors, can very easily be seen as important but not urgent, and frequently take a back seat. This is especially true where tutor-tutee meetings are fluid without any clear structure to keep personal and professional development on the agenda.

Yet another point is that students who do not have issues hindering their academic progress can sometimes feel that there is no compelling reason or 'need' to come to academic tutor meetings with their academic tutor, as they do not have any pressing questions to raise. This suggests that providing a pre-planned group activity within academic tutor group meetings may add value to these meetings. If students are provided with the opportunity to explore and reflect on employability and careers-related aspects of their course through interactive activities within staff academic tutor meetings, this may raise the level of engagement with these meetings. This also allows for the development of deeper and better tutor tutee relationships and places the tutor in a more informed position to be able to support students.

Consideration of the issues above within the Knight and York (2003) model of employability and learning highlighted the potential utility of adopting a psychologically informed reflective (Kolb, 1984) and cognitive-behavioural coaching approach (Palmer and Szymanska, 2008). The components of personal qualities (self theories, efficacy beliefs) and metacognitive awareness (Knight and York, 2003) were seen as areas that held particular relevance to encouraging an undergraduate employability mindset and to this case study.

While the application of a cognitive-behavioural coaching approach is gaining traction in diverse domains of life due to its potential to build a positive supportive relationship to encourage behaviour change, this approach is only emerging in the higher education sector student employability literature, with only a few published empirical studies such as Gottschalk (2019). There is potential in applying this approach in the formative undergraduate years of young adults where there are multiple points of personal and educational transitions. In a higher education environment, a cognitive-behavioural coaching approach seems well aligned to nurture the transition into an undergraduate learning environment, and eventually the readiness and transition out into the world of work, via building on the personal qualities and metacognitive elements of Knight and York's (2003) model of employability and learning. Therefore, this pragmatic case study represents a cognitive-behavioural coaching approach to address the more immediate transition into undergraduate education, with one eye also on building toward the transition out of higher education into work, and contributes to towards developing employability-related best practice in higher education.

Approach

Student feedback in a participatory co-design exercise

Before any activities were designed, feedback was sought from current psychology undergraduate students to gauge their interest level and enthusiasm for taking part in planned interactive groups activities within the context of academic tutorial meetings.

For this participatory co-design exercise, there were 66 third-year undergraduates who provided feedback from their experience of navigating our psychology programme. The majority of these students (68%) indicated they were interested in this approach, and three quarters of these students showed very high levels of interest.

Current students also emphasised that while it was good to start discussion around professional development, careers and employability-related reflections early on in the first year, it was also important to be relevant for each year level. A progressive element over the course of the programme, taking advantage of the infrastructure of the academic tutorial meetings was enthusiastically received.

Students liked the suggestion of a coaching approach where the tutor takes the lead in initiating relevant activities that involve reflection, building motivation via positive peer support, and leading to further reflection or perhaps subsequent action, which can be discussed at later meetings.

Design and rationale of an employability-related activity

As there was student support on starting early in the programme, to set the tone and establish the personal and professional employability-related development element of the academic tutor role, the first introductory academic group tutorial was used to run an employability-related ice-breaker session for incoming first-year undergraduate psychology students.

In order for all academic tutors to be able to take a coaching approach, and for the activity to be feasible within the time frame of academic tutor meetings (an hour), a structured activity would need to be brief to allow time for other teaching and learning issues that students may want to raise with their tutors.

Tutors were provided with a guided 15-minute employability-related ice-breaker activity to conduct within the start of their first academic tutor group session for year one undergraduate students.

This small-group activity, aiming to orient undergraduates towards employability and career-related thinking and action early on in their university degree, was designed and piloted in a focus group of undergraduate students.

This ice-breaker employability-related activity would take the place of more open and unspecified introductions where tutors generally got students to introduce themselves however they wished. Instead, in this activity, tutors would ask students to share their childhood career ambitions as well as a more up-to-date reflection on potential career aspirations at the start of their degree programme.

Importantly, tutors were told to start answering the ice-breaker question first, in order to serve as an introduction and also to give students some time to listen, reflect and consider where they were at. The academic tutor's response provides a real-life example of how careers in psychology may (or may not always) lead to set the scene by using the tutor's personal career journey (briefly conveyed) as a mini psychology careers case study.

Tutors were also told to make it clear that it was entirely normal not to know at this stage, and also gave students the option to talk about what careers they were not inclined towards as well. This was to allow students options, reflecting the range of students and where they may be in terms of formulating their thoughts on career goals. This aim was to encourage all students to share something meaningful about themselves, with each other and also to discover like-minded peers early on in the piece.

The relevant topic of psychology, and where it might lead, was a common point for all students as well as the academic tutor, to bring their shared experience together across multiple personal timelines.

This reinforces the inherent similarity of interest in the field of psychology within the group to emphasise shared similarities. As Reading is a very multicultural town drawing students from a wide variety of backgrounds, this approach may also serve to de-emphasise the more obvious superficial physical differences that may be more immediately tangible such as age, race, gender, etc.

By highlighting a common interest and goal, a more collegiate team approach is hoped to set the tone for further interactions in the academic tutor-tutee relationship. This also extends to student-to-student interactions, possibly outside the formal group sessions as well, setting the scene for a supportive learning environment.

Outcomes

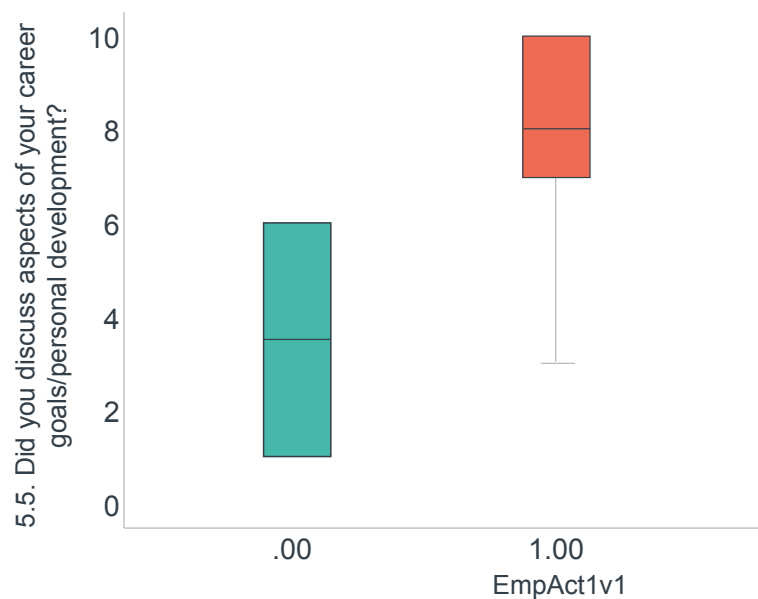
Matched group comparison in a small pilot study

The impact of running this brief, interactive small-group employability activity in first year undergraduate psychology students was examined. This was done by comparing a group of students whose academic tutor conducted this activity (N=9), with another group where this activity was not done (N=7), resulting in a total of 16 students across the two groups. The two academic tutors were 'matched' for level of teaching experience in that they were both junior members of academic staff, and hence had a similar level of experience as academics working with our undergraduate student population. They were both also new academic tutors, and matched for gender, as well as the specific psychology course programme the students allocated to them were registered for ie three-year standard psychology programme (without specialisation in specific streams). The difference between the tutors was that one ran the new employability-related icebreaker activity and their students participated in this, whereas the other tutor and their students did not.

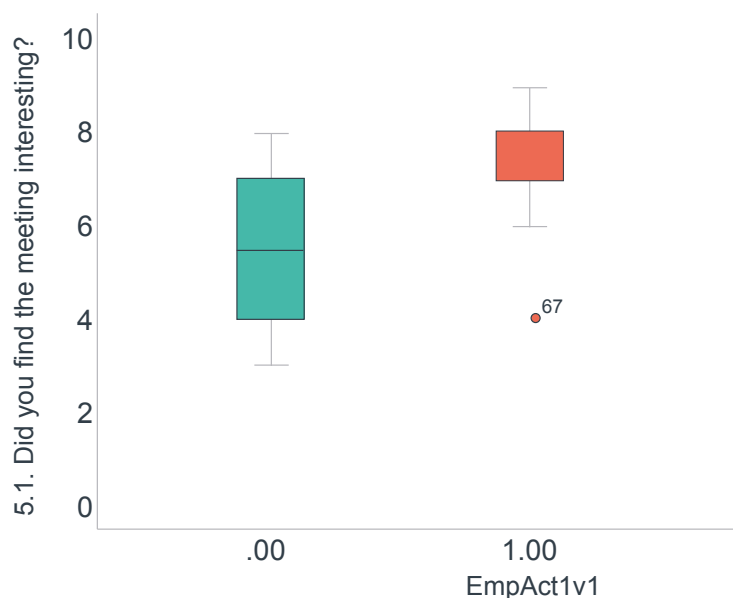
The tutees of these two matched academic tutors were contacted by a student researcher they did not know and asked about the relevant academic tutor session. The researcher asked students about how they experienced the academic tutorial sessions and gathered students' ratings on relevant questions about their experience of the tutorial group session. These ratings were gathered using a 10-point Likert scale with 1 indicating 'not at all', and 10 indicating 'very much'. Independent samples t-tests were then performed to compare group ratings.

Box plots were used to summarise the data visually. They depict the distribution of the student ratings, with the line in the middle of the coloured boxes represented the median rating for each group (0 indicated the 'as usual' no employability activity group, and 1 indicated the employability group). The bottom of the boxes depict the 25th percentile mark for each group, and the top of the boxes the 75th percentile mark. The T-bars attached to the boxes extend to 1.5 times the height of the box or to the minimum/maximum values. Dots represent outlying data points.

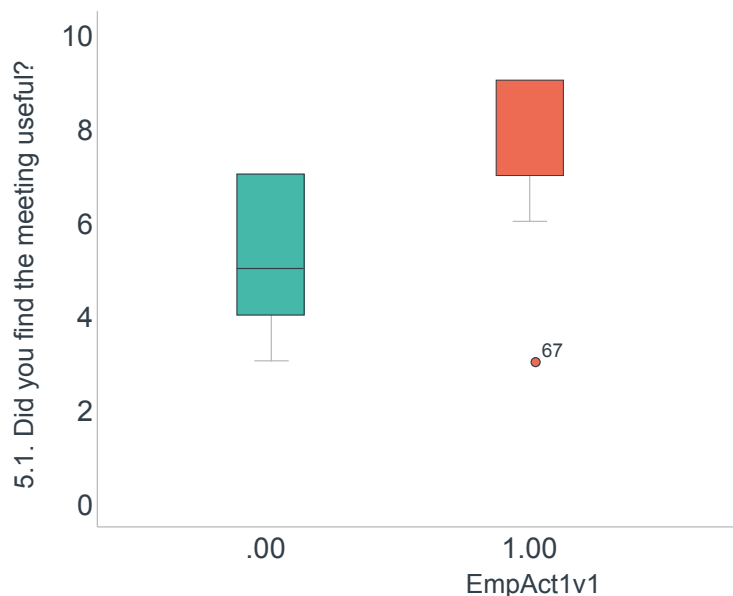
The results showed that when students were asked if they discussed career goals and personal development, students who attended the meeting where their tutor conducted the employability-related icebreaker activity had a higher level of endorsement to this question (as indicated by the red box plot below). Their counterparts who did not partake in the activity (in blue below) showed a lower level of endorsement indicating only a little informal and spontaneous discussion of career goals and personal development, possibly only in a few students. Those in the employability-related activity group showed statistically significantly higher ratings on discussion of career goals and personal development than the control 'as usual' group, $t(14)=-2.55$, $p=0.023$



Students were also asked how interesting they found the academic tutor meeting, and here again, the students who did the new employability-related icebreaker activity (red) found it more interesting than those who did not (blue). However, this finding did not reach statistical significance, and was only a trend $t(14)=-2.55$, $p=0.23$.



Students were also asked how useful they found the academic tutor meeting, and here again, the students who did the new employability-related icebreaker activity (red) found it more useful than those who did not (blue). Those in the employability-related activity group showed statistically significantly higher ratings on finding the meeting useful than the control 'as usual' group, $t(14)=-2.57$, $p=0.22$.



Correlations from the roll out to a larger group study

Our first-year intake is just under 200 students. The new activity was rolled out across the school and there was a mix of tutors who conducted the activity and those who did not have time to do so. Therefore, when the researcher surveyed a wider pool of students, of those who responded there was a mix of those who had ($n=35$) and had not ($n=31$) been exposed in varying levels to the employability-related icebreaker activity via their academic tutor meeting, and also some who were not sure ($n=3$). From the students' description of their experience, it became clear that while tutors were provided with the same employability-related activity material, in practice, they used the exercise at their discretion with a mix of applications, from either completing the exercise as described to adapting it or completing the exercise partially due to time constraints or group size as some groups were larger than others for pragmatic reasons.

The students were asked about the degree to which careers and personal goals were discussed, and also the extent to which the academic tutor meeting impacted on their thinking after the session, to explore if there was a beneficial impact of the activity. These ratings were gathered using a 10-point Likert scale with 1 indicating 'not at all', and 10 indicating 'very much'. Spearman's correlations were performed on data from the whole group ($n=69$) to examine the relationship between the extent of employability-related discussion during the targeted academic tutor session and the ratings on relevant subsequent reflection.

A statistically significant strong positive Spearman's correlation was found between greater level of discussion of career goals and personal development in the academic tutor meeting with a higher level of reflection on career goals and personal development ($r=0.7$, $p<0.001$). A similar positive Spearman's correlation was found between greater level of discussion of career goals and personal development in the academic tutor meeting and level of contribution this had towards their personal development and reflection ($r=0.6$, $p<0.001$).

Therefore, it can be concluded that student feedback showed that the new employability-related icebreaker activity was well-received. It was rated as a highly positive and worthwhile experience and highly useful. While it was not significantly more interesting than the control 'as usual' group run without the employability-related activity, this small dataset shows a very promising trend in the right direction, suggesting that these carefully designed intentional activities can potentially be both beneficial to students and enjoyable as well. Those who were exposed to the new activity benefited as they reported high levels of reflection on personal development and career goals after the session and they found that the activity also contributed more towards their personal development and reflection.

In view of the encouraging feedback from adding a short and simple initial employability-related activity within the academic tutorial setting, more activities will be designed to build on this early initiative, such as further use of reflection (Kolb, 1984) and the building of personal connection with peers and academic staff in a context-appropriate way through more employability-related activities. Applying this reflective cognitive-behavioural approach sets the scene for applying coaching models (eg Leach's, 2021), for subsequent sessions designed to encourage positive coaching conversations, inspire early exploration and engagement with personal and employability-related development. This is in order to progress undergraduate student from the pre-contemplation phase to action phase of behavioural change (Skiffington and Zeus, 2003) as they move through their programme towards graduation.

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Dip, dabble and dive – developing employability to create a sustainable, healthy and socially just future

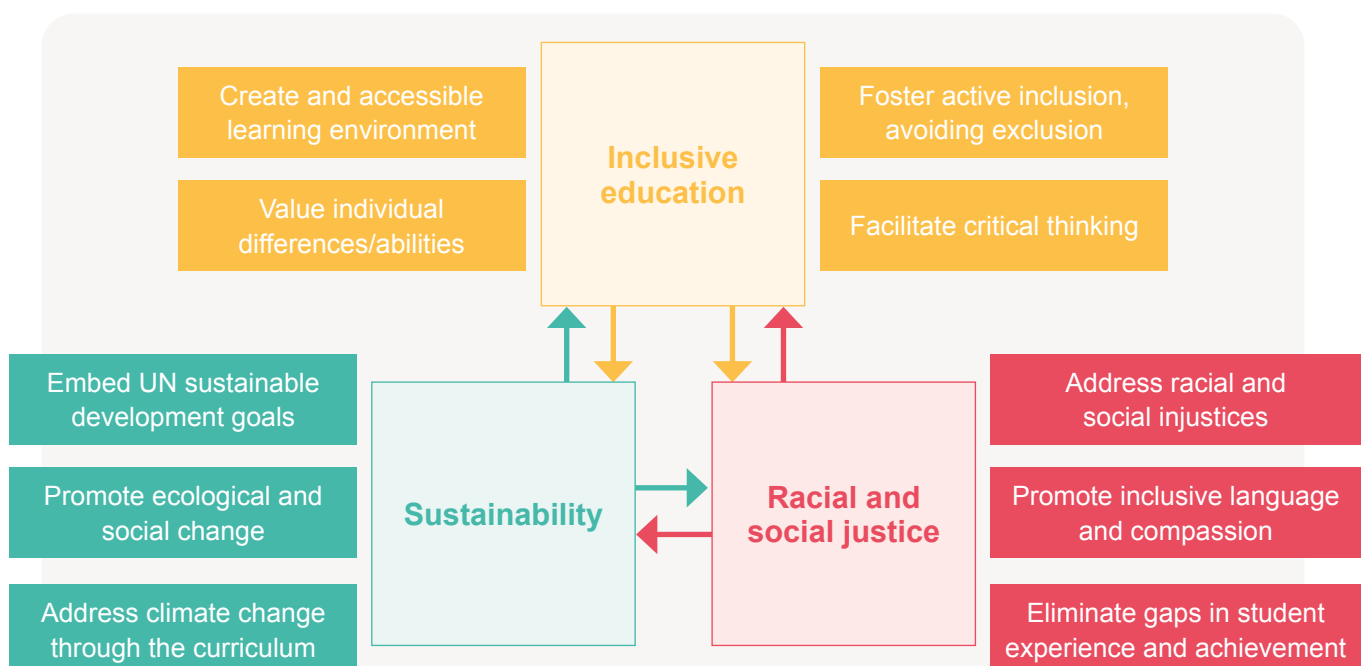
Dawn Lees, Anka Djordjevic and Rae Roberts, University of Exeter

Background

The purpose of the University of Exeter is ‘To use the power of education and research to create a sustainable, healthy and socially just future’ (University Strategy, 2030). Through the Transformative Education Framework, the aim is to use education to transform our students’ lives so that they, in turn, can transform the world. This education innovation was introduced in 2021 as part of the implementation of the Success for All Strategy.

The three principles in the Transformative Education Framework are Inclusive Education, Sustainability, and Racial and Social Justice (Figure 1). There is a good deal of intersectionality with this approach.

Figure 1. Transformative Education at the University of Exeter



On 20 May 2019, the University of Exeter declared an environment and climate emergency. We committed to building sustainable curricular and communities reflecting our commitment to environmental sustainability in the university's 2030 strategies.

Our environment and climate emergency policy aims for us to “be recognised as an Environment and Sustainability Leader across the HE sector, nationally and internationally by 2025”. In 2019, Exeter signed the United Nations Sustainable Development Goals (SDGs) accord (United Nations, 2015). In 2022, the Times HE Impact Rankings (Times Higher Education, 2022) placed us 42nd in the world for overall SDG impact and eighth in the UK.

Our approach at the Career Zone, over the past decade, has been that, through exposure to a ‘culture of sustainability’, all of our students, regardless of discipline, year of study or level of engagement, have the opportunity to develop a general understanding of sustainability sought throughout the modern graduate labour market. Some programmes are explicitly about sustainability, and others have sustainability threaded through them.

Our programmes are designed using Education for Sustainable Development Principles; equipping students with the knowledge and understanding, skills and attributes needed to work and live in a way that safeguards environmental, social and economic wellbeing, both in the present and for future generations (Advance HE and QAA, 2021). We use the SDGs as anchors to show how particular problems relate to wider issues and articulate the complexities and inter-connectedness of issues across social, cultural, economic and environmental spheres. We are trying to make students aware of these drivers so they can consciously reflect on their experiences, consider their own impact and make informed decisions about their career choices and how they fit into an evolving future of work (Bakhshi et al, 2017; Lees, Djordjevic and Roberts, 2022).

The government introduced the Green Jobs Taskforce Report in 2021 and sets out its ambition to level up the country and support jobs throughout the UK as we work towards net zero by 2050. The reality is that, in addition to the specialist roles recognised as working in the ‘sustainability sector’, all jobs will need to be green jobs. The report focuses on further education, T Levels and career changers – we think that HE also has a huge role to play and that our graduates can be part of leading the solution.

Approach

The Career Zone uses a broad definition of sustainability, encompassing mental health and wellbeing in the workplace to recycling, waste and water audits. Students can engage to develop their employability at three levels: **Dip** – short interactions, **Dabble** – exploring the issues, **Dive** – developing and using practical skills and gaining experiences. Figure 2 sets out a broader range of activity than we can cover in detail here. Students who engage with this agenda Thrive as graduates in the sustainability sector or take their skills and behaviours to other areas of employment.

Figure 2. Dip, Dabble and Dive: developing employability and sustainability awareness

DIP Short interactions		DABBLE Exploring the issues		DIVE Developing skills and gaining experiences	
Career Zone Podcast	Create your future	Skills sessions	Student Start-ups	Career Mentor Scheme	Green Consultants
A variety of sustainability-related podcasts eg, 'Top tips for securing a role in the Green Sector' 'Careers for Social Justice'.	A personal and professional development course that helps first years think about their future, and identify practical steps to help them get there. Learning about the future of work with its consideration of sustainability, equality, diversity and inculsivity.	Personal and Professional Development experiential skills sessions run throughout the year. All of these topics align with the SDGs.	Enterprise education and busines start-up support from which many successful social enterprises and sustainability related businesses have been developed.	Matching students with an experienced professional to facilitate one-to-one careers advice and has included mentors from the Met Office, NHS, Environment Agency, Devon County Council and the RSPB.	Our multi-award winning programme allows students to attend skills based training, develop project management and behavioural changes skills, an on-campus project and undertake an internship, to give students wishing to pursue a career in the environment and sustainability sectors the competitive edge for roles in the green sector.
Careers Fair	Ask an Alum	Employer and Alumni Presentations	Exeter Award: Sustainability Theme	Grand Challenges	
More tyhan 10% employers at Fairs in Streatham and Penryn are related to the Sustainability sector. Our fairs are paperless fairs to make our provision more sustainable.	Access to hundreds of alumni who are able to answer questions on the sustainability sector or organisation students are interested in working with when they graduate.	Many employers come to campus to promote their organisation. A large proportion of these are related to sustainability. Eg, 'Careers in Sustainability and Environmental Protection' with speakers from the Environment Agency and SW Woodlands Trust.	Careers in the environmental and sustainability sector are becoming increasingly popular. Sustainability covers sustainable working practices such as workforce resilience, wellbeing and corporate social responsibility. Through the award you can explore the skills and experiences you may need to succeed in a career in the green sector.	An inter-disciplinary, enquiry led learning experience which helps students develop their employability by exploring 21 Century issues with a strong focus on sustainability. Eg, Climate and Environment Emergency, Mental Health and Future Food.	
				Grand Challenges	
				Credit-bearing placements with for example, Treeconomics, Planethub, and ClearLead Consulting.	

Dip

For students who only want to ‘Dip’ in, we ensure they encounter our culture of sustainability.

The Career Zone podcast addresses careers issues not covered elsewhere in the careers curriculum. Episodes relating to sustainability include: ‘SDGs and career planning’, ‘Tops tips for securing a role in the green sector’ and ‘Careers for social justice’. Podcasts can be found on iTunes and Spotify.

We advertise vacancies that students can search to see whether they are interested and have careers fairs where about 10% of exhibitors are directly related to the sustainability sector. *Ask an Alumni* enables current students to ask alumni questions about their role, organisation or sector via a short email exchange. Students gain insights into careers they are considering and develop networks.

Create Your Future (CYF) (Lees et al, 2022), is a mandatory programme first year students complete as an initial step in career thinking. This is based on the award-winning eX Factor programme, which ran from 2010 until the pandemic. CYF is now delivered as a mix of five face-to-face and online sessions and is the cornerstone of employability and careers delivery. It helps students to think about their values and motivations and signposts them to the developmental support available. In the workshops students work in groups to critically analyse the organisations graduates from their discipline have gone on to work for, in terms of sustainability and EDI. This is the only element of delivery that is mandatory, everything else students opt-in to participate, and engage at any point during their university career.

Dabble

The more substantial engagement of ‘Dabble’ opportunities include our Career Mentor Scheme where more than 600 students a year are matched with alumni and businesses and can communicate by email, messaging, phone, video call or in person, over a six-month period. We have recently matched students with mentors at the Met Office, Vattenfall Wind Power and the Environment Agency. Matching students with people who work in the sector helps students gain a better understanding of the sector and roles available within it, enables them to develop their networks, and helps them decide on a career path.

We run employer and alumni events such as ‘Careers in Sustainability and Environmental Protection’, including speakers from the Environment Agency and the SW Woodlands Trust and a Sustainable Futures Business networking event.

Personal and professional development experiential skills sessions run throughout the year. These two-hour long sessions align with the SDGs and include topics such as Understanding Social Enterprise, Inter-cultural communication, Collaboration, Problem solving and Resilience. Of the c100 skills sessions delivered a year, two-thirds of delivery is face to face with a third online. Students who are based at any of our campuses, or who are working or studying abroad, can access support wherever they are.

Dive

Our dive opportunities are for students who really want an immersive experience to develop skills and gain experiences.

Grand Challenges (Anderson, Djordjevic and Ritchie, 2021) is an innovative learning experience which helps students develop their employability as they work in research-led, interdisciplinary inquiry groups to tackle real world problems. The week-long challenge has taken place for the past decade. The challenges, such as Future Food, Planetary Health, Social Inequality and Student Mental Health, align with the SDGs and there is a Climate Change challenge where students work with world-leading academics to address the climate emergency. Students develop their ideas and create original solutions, with outputs including apps, videos, books, social media campaigns and games.

The Green Consultants programme is composed of three elements. The first stage is online training, covering 1) working as sustainability consultants, 2) soft skills (networking, persuading, influencing and negotiating, and problem solving) 3) project management and auditing and 4) technical skills such as Environmental Impact Assessments, BREEAM, ISO14001 and BCORPS.

For the second stage, students apply to participate in On Campus Projects (OCP), and students undertake face-to-face training with their group. These groups work for the Sustainability Team on real projects related to the university's net zero policy. Recent OCPs have included 'Anthropogenic impact on biodiversity and wildlife on campus' and 'Devising a methodology for monitoring sustainable transport provision'. The third element is a week-long Internship with an external organisation, eg LiveWest, ClearLead Consulting and Optix Solutions. These internships are designed to improve the sustainability of the host organisation and vary according to need. Green Consultants has a 10-year history of training students in the skills and knowledge required by consultants in the green sector.

*"Green Consultants has been an **absolutely fantastic opportunity**. It has given me the chance to gain **real, professional experience, the drive and the confidence** to pursue a career in this sector."*
(Modern languages graduate)

Outcomes

In the Career Zone, we have clearly badged all our employability programmes with the SDGs since 2017, an approach the institution is now adopting. This means that students are able to seek out, or become explicitly aware of, the SDGs of the programmes they engage with.

Of our c.23,000 undergraduates, 95% engage at some level with Dip Dabble and Dive career development for sustainability provision. At least 10% Dive into it and this number is growing. The Green Consultants programme has expanded significantly since we have been able to offer the training online. In 2021-22, more than 300 students engaged with online training, of these 250 completed at least the first section and more than 100 completed it entirely. We are currently exploring ways of expanding the number of students able to engage with an OCP and have bid for funding to expand the number of internships we can offer.

Grand Challenges has an average of 400 completers each year and lends itself to nurturing a 'pipeline of talent' in which roles between students, academic and professional staff become blurred. An example is shown in Figure 3.

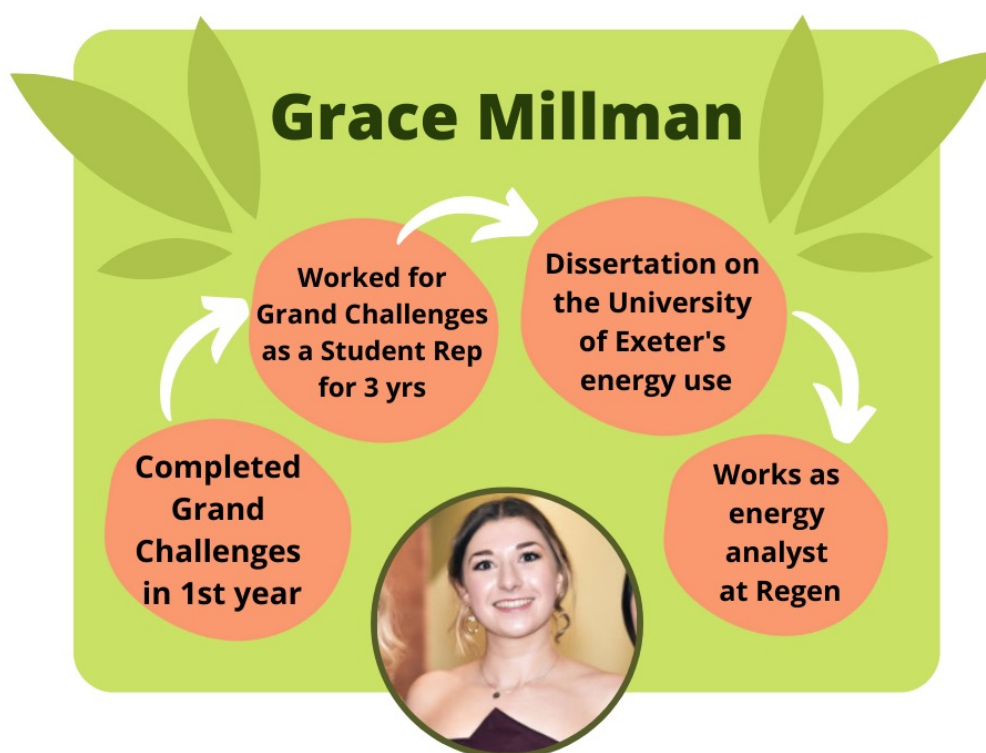


Figure 3. Pipeline of talent – Grace Millman, Mathematics (Climate Science) MSci, graduated 2020

Each year, hundreds of our graduates enter professions that are directly related to sustainability, from ecologists, sustainability officers, recycling officers, and conservation planners to wellbeing officers and historical building inspectors. Hundreds more use the skills and experiences they have developed in a different sector, but continue to apply the behaviours and skills they have learnt.

For the 2020-21 Career Destination survey, an additional question was added to the survey for anyone who was working or due to start work in the next month. This question asked if someone's work contributed to the UN's Sustainability Development Goals, and if it did, which goals specifically. Table 1 shows these data and is likely to be an underrepresentation because 1) not every graduate responded to the survey and 2) it is likely that not every graduate had made the links to the SDGs and their role.

Table 1. UN Sustainability Development Goals and graduate outcomes

College	Contribute to SDG				Total
	Yes		No		
Business	120	49%	125	51%	245
Medicine & Health	25	50%	25	50%	50
Mathematics & Physical Sciences	75	41%	105	59%	180
Humanities	150	40%	220	60%	365
Life & Environmental Sciences	115	44%	140	56%	255
Social Sciences & International Studies	65	47%	70	53%	135
Total respondents	545	44%	690	56%	1,235

The Dip Dabble Dive model means that, as the portfolio changes and develops, the integration of sustainability into the offering remains. It is holistic and not reliant on any one initiative. It is a robust and sustainable approach that is highly transferable to other contexts.

A new initiative for the University of Exeter is *Future 17*. This module is based on the Grand Challenges model, but takes the partnership working even further. Exeter has combined with Quacquarelli Symonds to create a transformative educational partnership. The vision is to build a global ecosystem that connects students from multiple universities with international organisations (industry, third sector, NGOs). Students will be presented with real-world challenges from partner organisations that are aligned to the SDGs and represent a genuine need for the organisation. The student teams will collaborate across borders and disciplines to develop actionable solutions and galvanise real change.

By offering a wide range of opportunities for students to engage with sustainability in its broadest sense, and supporting students to evaluate their values and motivations, we hope that students can see how they can impact the world through their future career, whether they enter a 'green' career or not.

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Collaboratively embedding employability into an introductory legal skills module: reflections on a soft launch

Amanda Millmore, School of Law; **Aileen K Ho**, School of Psychology and Clinical Language Sciences and **Sharon Sinclair-Graham**, School of Law, University of Reading

Background

Many law undergraduate students start their time at university with a clear aim to pursue a legal career, while others lack any formal plan; approximately half of our graduates pursue legal careers. At the University of Reading, our LLB qualifying law degree includes a compulsory legal skills module for first year undergraduates (and incoming third year transfer students), which starts in their induction week. Serving as a transition to university, this module is an ideal opportunity to introduce employability ideas at an early stage.

Each student at the University of Reading is allocated an academic tutor (an academic within their school/department) who has responsibility for their academic, personal and professional development (Millmore et al, 2022). In law, the academic tutor teaches the legal skills module to their tutees and this is the start of their tutor/tutee relationship. Part of the academic tutor's role is to help the students to develop professionally; a refresh of this module in 2021 presented a golden opportunity to introduce employability explicitly within the legal skills curriculum.

Approach

Using the broad Knight and Yorke (2003) model of employability and learning, we worked collaboratively to incorporate expertise in psychology to address two key inter-related model components, ie efficacy beliefs and metacognition, which were identified as gaps for further development within the School of Law.

We devised a task underpinned by a (cognitive) behavioural approach, specifically Leach's (2021) GROW model to scaffold cognitive-behavioural coaching conversations designed to move students from the pre-contemplation phase to action phase of behavioural change (Skiffington and Zeus, 2003). The application of the GROW model to developing undergraduate student employability actively supports students in their progression from career 'Goal' (G) reflection, to 'Reality' (R) exploration of what they can start doing now, to considering appropriate 'Options' (O), and to planning concrete actions for their personalised 'Way Forwards' (W). While actions were self-identified, promoting autonomy and intrinsic motivation, consistent with self-determination theory (Ryan and Deci, 2000), they were also encouraged to be SMART, ie Specific, Measurable, Agreed, Realistic and Timed (Leach, 2021), to allow for constructive follow-up discussions in subsequent academic tutor meetings to build momentum and encourage further development and growth.

The legal skills module is taught in an accelerated window at the start of the first term of the first year. In 2021-22, we decided to gently introduce employability to our 400 first year undergraduate and 25 international final year transfer students. We started the first taught session with a discussion about skills that will help a law student, linking to our set of 11 employability attributes that embody “what a Reading law graduate looks like” (Bennett and Cooper, 2018). Then our intervention employability task was introduced to encourage ongoing conversations about employability skills and attributes with their academic tutor.

The employability “action plan” task

Students were asked to work in pairs within the very first compulsory small-group taught session. The activity was a simple one, taking approximately 10 minutes:

- 1 Write down their career goal if they have one (whether specific, “I want to be a human rights barrister” or something more general, “I’d like to work with people”), and identify the skills they need to obtain to assist them in pursuing that goal.
- 2 Identify three positive actions they will take to help them develop the skills and pursue that career goal.
- 3 Discuss the career goal and three actions with a partner.

This task was followed by a whole class discussion, with the academic tutor signposting opportunities and actions that would help the students achieve their goals. For example, an aspiring barrister could be signposted to advocacy and mooting opportunities, students could join the University Law Society or volunteer with local third-sector advice services. Those with more generic goals could be signposted to careers advice and suitable activities.

Following up the “action plan”

During routine termly meetings with their academic tutor, students are able to discuss their career goals, involvement in extra or co-curricular activities and are signposted to support services such as the University Careers Service, or to volunteering, work experience and skills opportunities offered by the Law School and externally.

Following the action plan task, students were encouraged to revisit their action plan with their tutor two months later, and again in the subsequent term, reflecting on steps they had taken (or had not) since that initial class. Tutors could support them to further their career aims and encourage them to look to wider opportunities.

Outcomes, findings and discussion

We followed up this task once the teaching on the legal skills module had finished and after the autumn term academic tutor meeting. We used an anonymous survey designed to elicit feedback on the task, with Likert scale questions and open-text responses. This was shared via email and direct approaches in lectures in other modules. We struggled to get students to engage with the questionnaire; the quantitative data is not statistically significant but qualitative comments were insightful.

Of the students who responded to the survey, the majority found the task was enjoyable (71%), increased their confidence (86%) and helped them to think about their future (71%). Qualitative responses included: "...really helpful as I gain... knowledge about the skills that are needed for a successful career in the future...". Another comment indicated that there may have been problems with delivery of the employability task, "Due to limited time, I didn't get the chance to talk about my career path".

The student respondents clearly acknowledged the benefit of this task where it had been run as intended.

We then followed up with the academic staff teaching this module, to find out how the task worked in practice and 38% (8/21) of staff responded. Our findings were mixed and it became apparent that while the task worked well for some, others had not carried out the task as expected. The qualitative comments were most insightful, from the positive, "Majority of the students were excited about this question because it was the first serious conversation about their future plans," to the less helpful, "we only did the exercise in the loosest sense, we didn't formalise into the action points, but people talked about why they were studying law and what they might hope, at this stage, to do with their degree." One colleague wrote honestly, "Did not really land, but can be linked to my lack of engagement and understanding of it...I do not think that I gave this my full attention."

Evaluating this, it seems that where it was undertaken as intended, the task was a positive and exciting one for students, but instructions to staff were insufficiently clear to explain the rationale behind it and some failed to engage fully.

Academic tutors were supposed to discuss progress towards the action plan in follow-up tutor meetings. One academic said, "I only did it with a few students", while another reported, "it was a good talking point with some students...and I was able to signpost some activities/opportunities as a result." We found that students did not record their three actions anywhere permanent, and often had forgotten what their action plan was, while many staff did not appreciate that they should be following up in academic tutor meetings.

At the heart of these misunderstandings was a lack of communication as to the rationale and plan for this task. Formalising the action-setting and follow-up would assist in highlighting to both staff and students the importance of the activity and that there would be follow-up activities.

Key messages for the future

Learning from our mistakes with this soft launch, we modified this task for the next academic year to explicitly emphasise the employability focus and by embedding it within summative assessment.

- 1 Explain that the task is to highlight employability skills and the need to work towards goals by setting, recording and taking clear actions.
- 2 Signpost to staff and students that the task will be followed up in subsequent tutor meetings and assessment.
- 3 Embed the task specifically into assessment (an assessed portfolio) – explicitly require students to record their three actions and write a reflection on their progress towards them.
- 4 Ensure that staff have access to information about opportunities to share with students in setting their action plans. This is particularly important for new staff who may not be aware of the full range of opportunities.

Final comments

In summary, our soft launch was too soft, and we have bolstered the task for the subsequent academic year.

This task is a simple and enjoyable intervention that is easily adapted to different contexts beyond the Law School. It is a good icebreaker introductory task for tutors and encourages students to think strategically about their career goals and how they can achieve them, by taking simple steps within their control.

A cognitive behavioural approach promoting action and autonomy via a guided small group activity approach is promising in starting to develop student employability early on in an undergraduate programme.

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The Graduate Stream in Psychology Award – one year on

Pauldy Otermans, Sofia Barbosa Bouças and Stephanie Baines, Brunel University London

Background

It has been shown that soft skills are not given enough attention in education and that there is an over-emphasis on the hard skills that graduates should obtain (Noah and Aziz, 2020), leading to a graduate skills gap. Obtaining a degree is not enough on its own to get you prepared and ready for today's ever-changing graduate job market. To address this problem, our aim was to develop and launch a specific skills-set curriculum for our undergraduate psychology students. Research has shown that the addition of extra-curricular employability activities enhances career outcomes of students (Jackson and Tomlinson, 2022). This would support our students to enable them to become well-rounded graduates ready for the wider world of work, irrespective of their chosen career path after their psychology degree.

In 2019-20, we started to set up the Psychology Graduate Stream in the undergraduate psychology programme (Otermans and Barbosa Bouças, 2022). The aim is to provide students with a grounding in employability skills and prepare them for graduate life as well as encouraging an ethos of lifelong learning. Additionally, the goal is to enhance students' understanding of the diverse range of career options available to them as psychology graduates. This stream links content taught in the programme with extra-curricular activities delivered outside the programme. Previous evidence shows that these skills should be learned in a more interactive, practical manner compared to more traditional forms of teaching (eg lecture-based delivery of theoretical content) (Virtanen and Tynjälä, 2019).

In 2021-22, we launched the Graduate Stream in Psychology Award, which consists of three categories depending on what students have successfully completed: Bronze, Silver and Gold. Students can engage and complete a variety of employment-enhancing activities which they log on an online portfolio (PebblePad). At the end of their degree, their eligibility is assessed and the level of award they have earned is determined. The award is added to their Higher Education Achievement Report (HEAR) transcript and on graduation day they receive a special certificate from the Division of Psychology to celebrate their achievements. In this case study we showcase the further development and implementation of the Graduate Stream in Psychology Award.

Approach

We have identified a number of employability-enhancing activities for students to engage in during their degree programme. An overview of these activities is provided in Table 1. All these activities will support the students in the development of key skills they need to become successful graduates and cover the breadth of employability-related skills (eg communication, professionalism, networking, career awareness). By attending the weekly guest speaker talks in psychology, students will get a better understanding of the possible career avenues, which they may not hear about in the traditional degree teaching as many psychology students embark on a career outside the expected psychology jobs

(eg clinical psychologist). In addition, by meeting with a mentor, an alumnus, or by attending events organised by the Professional Development Centre, such as Psychology Uncovered, students get further insight into potential jobs (and what these actually entail). They also develop networking skills, communication skills, resilience, professionalism and how to overcome barriers as opposed to giving in when things do not go as expected.

Table 1. Employability-enhancing activities and relevant evidence

Number	Type of activity	Evidence	Bronze	Silver	Gold
A	Mentor meeting with Brunel alumni	A pdf of the email chain/LinkedIn messages between the student and the alumni clearly indicating when the meeting/conversation took place.	None	1 out of A, B, C	2 out of A, B, C
B	Mentor meeting with Brunel Mentoring Scheme	A pdf of the email chain/LinkedIn messages/Brunel Mentoring platform between the student and the alumni clearly indicating when the meeting/conversation took place.	None	1 out of A, B, C	2 out of A, B, C
C	Shadowing Brunel alumni or other employers	A pdf of the email chain/LinkedIn messages between the student and the alumni clearly indicating when the shadowing took place.	None	1 out of A, B, C	2 out of A, B, C
D	Attending PDC events such as Psychology Uncovered	List the sessions you attended (date, name of the guest speaker and topic).	2	4	6
E	CV and cover Letter check (by PDC)	Name of person who reviewed CV/ cover letter; date and time; and pdf of email exchange.	CV or cover letter check	CV or cover letter check	CV and cover letter check
F	Having a mock interview (by PDC)	Name of person who did mock interview; date and time; and pdf of email exchange.	Yes	Yes	Yes
G	Attending guest speaker sessions of psychology graduates (total 20 per year)	List the sessions you attended (date, name of the guest speaker and topic).	25%	45%	65%

Number	Type of activity	Evidence	Bronze	Silver	Gold
H	Volunteering experience	Signed agreement (signed by PDC, you and the organisation) Completed pre-volunteering experience survey responses Completed post- volunteering experience survey responses	None	Either H or I	Both H and I
I	Work experience	Signed agreement (signed by Brunel Volunteers, you and the organisation) Completed pre-work experience survey responses Completed post- work experience survey responses	None	Either H or I	Both H and I
J	Employability curriculum (in 2022-23 total 10)	Badge	2	4	6

The aim of the work/volunteering experience in psychology is to enable students to develop skills relevant to professional practice and to gain an understanding of how to apply the skills in an employment context. By the end of the work/volunteering experience (30 hours each), students should be able to reflect critically on issues encountered in an employment/professional setting and apply problem-solving skills to overcome them. Students will develop a range of skills including self-directed learning, time-management skills, working independently, working in team, adapting to a workplace setting and effective communication skills.

By successful completion of the work/volunteering experience, students will be able to:

- + understand and articulate their employment-relevant attributes, skills, attitudes and preferences
- + effectively present and promote themselves to potential employers
- + identify their need for further training, skill development or new competencies to facilitate their successful career, and their ability to create a strategy to achieve these
- + develop self-awareness (eg identifying personal preferences and attributes; employability; self-motivation)
- + interpersonal and transferable skills (eg teamwork; effective communication; self-presentation; IT and digital literacy skills)
- + professional development (eg ethics and social responsibility in the workplace, well-being at work, career planning).

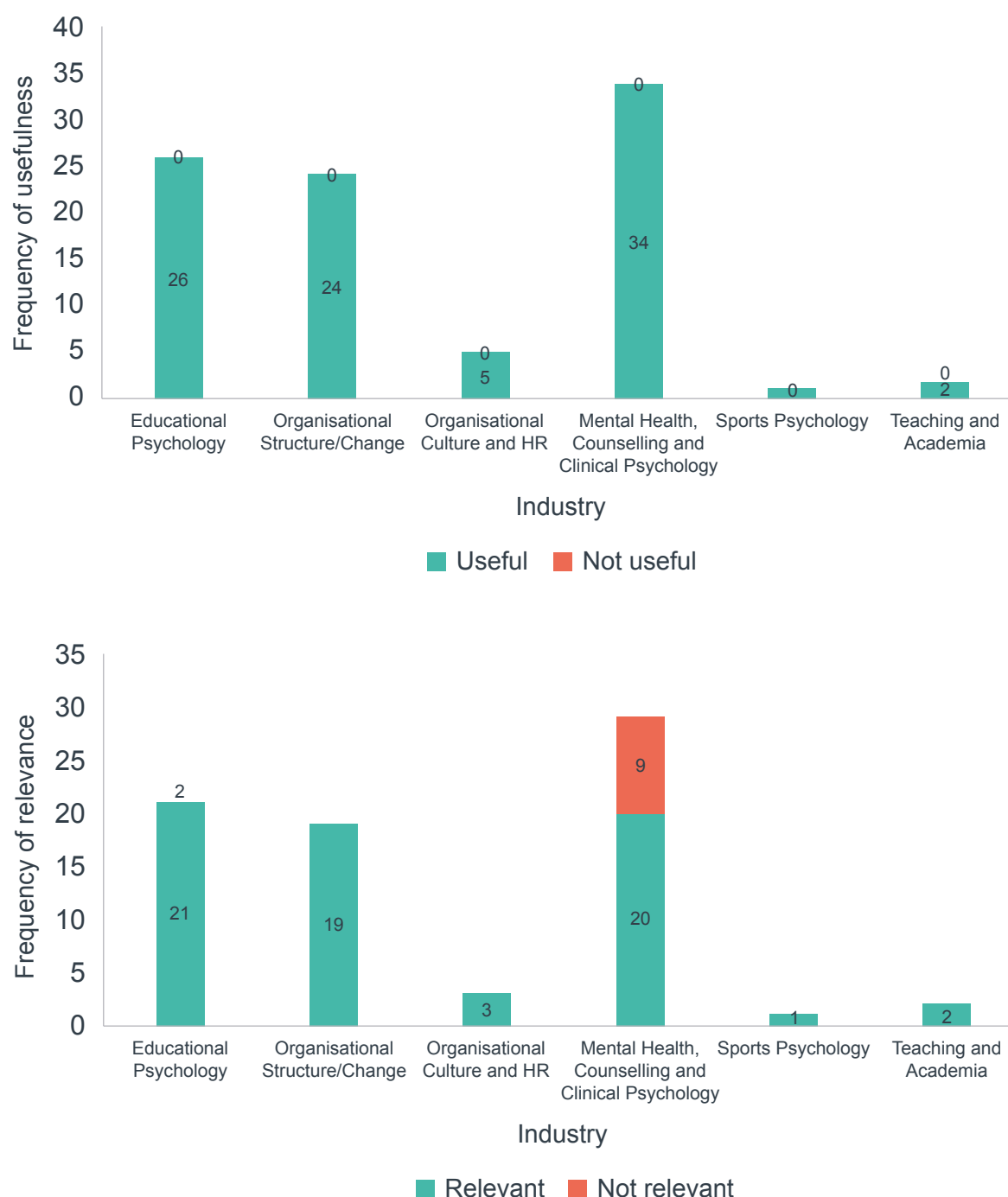
For each level of the Awards, students would have to have completed a set number of employability-enhancing activities. The number of activities required to be completed increases as the level of award increases (Table 1). In order to receive the award, students need to upload all relevant evidence and descriptions to their online portfolio by a set date (usually June). This task of reviewing potential evidence to determine whether or not it is relevant in a timely manner is in itself a skill that many students learn in the process. Examples of evidence include a pdf of the email where they received feedback on their CV/cover letter/mock interview or a pdf of their email communication with a Brunel alumni/mentor (Table 1). Before the student can start with their 30-hours work/volunteering experience, they need to obtain an agreement signed by the university, themselves and the organisation, and they need to complete a pre-experience survey. After they complete their 30 hours, they need to complete a post-experience survey. For both surveys, they will receive an email with their responses. These emails, along with the signed agreement, are then also uploaded as evidence. These online portfolios are assessed by the Division of Psychology on a yearly basis by two academics. To assess the portfolios, the academics will go over the evidence provided by each student. Each piece of evidence is checked by the academics to ensure that it matches with what is required (eg an email thread between the student and their mentor). Submission of the required evidence is sufficient, there is no additional assessment. Based on the evidence provided, the academics determine how many activities the student has appropriately evidenced, which determines their level of Award. Any doubts are clarified with students via email during the week of portfolio assessment. Once assessment is complete, the academics create each student's individual certificate showcasing the level of Award and outlining the activities completed.

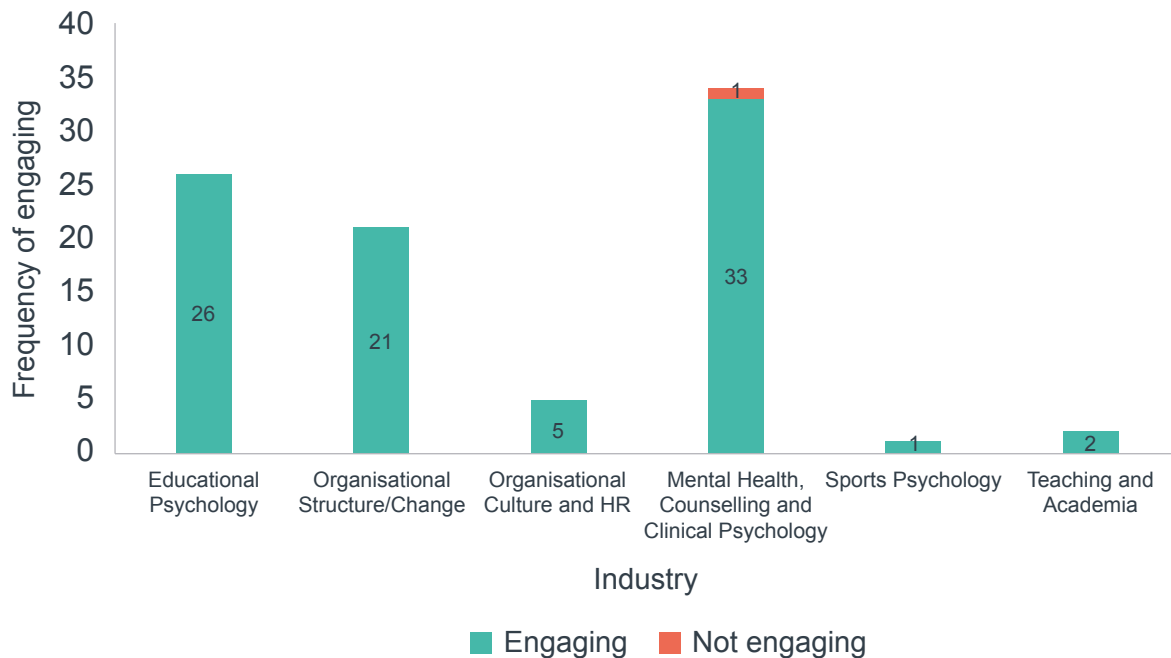
Outcomes

Students attending the guest speakers' talks were asked to complete a very short survey about the usefulness of the talk, the relevance of the talk to their future career, and how engaging the talk was. Students provided their views using a five-point Likert-type rating scale and the results on both ends of the scale were aggregated. Frequency of usefulness is determined by collapsing the positive end of the Likert-type rating scale (ie 'very useful' and 'useful') and 'Not useful' was determined by collapsing the negative end of the scale (ie 'Not very useful', 'Not useful at all'). In all instances, the 'neutral' option was not chosen by students. Results were categorised by "industry" and Figure 1 shows that of the 84 students that completed the survey, the majority of students found the talks very useful, relevant and engaging. The only area where there were some negative responses was the area of 'relevance'. We have addressed this by gathering feedback from students on the type of careers they would like to hear from. We have also emphasised to students when talking about the graduate stream that it can be useful to hear about career options that they may not know about or think are 'not relevant'. Firstly, it is just as useful to find out that you do not want to do something. Secondly, the guest speakers not only talk about their current role, but their career path, previous roles, and decisions leading up to their current role. Thirdly, a job title can only say so much and many students are not aware of what is involved with a particular role. This will be used to confirm an even wider range of speakers for the guest speakers in psychology series 2022-23, including some areas that

we had previously not realised our students were interested in (eg organisational psychology, behavioural economics and law) These talks will take place weekly, are very informal and are available to all psychology students (undergraduate and postgraduate levels).

Figure 1. From top to bottom: feedback on usefulness, relevance and engagement of the guest speaker talk.





Students were actively encouraged to sign up on PebblePad to log their activities. Data from 2021-22 indicates that 31 students across the undergraduate programme signed up. For the work experience, which was particularly targeted to Level 5 students, nine students worked together with colleagues from the Professional Development Centre to find a work experience and successfully completed it. In addition, the volunteering experience, although targeted at Level 6 students, was completed by two Level 6 students and two Level 5 students. In the end, at graduation, two graduating students received the Graduate Stream in Psychology – Silver Award based on the evidence they provided of completing employability-enhancing activities. The other students who uploaded evidence are in their final year in 2022-23 and will be assessed in June 2023 for their level of Award.

During 2021-22, we collated anecdotal evidence of students' experience with the entire Graduate Stream in Psychology Award. Overall, students gave positive feedback but had some constructive suggestions on how to make it even better and more accessible. Firstly, until then the work experience was linked to Level 5, and the volunteering experience was associated with Level 6. Students informed us that they would like to have the opportunity to decide for themselves when to complete each experience. Therefore, we have removed these restrictions and students can complete a work/volunteering experience in either Level 4, 5 or 6. Secondly, students requested clearer rules on the eligibility criteria of each level of award. For 2022-23, we have implemented a system with explicit rules as to what each level of award entails. For example, in order to be eligible for Bronze, a student needs to attend 25% of Guest Speaker in Psychology talks, for Silver this will be 45%, and for Gold this will be 65% (see Table 1). With these two revisions, we have reduced the barrier of participation in the Graduate Stream in Psychology. In addition, we have launched an online, asynchronous employability curriculum available to all psychology students on our virtual learning environment.

This consists of a variety of employability-related topics, mostly split into three levels (beginner, intermediate and advanced) with sub-topics. The topics have been designed to encompass a broad range of transferable skills (eg communication, Excel, note-taking, time management, speed typing, organisation). Students can go through these topics in their own time and, after successful completion of each sub-topic (ie obtaining a score above threshold in the quiz at the end of the sub-topic), they will receive an online badge. This will also count towards their Graduate Stream in Psychology Award.

The impact of this new employability curriculum and the revisions we made to the Graduate Stream in Psychology Award will be assessed at the end of 2022-23. Assessing the impact of the changes will be determined by measuring the change in the uptake of the Graduate Stream (difference scores); the type and number of evidence uploaded; evaluating feedback on the guest speakers provided in a survey at the end of the year; by comparing students' skills levels and confidence at the beginning of their degree and at the end of their degree; and by analysing the survey responses from both students and organisations (work/volunteering experience).

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Putting employability at the heart of the undergraduate curriculum

Eleni Routoula and Mohammad Zandi

Department of Chemical and Biological Engineering, University of Sheffield

Background

There has been interest in integrating employability into the higher education curricula since the 1990s (Miller, Biggart and Newton, 2013) and graduate employability remains a priority for universities (Pegg et al, 2012, Winberg et al, 2020). Across the UK there are examples of universities, departments and courses that have integrated education around employability in the curriculum. The Department of Chemical and Biological Engineering (CBE) at the University of Sheffield recently redesigned the undergraduate curriculum to redefine the delivery of engineering education, satisfy employer expectations and improve graduate outcomes, using four research questions (Zandi et al, 2017).

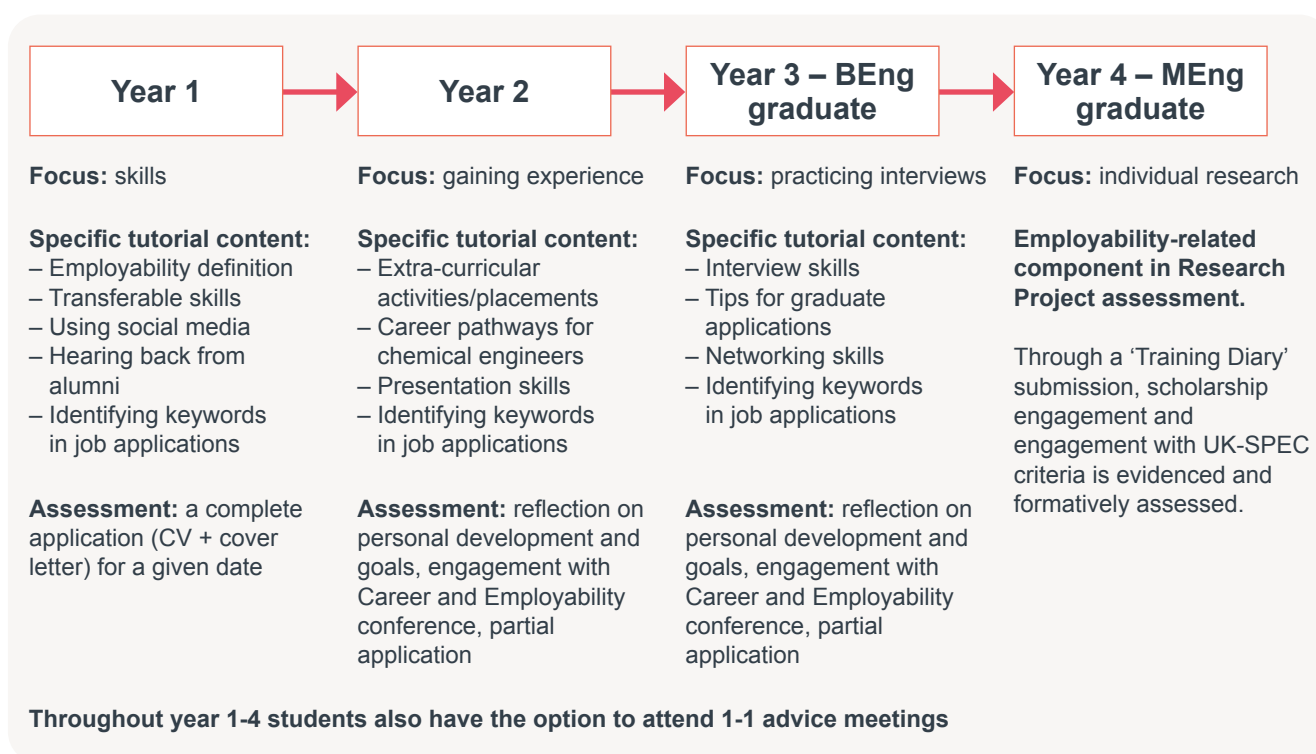
Bearing in mind the open-ended nature of chemical engineering and the continuous advancements on what chemical engineers should know about (Gillett, 2001), alongside the need for practical experience, existing modules were revised and reformed where needed. They were allocated in three distinct but co-dependent streams; core knowledge, practical design and enabling science. Each year students are introduced to modules from all streams, and they build on knowledge horizontally and vertically across their education journey. The redesigned curriculum, using a programme-level approach and taking student voice into consideration, has put emphasis on critical thinking, problem solving, professionalism, ethics and sustainability, to prepare students for future careers. Furthermore, project-based learning has been embedded in each year of a standard undergraduate degree through core modules which require students to work on open-ended projects that assess several technical and transferable skills, alongside the progress of the students in engaging successfully with various chemical engineering concepts.

To complement this three-streamed curriculum, a new, special module was also introduced, running for the duration of undergraduate studies, to help students identify the wider context of their education and develop their employability. The skills for employability module links skills, experience and awareness developed in other modules and shows how provided knowledge and acquired experience can be used to identify, shape and pursue career opportunities. This case study explores the structure of the module around students' needs, how it fits into the curriculum, and how it helps students develop global citizenship. Furthermore, it shares some initial results from our recent effort to improve our practice and include more of the students' voices.

Approach

The skills for employability module was introduced to help students “connect the dots” during their journey in chemical engineering education, and allow them the time and space to reflect on their journey and prepare for the next steps post-graduation. Through tailored content delivered through tutorials, reflection activities and using alumni experience examples, students get to identify career pathways and are enabled to better recognise, develop and articulate their skills and values.

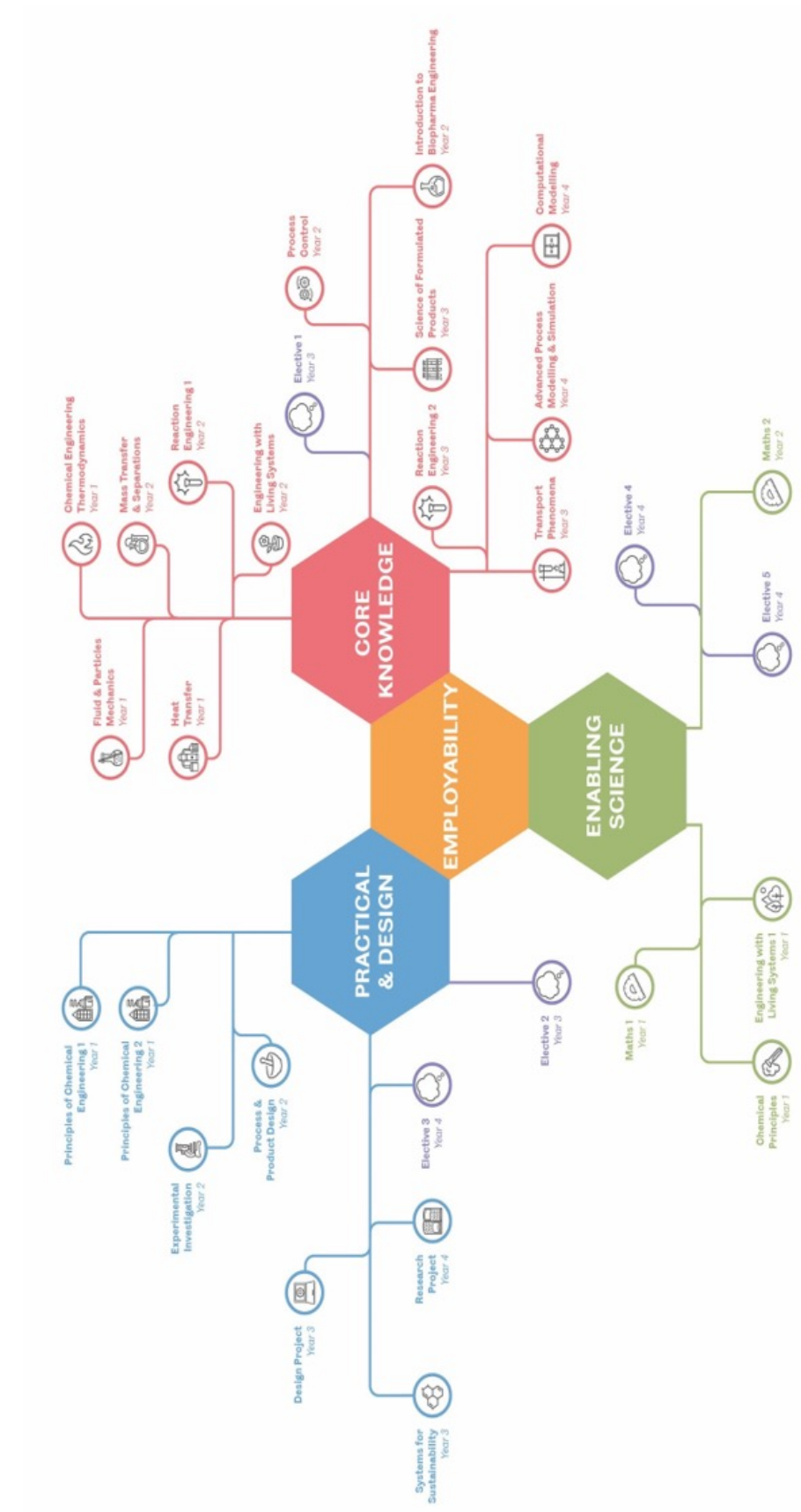
Given the nature of this module, it was introduced in a non-credit format where students are required to attend and pass the module through formal assessment, without it counting towards their degree credits. The module follows a scaffold-like structure across the curriculum (Scheme 1), guiding students through the job-hunting process, understanding of learning experiences, and the employability awareness process, with a distinct underlying focus each year. During each year students can acquire hands-on experience with the job-hunting process through engagement with applications, either as part of their assessment, or in real life (applying for summer placements, part-time roles, volunteering, year-in-industry placements [Routoula and Zandi, 2022]).

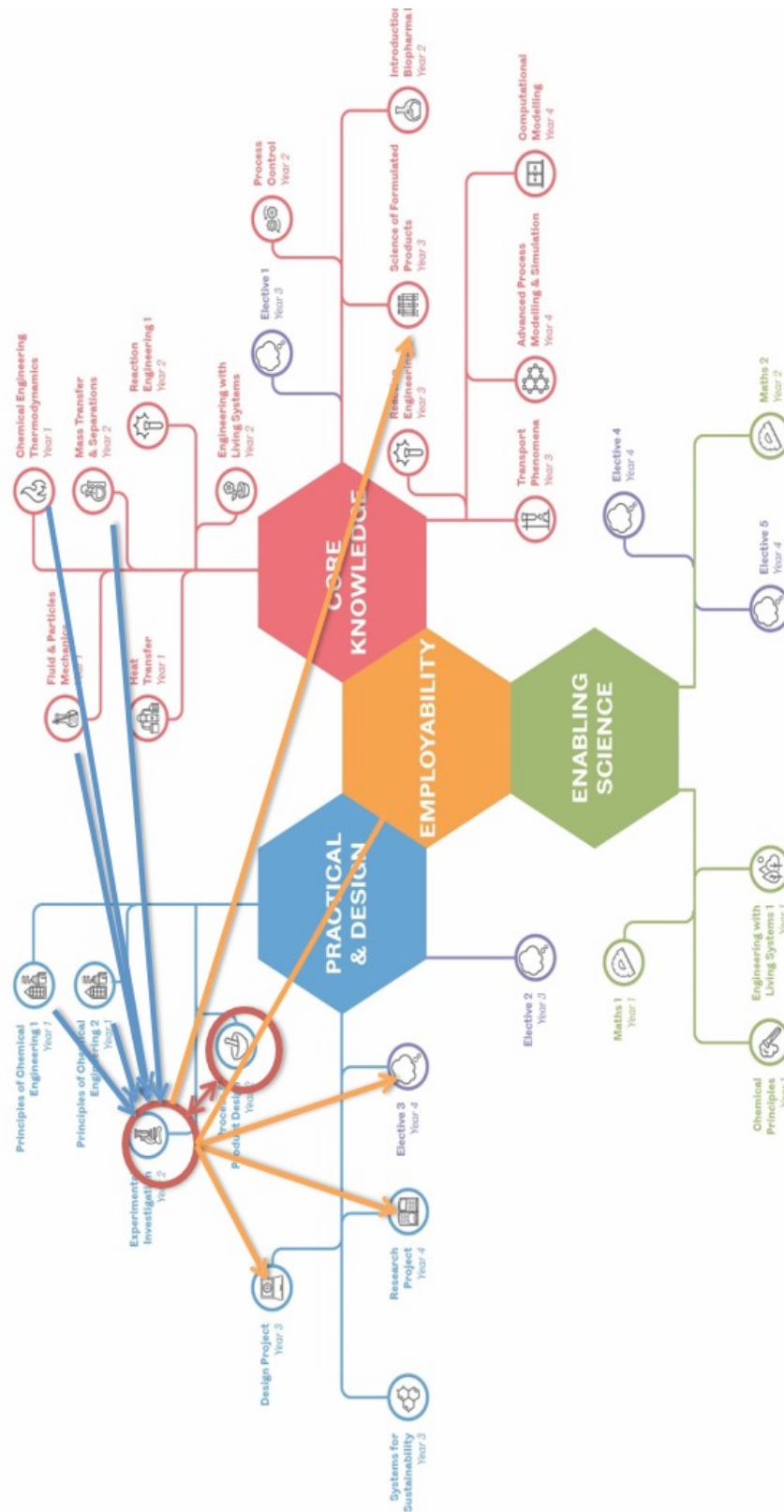


Scheme 1. Employability engagement throughout the CBE curriculum. The skills for employability module runs across Years 1-3, whereas in Year 4, students need to complete an employability-related component during their research project.

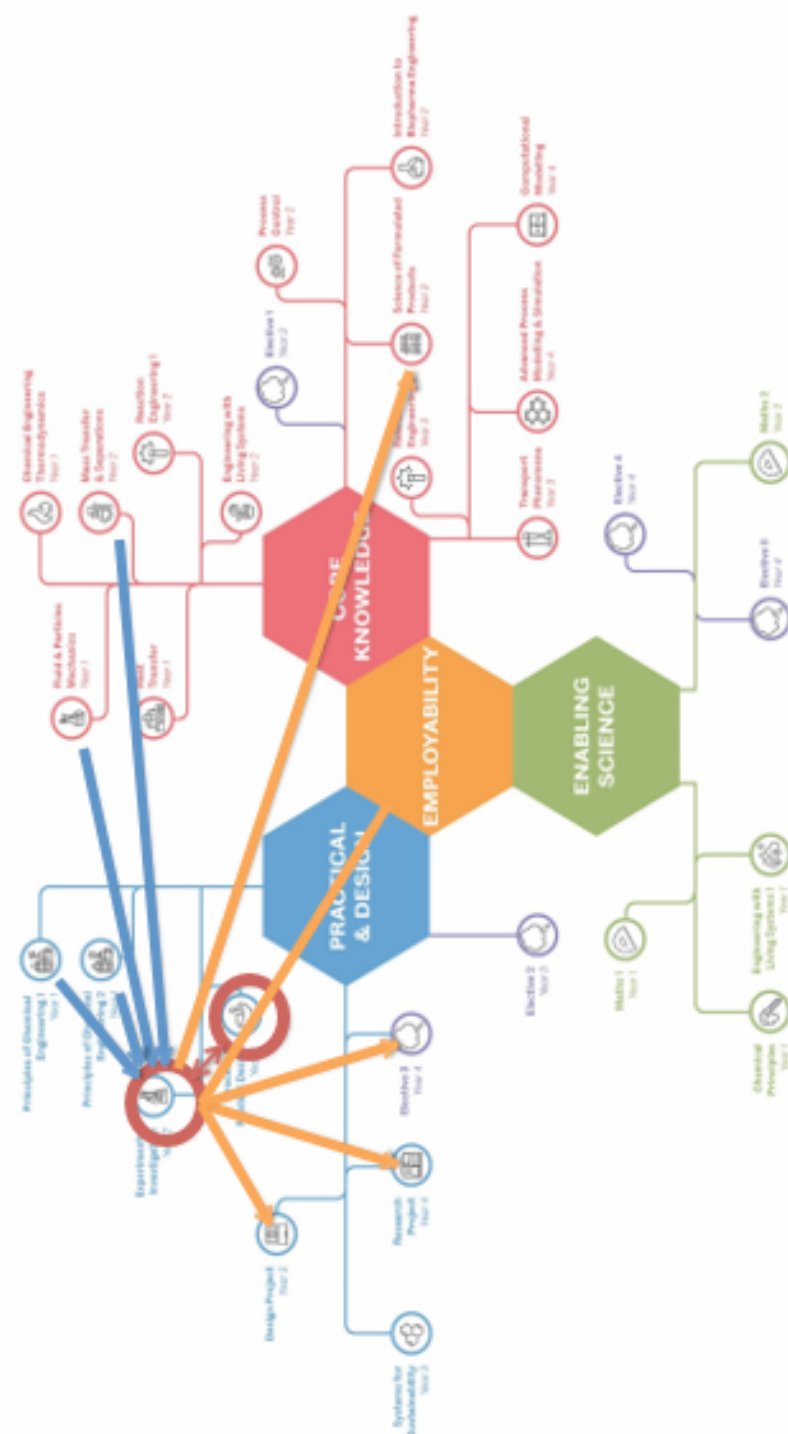
Students are assessed through reflections on their experiences and personal/professional development, for which they receive feedback, signposting resources where appropriate. Students are asked to take ownership of their professional/personal development, become aware of the professional skills they need to develop, and keep track of their achievements and progress (Exley and Dennick, 2004), while reflecting on previous learning experiences (work/project/challenge-based experiences) and trying to activate prior learning focusing on non-technical outcomes (identify professional skills rather than technical outputs). Reflection on previous experiences/learning encourages students to think about their gains and employability enhancement from seemingly technical-only, engineering knowledge experiences such as project-based or work-based tasks (Musa et al, 2012; Winberg et al, 2020). Through the module, students move from abstract conceptualisation (how we get jobs) to experimentation (creating job applications), to concrete experience (assessment, mock interviews, real experience) to reflection (thinking about feedback/outcomes), closing the loop on the experiential learning cycle (Kolb and Kolb, 2017).

Pivotal to assisting students develop their employability has been the programme-level approach (PLA) adopted during the redesign of the CBE curriculum. Each module in the curriculum was linked to modules before, ahead or in the same year, to showcase the links between modules and the application of learning, knowledge and experience as students move through the curriculum (Scheme 2).





Scheme 2. Top: CBE undergraduate curriculum, middle: PLA with CPE270 (Process and Product design) as example, blue arrows signify previous-year modules that contribute to CPE270, red arrows signify concurrent modules of relevance, orange arrows signify future modules that will use input from CPE270, bottom: importance of CPE270 and skills students gain.



CPE270 –Process and product design

Importance:

•Understanding processes and products is key for any engineer, and especially those working in the chemical, pharmaceutical, food, environment and energy sectors

Skills you will gain:

- Designing a process from scratch
- Evaluating a process
- Detailed design of unit operations
- Appreciation of safety considerations
- Designing a product from scratch
- Aspen process design skills

Despite the responses from the student body over the years as provided by mid-term surveys and the National Student Survey regarding the module, given the five-year period from the initial implementation of it, we wanted to further assess if our efforts to embed employability in the curriculum were being truly fruitful. Through a funded undergraduate summer research project, a student¹ worked for six weeks on identifying the best practice for embedding employability in the CBE curriculum. This project consisted of questionnaires deployed to academics, students and alumni, a review of the taught module content, and a review of the inclusion of employability (module, activities, staff) in curricula of other universities or departments offering courses on chemical engineering.

The questionnaires contained questions of multiple choice and open-ended nature, some of them being identical across all cohorts to directly compare responses. Some examples are shown in Table 1.

Table 1. Examples of questions deployed to students, academics and alumni, during an undergraduate summer research project.

Examples of questions deployed across all cohorts
How important do you think “Skills for Employability” is at the 1st year of study
How important do you think “Skills for Employability” is at the last year of study
Do you think it would be more beneficial to embed skills for employability within selected modules in each year group rather than having a separate module? (multiple choice)
Out of the following employability related areas and skills, select the three statements which reflect the areas you lack confidence at (multiple choice)
Examples of questions deployed only to students
Have you found personal tutorials useful in discussing employability and careers advice? Please explain your answer. (open ended)
Did you find it difficult to engage with the content and assessment? (multiple choice)
Examples of questions deployed only to academics
Based on your experience/understanding, what do you think is missing from our current practice regarding employability (multiple choice)
From your experience, when/where do you think students develop their employability awareness/skills the most? (multiple choice)
Examples of questions deployed only to alumni
When applying for graduate roles, did you use the resources offered to you and also the skills gained from the module (or other employability-related resources offered from CBE)? (multiple choice)
Do you think the module should be accredited towards the degree grade? Please state why. (open ended)

¹ We would like to acknowledge second year student Olivia Halliday and thank her for her great work on this project.

Outcomes

Undoubtedly, one of the main outcomes of introducing the skills for employability module is the clear point of reference to employability in the curriculum. Students have a module dedicated to supporting them to become aware of and develop their employability. This also means that there is a staff member with a dedicated role around employability and allocated workload to support students with their career-related requests on a more targeted and personal level compared to the often more general career service provision. Students' response to the module has been positive overall (Scheme 3).

Scheme 3. Student feedback collected from mid-term departmental surveys and the National Student Survey.

Student feedback:

"It is absolutely clear how this module fits overall into my degree and how important overall skills for employability are for my engineer..."

"...the information you get from it will determine and set the rest of your life..."

"insight on how to stand out towards potential employers, overall a very necessary module..."

"...clear up doubts in our minds like having an engineering degree but not actually end up in the engineering sector..."

The summer research project on identifying the best practice of embedding employability in the CBE curriculum showed that CBE has a standalone module on employability compared majority of other accredited chemical engineering courses offered in the UK, which include professional skills teaching in technical modules. However, questionnaire results showed that students and staff are not always on the same page on what is important to students. The questionnaire responses (17 academic responses, 35 student responses with equal representation across all year groups, and 21 alumni responses) indicated internal gaps and areas CBE should address in the future. Skills identified by students as of limited support were different to those identified by academics. Students identified networking as the top skills/area they would need more support with, whereas academics identified (technical) writing as the area students need to improve the most. All cohorts agreed that having a standalone module is beneficial, but employability elements should be included in technical modules of the curriculum as well (full project outcomes pending publication). Furthermore, despite having included PLA in our curriculum design, students felt the connection across modules was not as obvious as academics thought. These results identify a gap in perspective across the two cohorts; that the skills for employability module is called to act on through specifically developed content and approaches to satisfy both demands and bridge the gap.

This work is the beginning of an effort to appreciate the importance of supporting student employability actively, through dedicated departmental resources rather than relying only on faculty or university provision. Graduate employability is a priority for many universities, including the University of Sheffield, and we need to take the student perspective and student voice on board if we are to further improve our approach and metrics.

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Knowledge and soft skills

Switching on the creativity gene

Natalie Colson Shilton, Mary-Ann Shuker and Louise Maddock

Griffith University, Gold Coast, Australia

Background

Assessment practices in large foundational courses often focus heavily on learning and practising content knowledge. However, there is an increased emphasis on soft skill development, considered by many employers to be more important than disciplinary skills (Sakar, Overton, Thompson and Raynor, 2020). Students can develop and demonstrate these skills with certain pedagogical practices, including those involving collaboration, decision-making and creativity (Jahnke, Haertel and Wildt, 2017). We were particularly focused on creativity in this project as our own assumptions had been effectively challenged when students tasked with explaining the complex topic of recombinant DNA technology to their peers did so with origami! This demonstrated that students actively seek opportunities to be creative, sometimes in the most unexpected ways. Assessment that cultivates the creativity that students already possess can lead to deep and transformational learning experiences (Rosetto and Chapple, 2019). For future health professionals, creative capacity enhances adaptability and problem solving, important in the complex and ever-changing environment of healthcare (Green et al, 2016; ten Haven, Pragt, van Luijk, Dolmans and van Mook, 2022). Therefore, providing and assessing opportunities to be creative were specific aims of this project. We were also interested in the co-creation framework that involves students in the pedagogical decision-making process but acknowledges power inequity, particularly as increased employability, confidence and efficacy have been described as benefits (Dollinger and Lodge, 2020). This case study describes how we were able to successfully embed creativity and graduate skill development within a co-creation framework into course assessment in a large first-year genetics course. The course, Genes and Disease, is taken by approximately 450 undergraduate health students from a range of health disciplines including medicine, dietetics, medical laboratory science and health science at Griffith University, Gold Coast, Australia.

Approach

Our overarching research question was “How would the co-creation assessment task enable students to develop graduate capabilities and demonstrate their creativity?”. Sub-questions examined if students felt more in control of their assessment, if they felt more connected to their peers, if the assessment task demonstrated authentic assessment and whether peer marking of the task would be consistent with teacher marking. We collected quantitative and qualitative data to examine our aims.

The group task required all students to collaborate with peers to demonstrate expertise in one of ten listed course topics which would be assessed in the final exam (eg DNA replication, natural selection, cancer genetics) by creating a product of their choice for an audience of their selection. The product needed to be uploaded with a link provided to an online space for shared viewing and assessment. Product suggestions included an article, study guide, booklet, case study, educational material, poster, a work of art or music. Students were encouraged to think beyond these suggestions and to explore their creativity. Students were required to exhibit at least two Griffith University graduate attributes in their product creation:

- 1 Knowledgeable and skilled, with critical judgement
- 2 Effective communicators and collaborators
- 3 Innovative, creative and entrepreneurial
- 4 Socially responsible and engaged in their communities
- 5 Culturally capable when working with First Australians
- 6 Effective in culturally diverse and international environments

Within the co-creation framework students were required to develop part of their assessment marking criteria for their own group product. The assessment task was peer assessed both within group (5%) and between groups (5%). Course teachers assessed the group products for 5%. The assessment task ran over a 12-week trimester with a timeline in Table 1.

Table 1. Group project timeline

Week	Task
2	Sign up to a group
4	Submit a group charter
7	Submit a project brief and marking criteria
10	Submit the project
12	Assess group peers and five other group projects

Recognising that this assessment task would likely be an unfamiliar experience, we provided considerable support, guidance and reassurance, with teacher question and answer sessions; how to succeed at group work resources; feedback on their product idea and marking criteria; and marking practice where students assessed three online 'quasi-products' and compared their score to the instructor score with explanation by the instructor why particular scores were chosen.

Outcomes

We embedded elements of creativity into the assessment by encouraging students to present the material in a new way. Detailed results can be found in Colson, Shuker and Maddock (2022). While all the student group products were educational, 30% showed elements of transformative learning evidenced by critical reflections and/or changes in perspective. These products included websites, animated videos and children's books. Twenty percent demonstrated potential for commercial success. These products included documentaries, illustrated children's books, and animated cartoon characters. At the other end of the scale, 25% were simple posters.

Of the six graduate attributes, the three most frequently chosen by the groups were effective communicators and collaborators (84%); innovative, creative, and entrepreneurial (65%); and knowledgeable and skilled with critical judgement (52%). Overall, most students felt in control of their assessment (71%) and connected to their peers (69%), which was an excellent outcome, as the course was delivered completely online due to the Covid-19 pandemic.

Authenticity was demonstrated in the usefulness or entrepreneurship of the products, from school board games to patient brochures, educational videos, and children's books along with development of skills in addition to graduate attributes such as digital fluency in video editing, animation and using unfamiliar technologies. Authenticity was also recognised from the students' perspectives. A selection of anonymous student comments about the assessment item demonstrates an awareness of skill development for their future careers along with other benefits such as helping them understand difficult course topics (Table 2).

Table 2. Anonymous student responses to an open-ended question about their experience of the assessment item.

Selected student comments

"I developed skills in team leadership and management that will be invaluable to future leadership roles."

"The freedom to work collaboratively and creatively in the context of course content gave me the opportunity to develop new insights into the subject. I would not have developed the same understanding through traditional learning methods."

"The need to present information in order for it to be understood by others that hadn't covered the topic really allowed the group to dig deep and thoroughly understand concepts so that we could present them accordingly."

"You draw from other's strength and it's insightful to know their ideas. It's great to collaborate with lots of people. You will definitely need this experience in the future."

"After a while we started to communicate about study tips or hacks and things beyond the group project."

To investigate how students felt about the assessment item within the context of the course, we examined 642 qualitative comments from anonymous course evaluations over four iterations. Fifty-one were related to the co-creation assessment item. Students identified particular strengths related to the enjoyable nature of the task, the sense of freedom provided and peer/team collaboration. Peer-marking was the students' least favoured task element, expressing concerns about the marking skills of self/peers, despite all students participating in successful calibration exercises. Results demonstrated comparable teacher and peer marking, with students being slightly more conservative in their judgements, perhaps due to inexperience or lack of confidence. Further research examining these peer-marking innovations is warranted as we would like to support greater confidence in evaluating peers' work.

We have shown that graduate skill development can be successfully embedded into an assessment plan of a large foundational course to sit alongside and enhance the development of essential discipline knowledge. Using a co-creation framework, we were able to provide enabling conditions for students to act with agency, be creative and collaborative decision-makers and problem solvers and take ownership of their work. While this study was conducted in the context of a first-year science course in a particular university site, university educators may find the fundamental principles of student-staff co-creation, creative assessment for learning and embedded graduate capabilities as useful points for critical reflective practice in their university context. Future studies are planned to investigate the enabling and constraining practice conditions for the co-created assessment innovation, engaging with students as co-researchers through participatory action research methodologies.

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Enhancing employability through building graduate capital: a multi-faceted approach

Sara Namvar, Aimee Pinnington, Paula Courchene, David Greensmith and Niroshini Nirmalan
University of Salford

Background

The University of Salford is home to a diverse community of learners, a high proportion of whom are from underprivileged socioeconomic backgrounds and/or underrepresented communities and many are commuters. A significant proportion of the cohort gain university entry through level three qualifications other than A-levels. It is widely documented that students from such backgrounds often achieve lower graduate outcomes and struggle to secure graduate jobs.¹ We present here a series of interventions aimed at enhancing graduate capital through building confidence and competence. Availing this timely acquisition of information and opportunities has promoted a value-added student experience against the backdrop of a strong sense of belonging and ownership. Many of the projects described here have been co-designed with students as partners and involve collaboration with wider teams within the university. Using the graduate capital model as a framework, we designed interventions to build social, cultural, identity and psychological capital (Tomlinson, 2017). Collectively, these forms of capital facilitate information awareness, development of a personal, reflective, proactive employability narrative and the development of confidence and professionalism. Furthermore, we encouraged students to take ownership of their own career management, an important step towards enhancing students' employability (Bridgstock, 2009). Given our student demographics, offering such support is fundamentally important to student success, as capitalising on the university experience, social situations and networks can often be a challenge (Tholen et al, 2013).

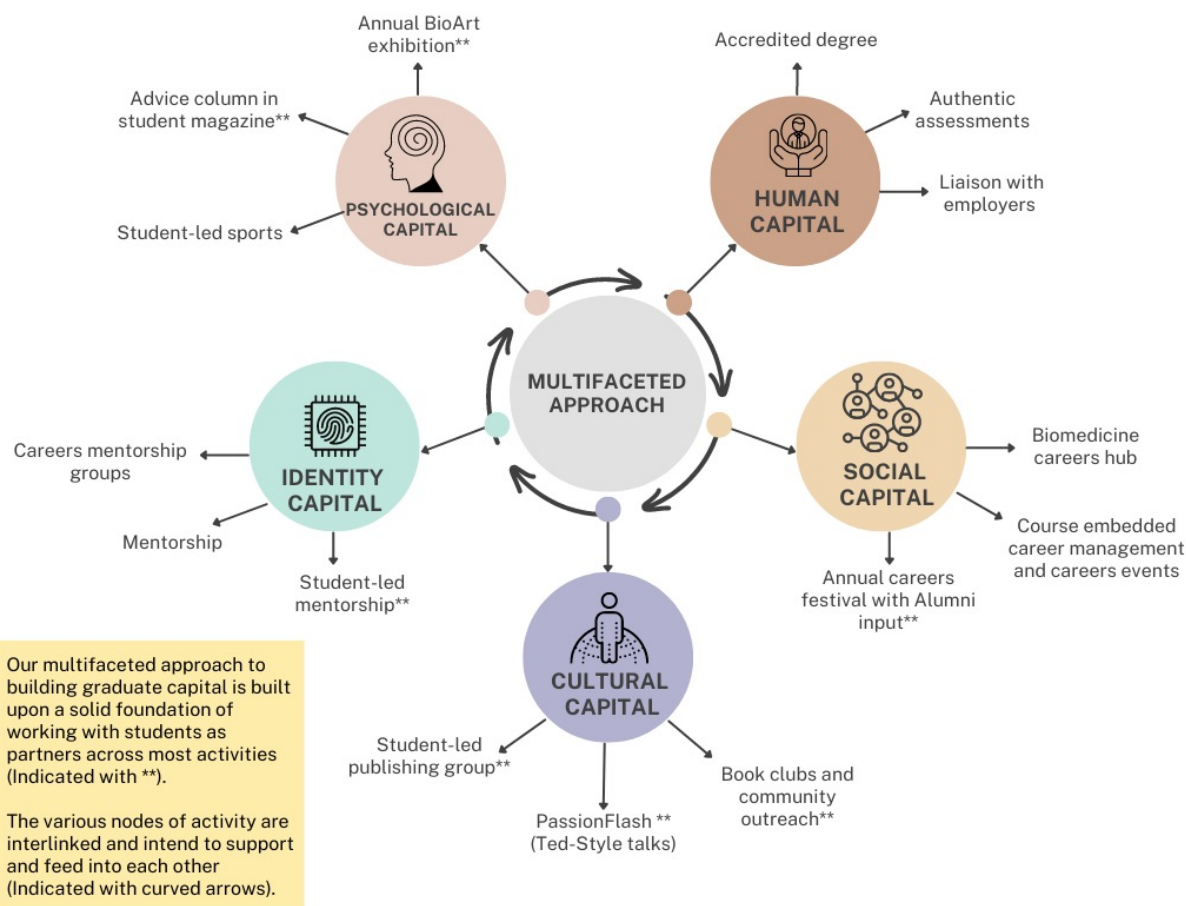
Approach

We adopted a multifaceted approach to develop graduate capital as summarised below.

Activities designed to build graduate capital were established over three years, primarily as above and beyond commitments by many staff, and some protected time for the lead author (Figure 1). Funding was obtained from the Salford Community of Excellence in Teaching and Learning (SCELT), Salford Advantage fund and the School of Science Engineering and Environment.

1 www.officeforstudents.org.uk/data-and-analysis/access-and-participation-data-dashboard/findings-from-the-data

Figure 1



Academics developed three Microsoft Teams-based sites to provide focused mentoring towards three biomedicine-aligned career pathways (biomedical science, clinical and research-based careers). Here, regular events led by academics cover: CV feedback; interview practice; entrance exams; sharing work experience opportunities and engagement with learned societies, usually on a monthly basis. We developed a permanent repository of bespoke career development materials (including a wider range of career options) on a dedicated site hosted on Blackboard, that students could access any time outside of taught or extracurricular sessions. Although beyond the scope of this report, these efforts were also accompanied by curriculum-embedded careers events and assessment. Identifying that students needed a dedicated period of time to focus on career aspirations, we also launched the annual summer careers festival with input from the wider academic team, alumni and careers and enterprise team, external partners and the school employability advisor. It provides immersive experiences, practical skills development, employer engagement, applications to postgraduate positions and much more.

We previously described the design and delivery of Salford PassionFlash (Namvar, 2021), an annual TedX-style public speaking competition designed to build graduate capital. We worked closely with student leaders to establish a student-led publishing group (<https://scicomm.space/the-bioscientist-magazine>). Here, students build a plethora of employability skills through true leadership as editors, graphic designers, writers and more. With support from student and academic reviewers, this publishing group provides formative feedback to take an initial student expression of interest through to an online article. To build language, ethical reasoning, social and communication skills, we have also worked closely with students and academics to establish several general interest book clubs. With the goal of developing creative confidence and supporting wellbeing, we also worked closely with students to develop an annual BioArt exhibition where students create their own art and showcase it at a gallery-style event where they compete for prizes.

The University of Salford ethics committee granted approval to issue a Likert survey designed to assess the impact of the range of ongoing projects. Survey questions covered factors such as confidence, communication skills, career planning and employability. For our initial assessment, the survey was issued after the summer careers festival to members of the careers mentorship groups, where many members are known to be active in the multitude of opportunities on offer (Figure 1). For this initial assessment, 20 students agreed to take part, with data collected and analysed in Microsoft Excel. We also share some anecdotal observations and testimonies to demonstrate impact.

Outcomes

Since their launch just three years ago, we have observed continued growth of the academic-led career mentorship sites, which now hold 575 self-enrolled students. Mentorship opportunities are avidly taken up and our anecdotal experience indicates an approximate 50% increase in reference requests and a clear rise in the number of success stories in terms of graduate employment and postgraduate study. The biomedicine careers hub has been opened to programmes across the directorate and is now accessed by more than 1000 students. We issued an initial survey to assess the impact of our multifaceted approach to the development of graduate capital. Of those who belonged to a career mentorship group, 83% strongly agreed or agreed that this positively influenced their career planning. A similar figure endorsed the usefulness of the biomedicine careers hub (Figure 2).

“The research careers group made me aware of several societies that have been of significant benefit to me, allowing me to attend conferences and seminars relevant to my studies... Symposiums held within the group have also been beneficial in providing information regarding post graduate opportunities/options...”

(Student, career mentorship group member)

“I wasn’t very sure what I want to do or what I can do with the biomed degree. However, guidance provided specially in Graduate Entry Med/Physician Associate group really helped me in understanding future possibilities...”

(Student, career mentorship group member)

“Has given me confidence and perspective on variety of career paths, given me transferrable skills...”

(Student, career mentorship group member)

The summer careers festival is in its second consecutive year and has successfully engaged several hundred students with a wide range of events including employer talks, lab-based training, simulations and more. Our initial analysis also revealed that 86% of students strongly agreed or agreed that taking part in the annual summer careers festival had a positive impact on their career preparation, demonstrating that our interventions are having a positive result from the students’ perspective.

Examples of feedback from the careers festival include:

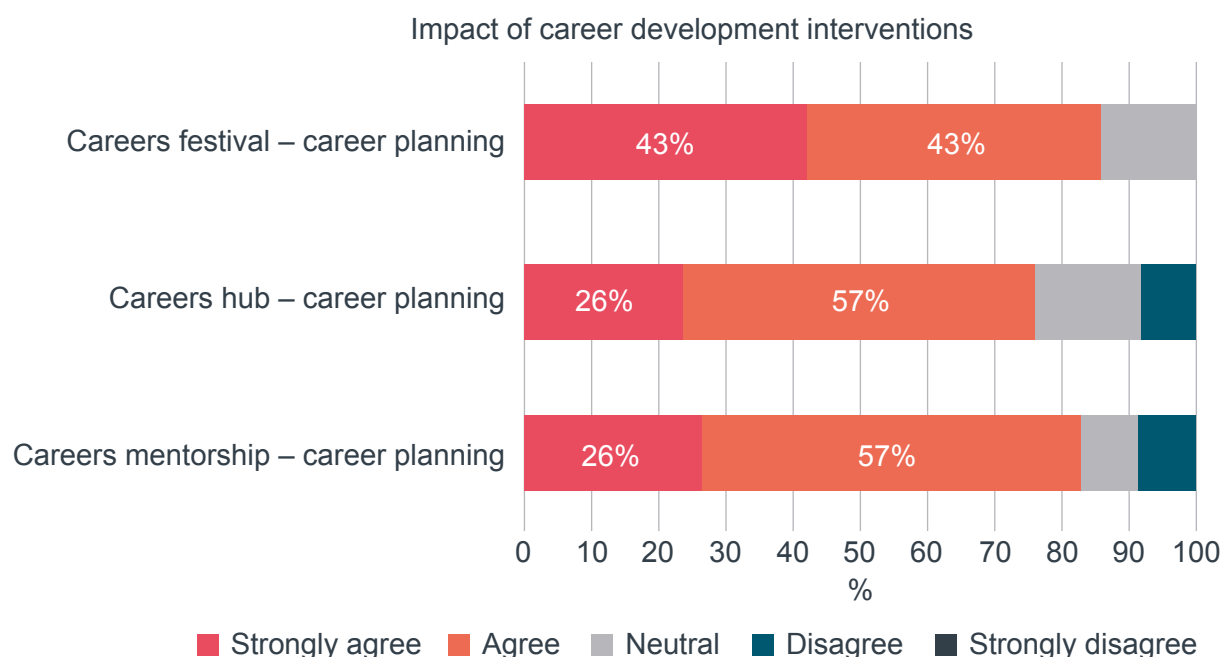
“... Am so glad that I attended the session, it’s way more than what I had expected! Would definitely recommend my friends and other Salfordians to engage in these types of sessions!”

(Student feedback, assessment centre, careers festival)

“... It was an amazing experience for me. This is my first time speaking to ‘patients’ at their bedside and I have learnt a lot.”

(Student feedback clinical simulation, careers festival)

Figure 2.

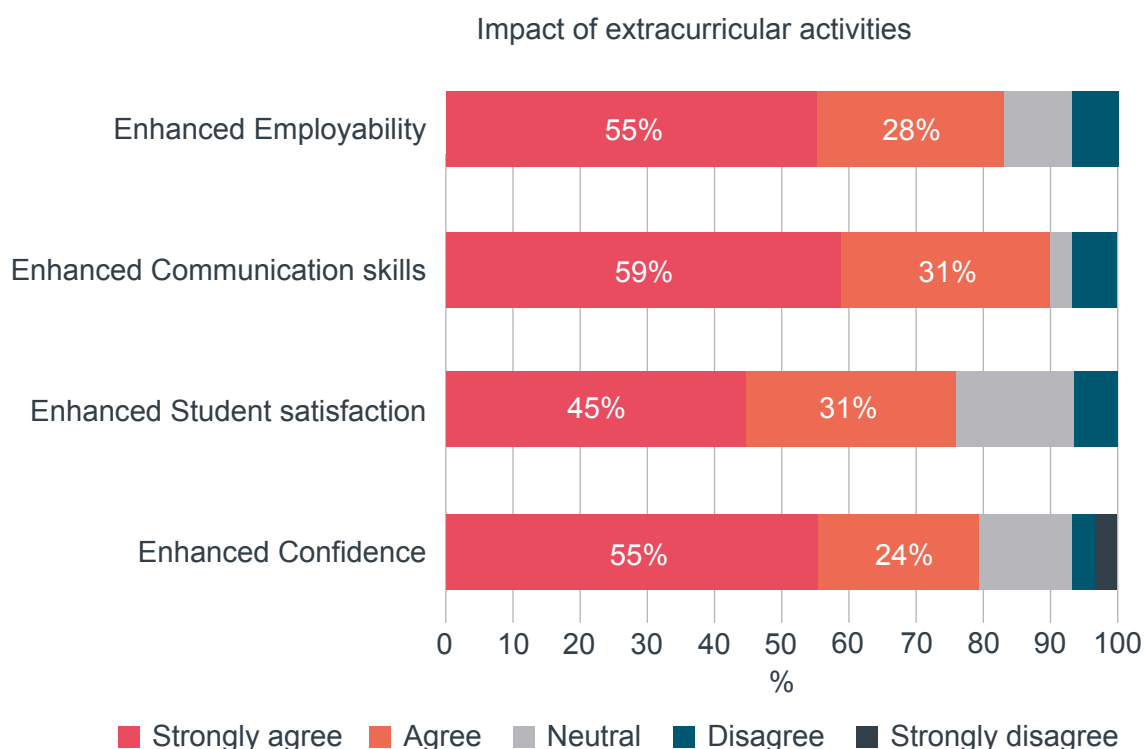


Since its initial conception two years ago, the Bioscientist Magazine team has expanded to include editors-in-chief, section editors, reference manager, graphic designers, many student writers, academic support and external contributors etc, amounting to approximately 30 student contributors per issue. The publishing team is currently working on issue 4 and has already published more than 60 articles. Skills obtained – including communication, writing, teamwork, digital literacy, project management etc – are all highly transferable to the world of work.

The annual BioArt exhibition has attracted 35 student artists and close to 100 spectators each year. Finally, what started as one general interest book club has grown into four separate book clubs with a variety of different interests that often feed into career development and global citizenship (eg clinician autobiographies or those debating complex ethical challenges in scientific discovery). Each book club attracts approximately 20 students, meeting two to three times per year to review their chosen book.

Collectively, these activities have been integral to the growth of on-campus student community, delivering both enhanced experience and a unique and objective value addition to the student journey. Students were asked to rate the impact of the co-created extracurricular activities designed to build graduate capital. Of those who participated, 83% felt that taking part in such activities enhanced employability, 90% felt it had improved their communications skills, 76% reported enhanced student satisfaction, while 79% reported a growth in confidence.

Figure 3.



“Our wide range of activities would not have been possible without the collaborative efforts from students and academics. Diversity in skills has been thoroughly broadened and brought together a multitude of different students that may never have met without these projects.”
(*Biomedicine Society president and secretary*).

We remain at the early stages of assessing the impact of this multifaceted approach, but our early evidence clearly points to a very positive outcome.

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Towards a seamlessly integrated, inclusive, and metric-informed professional development portfolio (PDP)

Nigel Page, Darren Clarke and Annie Yonkers, Kingston University London
Tom Spurway, City University London

Background

Key to creating transformative graduate outcomes are efficient support mechanisms that assist students at all stages of their employability journey. Nonetheless, such support is often not always clearly sign posted or integrated in a purposeful and seamless way into many curricula. Furthermore, when developing graduate attributes and employability skills, mechanisms to provide meaningful quantifiable metrics to inform students and tutors of their development are frequently either not in place or ineffective.

In one school at Kingston University, there was evidence many first-year tutees were not engaging in the personal tutor scheme (PTS) or a linked self-reflective and evaluation log (SERL) designed to support tutor meetings and personal development (the SERL being the primary delivery method for personal development). Analysis of SERL submissions to tutors between 2019-2021 revealed only 64.5%, 66.4% and 63.2% of tutees submitted respectively each year. Feedback on tutor meetings and the SERL was mixed: *“actually had a really positive experience”*, *“didn’t feel I got a lot from it”*. There appeared little parity in tutee experience and while some tutees received detailed SERL feedback, others had no acknowledgement or feedback (*“some of my peers submitted and did not know what happen to it and got no marks without any comments”*).

The role of personal tutors is often cited as crucial in facilitating professional and personal development, supporting academic progress, and wellbeing and engagement. Yet, the effectiveness and consistency in value and support gained can be variable and dependent on the success of focalised relationships. In the literature, Lewis (2022) evidenced Black students can feel excluded and less clear where to start in considering their career goals, aspirations and academic progress, which highlights the importance of equitable support for all tutees in helping identify, evidence and articulate their ambitions/skills acquired. When new dashboards for reviewing BME awarding gaps became available, we were shocked to find that, of those students who had engaged with their SERL (2019-21), and by proxy with their tutor, around 75% were consistently white students and only 51% and 53% of Black or other mixed race, respectively.

These differences in tutor and personal development engagement led us to review and consider what an inclusive PTS should look like and to determine what a more inclusive approach to professional development should be. We underpinned our considerations based on the CareerEDGE model in the context of developing lifelong career development learning through identifying experience, knowledge and skills, leading on ways to articulate, reflect and evaluate (Dacre Pool, 2020).

Approach

We took a multi-dimensional approach to review inclusive personal development and how this could be linked effectively between the curriculum and PTS. We devised a personal development curriculum around 'aspirations', 'academic integrity', 'finding and using information', 'developing transferable skills', 'working together and getting support' and 'reflection, feedback and the future'. We wanted to ensure these themes connected with dialogue identifying with the diversity of student learning needs, including fresh ways to build affinities between peers, tutors and the wider university support community.

Our review coincided with the successful Royal Society of Biology accreditation of our bioscience programmes, where a condition was to integrate teamworking experience/roles into our first year. We took this opportunity to evaluate new ways in which this could be achieved. In doing so, we developed a supportive small team peer learning network within the PTS framework linked to the professional development curriculum. This network enabled tutees to connect in groups to discuss their professional development, work together in supporting each other, and identify opportunities and share ambitions. The peer team meetings were also supported by separate themed tutor meetings. A primary driver for embedding a peer support network within the PTS came from recognising the need to establish earlier and more inclusive connections between peers to encourage belonging and a more positive transition/learning environment. This was especially applicable in our decision to embed the scheme into one of our large biosciences skills modules. In this case, we were able to target more than 350 first year students in the first year of operation, where it can be easy for students to feel overwhelmed in establishing connections. Additional support was provided by interactive curriculum-embedded workshops, themed tutor/tutee meetings and a specially created virtual learning environment resource.

We also integrated year-long within our own PDP curriculum, our university's newly launched personal development programme, Navigate, prototyping such delivery directly into the curriculum. We felt this aligned well alongside the tutor and peer support network, establishing an extra solid support strand. The content/dialogue conveyed within Navigate (connecting peers, sharing strengths, identifying challenges and solutions, and promoting growth mindset) had additional potential to support those students, who may not engage so well with their personal tutor. Overall, we felt, this provided a seamless integration/dialogue between tutees, tutors, module teaching staff, the curriculum, careers and employability, and student enrichment.

For credit, tutees worked on small tasks together throughout the year, reflecting on their teamwork experience and their goals, aspirations and developing skills following peer discussions. This provided a safe, low risk environment at level 4 to nurture positive feelings about teamwork and provide a scaffolded approach to higher stake teamwork assessment at later levels. Student outcomes were

quantified through evidence-based activities (including brief evaluation quizzes) and short reflective assignments designed to encourage not only active engagement in career development but provide employability metrics to inform both students and tutors about where interventions or support may be required. To accompany the reflective assignments, simple rubrics to help guide staff in reflective marking were developed.

The process to implement the scheme took around six months to plan before the start of the 2021-22 academic year. In this time, we also provided staff training especially to the dynamics of the scheme and the relationship between the curriculum and the PTS, teamworking and reflective practice.

Outcomes

Student feedback on our new PDP programme has been excellent *“fun and interactive”, “well taught and clear”, “I am learning certain skills that I know will definitely help me in future”, “interactiveness with students”, “content is challenging but rewarding, and I enjoy the way the module has been run especially with the help we have been given by the staff”*. In addition, we were overwhelmed by the positive feedback received from tutees about their experiences in their peer tutee groups with clear benefits beyond just PDP encompassing developing relationships, wellbeing, sense of belonging, sharing knowledge – *“After talking with my peer support group at the beginning about the main things I struggle with, most people have been very kind and really helped me overcome my anxiety and miscommunication. As I have never been very comfortable sharing my opinions and thoughts”; “working in peer support team was a good experience, team members are very supportive as well as interactive and helped me when needed”; “the support provided by my peer group has made a valuable addition to my studies and improved my sense of belonging to the university”; “coming into university I was very closed off and found it difficult making friends. Joining the peer support team ultimately forced me to build friendships, however I shan’t complain. I feel blessed meeting and connecting with my fellow peers. Working as a team enabled us to share knowledge of our learning and feel comfortable asking for help”; “working in my peer support team has been invaluable in allowing me to hone in on my existing skillset to support others in the group, enhance my interpersonal skills, and gain a new understanding of the importance of managing my workload, prioritising, and meeting deadlines”*. Not only that, we have seen a dramatic increase in student engagement with their personal development, up to 92.5% compared to 63.2%, 66.4% and 64.5% in previous years and the awarding gap essentially closed (25% to 0.08%).

For the future, our university’s strategy is to scale up this prototype provision and embed across all programmes within the whole university. This will be performed by effectively linking the delivery of personal development to the PTS, enabling groups of students to collaborate on a range of employability tasks and activities. This will be supported by additional funding to help expand delivery and embed at all subsequent levels through the integration of a scaffolded Navigate programme.

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Engaged scholarship: an integrated and participative approach to student employability

Anne MJ Smith and Ruby Lawrence

Glasgow School for Business and Society, Glasgow Caledonian University

Background

Our world of work is more complex than before, and our communities face dynamic challenges that are unpredictable and unprecedented (Guinan and O'Neill, 2019). Preparing graduates for such uncharted futures in multifaceted workplaces (Knight and Yorke, 2003) requires an approach that is not only innovative and sustainable but, we argue, integrated, participative and inclusive (Smith et al, 2017). Our case study shines a light on engaged scholarship, an approach harnessed at Glasgow Caledonian University's School for Business and Society, involving participative research through experiential learning (Lave and Wenger, 1991). Participatory tri-stakeholder relationships between academic, students and community are powerful ways for all parties to learn from each other while collaboratively seeking impactful solutions through social justice and citizenship (Van de Ven, 2018); we organise interdisciplinary student groups that collaboratively tackle some of the most complex community challenges identified by those communities. Subsequently, the assembled Vygotskyian classroom is a life space enabling supported cognitive and non-cognitive skills development (Vygotsky, 1978; Lewin, 1997). We will discuss the approach, exploring how it positively contributes to the employability of students. We define employability as "a set of achievements – skills, understandings and personal attributes – that make individuals more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy" (Yorke, 2006, 8). Van de Ven (2007) considers engaged scholarship as a participatory approach to research and we adopt the principles to guide our practice of engaged scholarship involving communities, students and academics.

Approach

Our engaged scholarship approach entails a community organisation, such as a social enterprise, presenting a problem to the university – perhaps a pressing need to generate new income streams, conduct a risk audit or complete an equalities impact assessment, for example. As a resource for creative problem solving, higher education institutions (HEIs) are well placed to provide new knowledge that can support community wealth building (Guinan and O'Neill, 2019). The notion that groups of students might, through work-related projects with community organisations, not only contribute to solving a real-world problem, but through process and experience develop themselves and make their own positive impact in the world of work is purposeful and meaningful (Knowles, Holton and Swanson, 2012).

Our cross-disciplinary professional practice module, sitting across all departments of our School for Business and Society, is how we ‘house’ the project, pedagogically designed as an experiential learning experience for students (Lave and Wenger, 2003).

Project	No of students	Team type	Masters programmes/disciplines
Project 1 2020	14	Discipline based	Risk management, accounting
Project 2 2021	40	Interdisciplinary	Marketing, international fashion marketing, international tourism and events
			Accounting, finance and regulation, risk management, international business management, international operations and SCM, social innovation, human rights
Project 3 2021	60	Interdisciplinary	Marketing, international fashion marketing, international tourism and events accounting, finance and regulation, risk management, international business management, international operations and SCM, social innovation, human rights

The key steps in our approach are as follows:

Step 1: community organisation agreement to pursue a project

Step 2: write short interdisciplinary work ‘briefs’ and agree with community organisation

Step 3: create student groups, complete ethics approval

Step 4: task students to respond to brief, online access to the community organisation

Step 5: students guided through secondary research, website/data analysis

Step 6: response to brief, project report prepared, delivered to community organisation.

The project is 25 hours over five weeks. Students keep ‘field notes’ detailing their activities and weekly reflection on professional development based on cognitive and non-cognitive skill set development.

Assessment is on reflective accounts, critically discussing cognitive and non-cognitive skills development. We require students to engage with learning theory and concepts around professionalisation as they reflect on their experience: how they made sense of instructions, how they managed mental and emotional processing, how they organised the group and managed conflicts, diversity and inclusivity, and finally how they completed the work in a professional capacity (Bandura, 1977; Lewin, 1997).

The report, which is the product passed from university to civil society, is intended to be of genuine use to the community organisation, who can use it as necessary: for example, to lobby local government for policy change (Scottish Government, 2015). According to Van de Ven (2007) and Beaulieu, Breton and Brousselle (2018), reciprocal arrangements are fundamental to the practice of engaged scholarship. Engaged scholarship is a fruitful approach enabling citizenship and creates impact (Beaulieu, Breton and Brousselle, 2018; Van de Ven, 2007; Van de Ven, 2018).

Outcomes

Impact triggers change. Innovative ways to create impact through employability is a relevant discourse; engaged scholarship can enhance employment opportunities while meeting the needs of vulnerable communities in difficult and challenging times. Engaged scholarship, albeit a participatory research process, has a lot to offer the employability agenda, communities and academia. Our impact is threefold.

- 1 The most obvious benefit to students is that they have contributed their knowledge and skills to a piece of 'real world' action research. Their experience in responding to the brief and creating the final product is tangible and meaningful, making a valuable addition to their CV; giving students work-ready evidence for employers.

"I appreciate the opportunity to be part of the student group. It has already changed my perceptions and made me work towards brushing up and enhancing my cognitive and non-cognitive skills. The big takeaway for me is the reflection in personal and professional engagements."

(Student)

- 2 By ensuring the stakeholder relationship is mutually beneficial, our engaged scholarship has direct benefit for the community organisation by delivering reports, analysis documents and evidence-based documentation that community organisations can use to leverage funds or challenge an institutional rhetoric.

"It is definitely something I can take to my board and work with" (project 1);
"amazing – thanks so much for verbalising the issues and challenges"

(project 2);

"we used the report as evidence of partnership work and we referred to the analysis, research and ideas within funding applications, particularly Scottish Government funding"

(Project 2)

- 3 Finally, academic publication, including policy papers evidenced with content from these endeavours, case studies and publications about community development; we engage with the social justice, community empowerment and citizenship agenda (Redwood et al, 2022).

Our engaged scholarship approach is innovative and process based, an integrated framework constructed using learning frameworks and Vygotskian ideology (Engeström, 2008; Knowles, Holton and Swanson, 2012; Lave and Wenger, 2003; Lewin, 1997; Vygotsky, 1978). We support students to enable them to work out how to tackle complex problems; therein is the deep learning and citizenship. Currently, we are applying the same learning and process framework to an undergraduate module of 700 students, we are managing discipline-based student groups through action-based seminars with tasks designed to respond to a case study. The case briefing structures the issues faced by the community organisation and breaks down complex problems into small, simplified weekly tasks, replicated by tutors in seminar groups. Outputs from the tasks are termed artefacts and included in student portfolios for assessment; we share artefacts with the community organisation as part of our reciprocal arrangement. Always, students are required to reflect on their learning, cognitive and non-cognitive skills development. We continue to create projects that respond to the social justice agenda in our communities.

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Forced to collaborate: nurturing students into employable, culturally intelligent, team players

Nicky Kinsey and Lynn Pattison, University of Leeds

Background

Teamwork and group assignments are prevalent across higher education (HE) (Fearon et al, 2012; Brutus and Donia, 2010), designed to emulate the collaborative nature of the modern workplace. Complex problem solving often requires input from multiple individuals thus group work develops essential patterns of creative and innovative behaviour (Bentley and Shamim, 2013). Nevertheless, group assignments benefit and challenge students in equal measures (Lee et al, 2016). Cross-cultural group work can result in tensions, spotlighting social relationships, language proficiency levels and cultural differences (Mittlemeier et al, 2018).

The UK has the third-largest cohort of international higher education students worldwide (UNESCO Institute for Statistics, 2021). Global competition demands that universities deliver academic excellence and quality student experience. The success of these module-level collaborations often underpins the overall student experience, impacting grade satisfaction and eventually affecting graduate employability. Moreover, as graduate outcomes become increasingly central to university rankings (Behle, 2020) supporting students to work effectively in teams is paramount.

The Global Marketing Professional (GMP) module is a postgraduate marketing module with employability outcomes at its core, designed to equip students with teamwork skills and cultural competence. Built on the USEM Model of Employability (Yorke and Knight, 2007) and later incorporating sustainable graduate career theory (Donaldson et al, 2019), instructional design aims to build lifelong learners with transferable skills (Donaldson et al, 2019) equipped for a global society.

Both student and graduate voices have previously been missing from the UK agenda for employability (Higdon, 2016). Additionally, research pertaining to postgraduate employability as opposed to undergraduate is limited (Morse, 2006; Rothwell, 2009; Potgieter and Coetzee, 2013). A larger body of research exists in the field of postgraduate international teamwork but does not specifically relate to employability. Collecting data from recent alumni who can reflect on group work experiences after subsequent employment provided insights into the connections between international group work and employability outcomes in the postgraduate context.

The aim of the study was to determine what impact participation in group assignments had on students studying at postgraduate level and how, as graduates reflecting on those prior experiences, they had shaped their subsequent work collaborations.

Research objectives:

- + to identify the perceived benefits and drawbacks of group work for both study and professional life
- + to explore the impact of cultural differences within diverse teams and any common causes of tension within groups
- + to understand which, if any, existing practices potentially enhance group work and determine future actions to improve collaborative experiences.

Approach

The chosen research design, a detailed, inductive qualitative investigation (Bryman, 1984) was selected for this study to gain in-depth insights into the student experience from a graduate perspective. The process of graduate reflection was nuanced, requiring the researchers to probe and explore the graduate experience, resulting in jointly developed meaning (Hong and Cross Francis, 2020). This could not have been achieved through survey responses, therefore in-depth, personalised, semi-structured interviews were deemed to be most appropriate.

Interviews were conducted virtually, with graduates from across four postgraduate marketing courses making the sample representative of the overall student cohort. Using a random sampling method to begin with we invited students through social media posts. Later, a more representative approach was used to advertise to Chinese students alone to make the sample more representative of the international student cohort. Participants had graduated within the last six years and were currently employed in marketing and communications roles. Participants were interviewed by unfamiliar staff members to avoid discomfort or bias. Data was collected over a three-month period in late 2021.

An interview topic guide was developed prior to data collection. Researchers were interested in gathering background data from participants, including prior undergraduate team work experience and work experience prior to postgraduate study. The next stage of questioning related to specific team formation experiences at postgraduate level. These questions related to team composition, behaviours and culture (Lindsay et al, 2022). Participants were asked about the logistics of their teamwork experience, nationality of members, frequency of meetings, quality of collaboration, satisfaction with joint marks etc. The concluding section of the interview explored the support provided to teams by staff, the structures in place to improve collaborative teamwork and suggestions for further improvement.

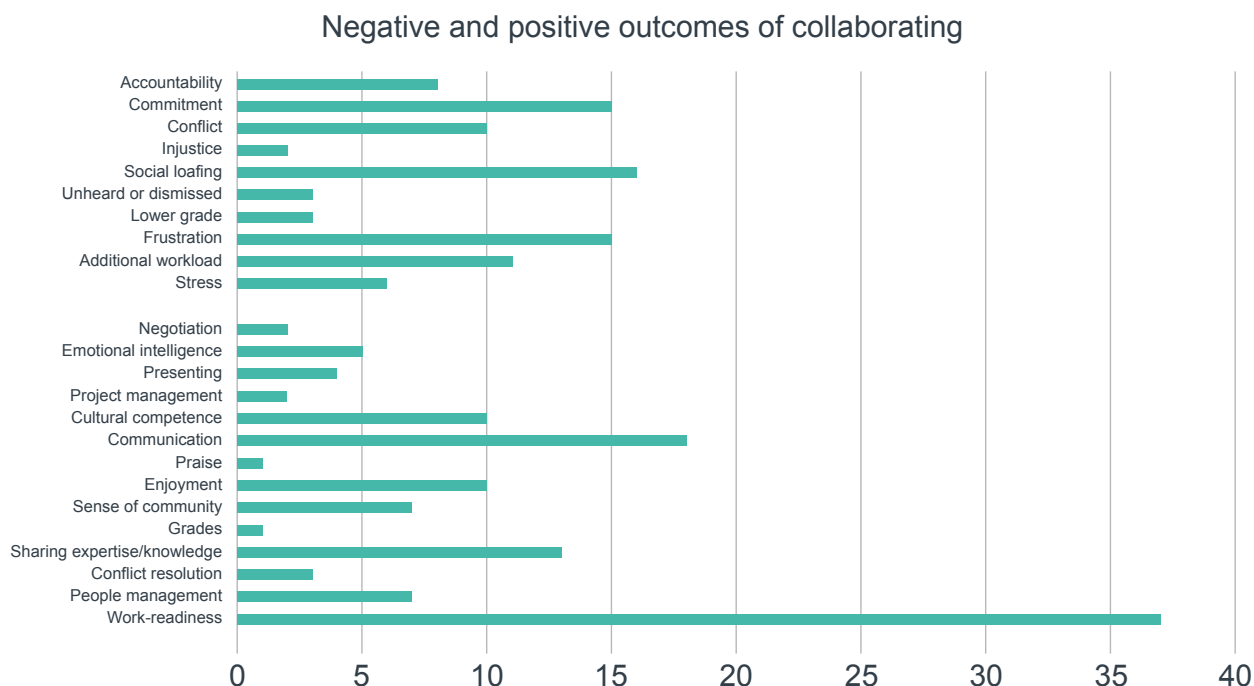
The aim of the analysis was to develop a series of implications which could be developed into a departmental plan to develop teamwork experience across the taught marketing programme. Thematic analysis of the 18 transcribed interviews was conducted using NVivo. Responses were coded for similarities and differences according to subject areas defined in the interview topic guide.

Outcomes

The data provides insight into the student experience with the additional benefit of real-world work experience, enabling these now-graduates to reflect with the hindsight of context. All interview participants took part in one or more group assignments, often two or three, depending on their module choices. The formation of groups was mostly staff assigned. Personality tests and team role preference tools encouraged students to recognise teamwork competencies and instances where group theory insights could be applied. Thus, some graduates had been able to apply this knowledge to improve collaboration. Where graduates had not been successful in this endeavour, it appeared that time had not been taken to discuss team roles and preferences.

Interview analysis revealed a number of benefits and drawbacks to the experience of teamwork. Group assignments encouraged knowledge and expertise sharing, increased cultural competence, people management skills and general communication skill development. The most commonly coded benefit to group assignments was a general sense of work readiness (see figure 1, below).

Figure 1. Negative and positive outcomes of collaborating



Drawbacks identified within the interviews included: a lack of commitment, social loafing, frustration, additional workload and conflict. Overall, experiences were more positive than negative and later reflection also increased positive attitudes.

While graduates struggled to articulate cultural intelligence, they instinctively felt it had been developed. Cultural differences often caused tension. However, it was also a great source of learning and professional development. The researchers noted that language proficiency, confidence, attitudes towards work ethic and performance, as well as differing interpretations of professional behaviours and expectations were contributing factors to negative feedback and were associated during coding to cultural differences.

When discussing the impact of developed cultural intelligence on employability and their current role, analysis showed that cultural intelligence was more significant for some graduates than others. Graduates who remained in Europe largely found cultural intelligence was still a large part of their current role. However, for graduates returning to China, opportunities to use cultural intelligence were less frequent. There also appeared to be differences in working styles developed in the UK to those required in China, whereas other home and international graduates continued to deploy similar team working habits. Further research into the Chinese labour market to better understand the teamwork and cultural intelligence requirements of graduates would be a logical next step for this research.

The following recommendations for programme delivery colleagues would enhance students' experience of teamwork.

Timely interventions from module staff through regular meetings need to be consistent across modules. The interview data sheds light on the role of module leaders and the steps they can take to mitigate conflict and tension, to increase rates of student satisfaction. By providing task clarity, strategies for potential conflict management and increased accountability and commitment from all students, group work becomes more productive and less stressful.

Opportunity for reflection across the programme enabling students to draw parallels between semester one GMP content and semester two practical group work. Benefits of university group work such as recognising different decision-making and problem-solving styles became apparent in the workplace. Continuous reflection would illuminate this insight earlier, while still studying, providing students with a chance to explore these skills earlier in preparation for employment.

Emotional intelligence activities to tackle social loafing and different work styles and enable students to reflect on the impact of their behaviours on others. Introduce social contract mechanisms across modules so that a consistent approach is used to provide students with structure.

Sharing these insights with fellow colleagues and leaders to ensure a more consistent and joined-up approach is the first course of action. Moving forward, group collaboration will be monitored in real-time using critical incident reflection diaries, enabling students to harness opportunities for learning and development and monitor the progress of group management and student satisfaction. These actions will feed into the wider Curriculum Redefined efforts of the university.

The data clearly identifies the benefits and drawbacks of group work at university. Students require structure and support to successfully navigate intercultural collaborative group assignments. Module leaders should take an active and consistent role in supporting students through the process.

By capturing the graduate voice, our research shows that the experience of completing group assignments has equipped students with an understanding of how to work more effectively in diverse teams, to manage the process and resolve issues, particularly when opportunities for timely reflection are provided.

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PGT placement module-enhanced employability: towards sustainable postgraduate education and career impacts

Yijing Li, Department of Informatics and **Claire Crowther**, Centre for Urban Science and Progress (CUSP) London, King's College London

A placement module embedded in a year-long postgraduate programme has been trialled for the MSc Urban Informatics at the Centre for Urban Science and Progress (CUSP) London, King's College London, since 2018 and has been very successful throughout its four years' practice. This placement not only enables students to test their taught education in real life scenarios, but also equips them with a rich working experience at prestigious host organisations. In addition to programme-based learning outcomes, it helps to consolidate the partnerships between university, industry and public sectors, while also promoting the enhanced employability of the students who take the placement.

Background: MSc Urban Informatics

In light of the big data spikes in contemporary urban contexts, there is increasing demand for specialists: people being able to mine the data, analyse the data, tell stories with the data, visualise the data, and perhaps most importantly, generate data-driven insights for policymakers.

As such, it has therefore propelled many postgraduate programmes across UK universities in the field, for example, the MSc Urban Spatial Science (CASA, University College London), MSc Urban Data Science and Analytics MSc (University of Leeds), MSc Urban Analytics (University of Glasgow), with varied features.

The term 'urban informatics' has been coined since the 2010s (Foth et al, 2011) to highlight data-driven problem-solving knowledge and skills for urban science practitioners. It had been interpreted by Kontokosta (2021) from the perspective of capability training in shifting modes of learning, working and decision making; especially when leveraging novel sources of urban data into urban management and policy analysis (Thakuriah, Tilahun and Zellner, 2015), which denotes its multidisciplinary nature in borrowing a wide range of methodologies from subjects such as informatics, geography, organisational behaviour, planning and social sciences.

The MSc Urban Informatics programme (MSc UI) was launched in 2018 at King's College London by the Centre for Urban Studies and Progress (CUSP) London. The design was to enable students to "study how rich behavioural data from cities and their citizens can be collected, analysed, understood, and communicated through computation", in order to "inform improvements that can increase the wellbeing of city residents, whether by government organisations or industries involved in providing services in cities".

Hence the programme has a strong remit to equip students with the rounded technical, analytical and communication skills embedded in Urban Informatics. These are the skills required to conduct effective urban data analysis, with experience of detailed case study topics and the communication of results to effect change, within the one-year educational intensive time constraint.

Placement module and its enhanced employability

Although there was a broad range of research in the UK discussing the benefits of work placements to students during higher education (O’Leary, 2015), it was mainly focused on undergraduates (Brooks and Youngson, 2016), or postgraduate research (PGR) students, who were normally PhD candidates, and their courses were more than three years’ long. Meanwhile, students pursuing postgraduate taught programmes (PGT) with a shorter duration (normally one to two years) had been left behind without such placement opportunities (Divan et al, 2022), due to tight time constraints. The majority of these PGT students are eager to be equipped with subject-bounded employability towards the completion of the programme.

This brand-new placement module had been developed through consultation with other departments; the faculty employability team, and college careers and employability team. This module was designed with innovative workflow, timeline, and education documents, tailored for a high-quality MSc UI module with industrial seminars, on-site practices promoting employability, and diary and report assessments.

At the development stages of this module, it was important that university protocol was researched to ensure all processes were adhered to and completed. Many consultations were convened before the proposal form was submitted, and these consultations explored such questions as:

- + how far the programme proposal fitted with the faculty policy and College Education Strategy
- + module evaluation was also investigated very carefully, to ensure parity with the other modules in the programme
- + discussions around the collaborative activity involved – how both the university and the host partner defined this activity
- + all Quality, Standards and Enhancement Office processes were checked for adherence
- + discussions were held with the host partners, drilling down to such issues as timetabling to ensure their company work schedule matched with the module and student timetabling, plus what, if any, resources the partner institution may require from the university
- + the partners’ equal opportunities and health and safety policies were scrutinised with induction assured for each student immediately they started.

On receiving initial endorsements, the faculty was then able to approve the module via the Education Committee. The approval of the Programme Development and Approval Sub-Committee (PDASC) was then sought.

The module's assessments comprise of two components.

- 1 A diary (a compulsory formative assessment, maximum of 500 words), listing the working hours and tasks undertaken during the placement. This reflects on both on the substance of the student's placement knowledge and the benefits the experience facilitated for their own personal and professional development.
- 2 A critical report (summative assessment weighting at 100%, maximum of 3000 words), demonstrating the student's ability to understand the project, as well as the challenges and future opportunities, if applicable, conducted at the host organisation. Students choose to answer one of the following two questions (extracts from module syllabus):
 - I. On the basis of your internship experience and using a variety of methodologies (eg data mining, spatial data analysis, network analysis, archival and internet-based work), test the hypotheses or work out solutions in your project conducted at the host organisation.
 - II. From your placement experience please assess the data-policy perspective(s) that the organisation you work for represents in its mission statement and its everyday functioning? Are the organisation's articulated values consistent with the values expressed through its operations? To what extent is the ideology of the organisation tempered by the opportunities and constraints it faces, especially from the data-policy perspective(s)? *Note: you may want to consider discerning data-policy values not only from their published, public and internal material, but also based on your interactions with the personnel at the organisation. Please do critically reflect upon the organisations' operations and how they connect to its values.*

The reports are marked by two markers (academic staff from CUSP London) using the blind marking model, with the module lead as first marker. Additionally, where feedback from the industry supervisor is available, this will be considered when forming the overall mark; once the assessment is completed, a short feedback report (approx one page) is returned to students. First and second markers will abide by the university and faculty postgraduate taught marking criteria, but also adapt assessment-specific expectations, as detailed below in Table 1.

Table 1. Assessment criteria

Assessment criterion	Sub-criterion	Weight
Introduction and overview	The report clearly and concisely describes the company in which the student worked.	10%
Technical description of the role and the projects on which the student worked	The report clearly describes the student's role and expectations from the student. It demonstrates a clear analysis of the problems addressed throughout the placement (for example, as part of the individual project(s) pursued by the student). There is clear evidence of reformatting disciplinary knowledge to the problem at hand and of selecting and devising appropriate strategies for problem resolution.	30%
Critical analysis and transferable skills	The report reflects on all elements of the student's learning experience, including technical and social aspects and provides a critical analysis and suggestions for improvement.	40%
Conclusions	The report includes a conclusion section that summarises the main points in the report and provides an overall self-evaluation of the student's placement experience.	10%
General scholarship	The writing is clear, coherent, and repetition free. The student is able to express a well-formed argument through his/her report. The report is well structured. The report is free of grammatical and typographical errors. A full set of references is included, and these are appropriately structured and formatted.	10%

Against this background, a work-based learning module with a placement opportunity in an external organisation (Atfield, Hunt and Luchinskaya, 2021), has been designed in the MSc Urban Informatics programme to contribute 15 credits towards the completion of the programme. Successful students will conduct eight hours per week working in their placement at the host organisation for 10 consecutive weeks from January to April, which falls into the Semester 2 of their academic year, focusing on one host-assigned data-driven project applying their taught techniques.

The module has been designed with the aim to:

- + provide students with experience of working with selected industrial and policy agencies in London
- + enable students to test, validate and question interdisciplinary theories in urban policy formulation and implementation
- + provide students with vital practical work experience for future employment in the corresponding field
- + develop further on general skills, confidence, and professionalism.

While putting an emphasis on the learning outcomes on the subject-featured objectives, as below:

Intellectual: knowledge of how urban policymaking is undertaken in practice. Recognition of the data-driven policy formulation and implementation.

- i. Application of data analytical skills and visualisation ability gained from other taught modules.
- ii. The ability to put together a structured and coherent diary and critical academic report based on their experience with the host organisation.

Employability: the skills and experiences will vary from provider to provider. Overall, there will be opportunities for networking, as well as learning the practicalities of urban informatics related policy. The placement programme will be a very good CV builder.

- i. An understanding of the data-driven policy formulation and implementation in the host organisation.
- ii. Insights into the workings of the host organisation and an understanding of the day-to-day environment (could be virtually).
- iii. How to collect/process urban data relevant to the work in the host organisation through a variety of methodologies including survey, statistics, analysis of archival and internet-based material, and by simulating data.

Module delivery and progresses

The module leader collected and compiled all placement projects from dedicated partner host organisations in the summer prior to the new academic year, to facilitate module content development and prepare for the upcoming new semester.

At the beginning of each academic year, the module lead introduces all projects to MSc UI programme students and invites them to apply for this module. They are asked to submit their CV and covering letter for each placement they are interested in with the deadline repeatedly emphasised. Each applicant is invited for an interview by the host organisation, who returns a ranked name list for the module lead to coordinate.

Once the successful candidates are confirmed, they are personally informed and asked to sign a specific host agreement provided by the university in semester 1. They then receive all the information required for the placement. The successful students meet with the line manager from the host organisation, together with the module lead and discuss their work plan and partner expectations in semester 2. Their daily activities (eight hours per week for 10 consecutive weeks in semester 2) vary due to the nature of the work selected. However, most of the activities are set out below:

- + mandatory training provided by host organisations to facilitate students' familiarity with varied working environments. For example, British Red Cross and a Freedom of Information request from a charity organisation
- + desk-based/archival research on specified topics
- + programming/data analysis work on specified topics and data (varied datasets provided from host organisations)
- + project work such as data collection, interviewing, on specified topics
- + analysis of the capacity of the organisation for increased or more sophisticated use of data analytics, to get familiar with the organisational working environment
- + other relevant activities proposed by host organisation and agreed with module lead, which will benefit the students, eg to explore tools and applications in the host organisation, such as JS and CSS, Shiny, etc.

From 2018 to 2022, the module successfully guaranteed more than 10 host organisations to provide more than 20 placement opportunities for MSc UI students on an annual basis, with partners ranging from large government bodies and international companies to small, medium enterprises (SMEs). A non-exhaustive list below provides examples of the partners who have hosted so far:

- + Mayor's Office for Policing And Crime (MOPAC)
- + Transport for London (TfL)
- + Westminster City Council (WCC)
- + Haringey City Council (HCC)
- + Lambeth City Council (LCC)
- + British Red Cross (BRC)
- + College of Policing
- + WSP
- + Movement/GHD
- + Kami Coach

The dedicated projects cover topics on:

- 1 **Transport and mobility:** *for example, forecasting footfall model building (WCC), spatial-temporal analysis of distribution characteristics of London passenger flow based on smart card data (TfL), public transport fare analysis and insights (TfL), Mosaic user-centric mobility behaviours and planning the mobility interventions (WSP), net zero transport and workplace optimisation (WSP), post-Covid mobility behaviour study (WSP)*
- 2 **Crime and policing:** *data in policing ecosystem (College of Policing), social media and public satisfaction evaluation on police services (MOPAC), assessing the link between socio-economic public service provision and violent crime in neighbourhoods across London (MOPAC), hot street Identification for crime prevention (HCC)*
- 3 **Healthcare and services:** *British Red Cross resilience index building-up (BRC), health chatbox design (Kami), influencing behaviour change using air quality sensor data at schools within the Westminster City Council area (WCC), effects from local building environment on residents' mental health (LCC)*
- 4 **Organisational evaluation:** *assessing Westminster City Council's data values (WCC), review of data policy at the organisation (College of Policing), etc.*

Toward sustainable education and career impacts

The term-long placement projects' benefits were multifaceted. They provided the students with opportunities to showcase their practical ability to potential employers while also helping consolidate the partnership between the university and dedicated partners. The successes also facilitate CUSP London to raise its profile on websites and social media. One of the more outstanding recent impacts in recognition of the successful progress of the module was that a host organisation set up a postgraduate scheme to recruit eligible King's MSc UI graduates.

Student satisfaction has been received and documented via various mechanisms; anecdotally among the student cohort and CUSP London members during events or on KEATs (King's Moodle) discussions and forums, more officially in Student Staff Liaison Committee (SSLC) meetings, positive mid semester student feedback submissions and via the Postgraduate Taught Experience Survey (PTES). This provided very positive feedback from a high percentage of returns received.

"The MSc Urban Informatics placement module gave me valuable industry experience which I could not have had otherwise, introducing me to my future employer. I was able to see the similarities and differences between academia and a workplace in terms of the problems they are trying to solve, and from this better gauge what I wanted from my post-university career."

(Raphael Canty – MSc UI alumnus, Graduate Transport Consultant, WSP)

“The CUSP placement at AI startup Kami provided me a great opportunity to cultivate my skills in artificial intelligence and natural language processing, which are exactly what are needed for my doctoral research. It also stimulated my research interest in human-centered computing and artificial intelligence.”

(Kejiang Qian – MSc UI alumnus, PhD Student King’s College London)

“Having the opportunity to use what I learnt to tackle a real-world problem facing London Ambulance Service was a major highlight of my time on the Urban Informatics MSc. It also helped enormously when it came to finding employment afterwards.”

(Liam Tollinton – MSc UI alumnus, Data Scientist HMRC)

Such practices had not only received positive feedback from students (rated in the college annual feedback survey, Evasys, at 4.8 out of 5), with example testimonial:

“Fantastic workplace experience which is invaluable for future graduates heading into the workplace. A highlight of my degree.”

(The student, 2020/21)

But this also helped promote the setting up of an exclusive postgraduate job scheme from dedicated host partners with high recognition of the students’ performance. This can be demonstrated by testimonial extracts from host organisations:

“This is brilliant to see... (the work). As ever, we are very happy to support future placement opportunities as the students’ enthusiasm is always so high and the skillset very valuable.”

(WSP, 2021-22)

“I just want to say, ... [student’s name] has been fantastic, and I am really impressed with the critical thinking skills she has shown during her placement. She hasn’t been afraid to ask for more information or question our methods, and I’ve really appreciated that.”

(British Red Cross, 2021-22)

“... [student’s name] was terrific, very mature and extremely knowledgeable. We had weekly one to ones, where he kept me updated with his work and his thought process for his various approaches and techniques. A standout quality was his ability to decipher data from the various sources and to methodologically eliminate data deemed unnecessary to answer the key questions of his project. I think this is a good quality to have, as it translates directly to the working world. He was also able to clearly talk me through the findings in his report, which was once again excellent.”

(MOPAC, 2020-21)

“It was great to work with ... [student’s name] and I’m really positive about the experience of hosting a work-placement student. His area of work (project’s title) was quite broad and required someone that was resourceful, flexible and proactive – all things ... demonstrated. One of our main hopes from the placement was for a student to offer new approaches and insights on topic area that’s knocked around in the authority for a while. I was really pleased with how he took direction, sought feedback on outputs and adopted guidance thoughtfully and creatively. He demonstrated a range of skills – working with different sources, types of data, as well as tools to analyse, map and interactively visualise findings. His analytical outputs will be published as PowerPoint reports on our internal information platform for officers to refer to in the future. He was happy to take on additional challenges too, including presenting his work to wider audiences. He put forward a comprehensive and sleek slide deck at our first council-wide analyst meeting. Needless to say, he has great communication skills – both interpersonally and in presentations, which made it easy for me to work with him and expose him to different scenarios. He was also proactive in requesting to speak to different officers on a weekly basis to learn more about their work, the council’s evolution where intelligence work is concerned, as well as understand public sector careers better – which I thought was great.”

(Westminster City Council, 2019-20)

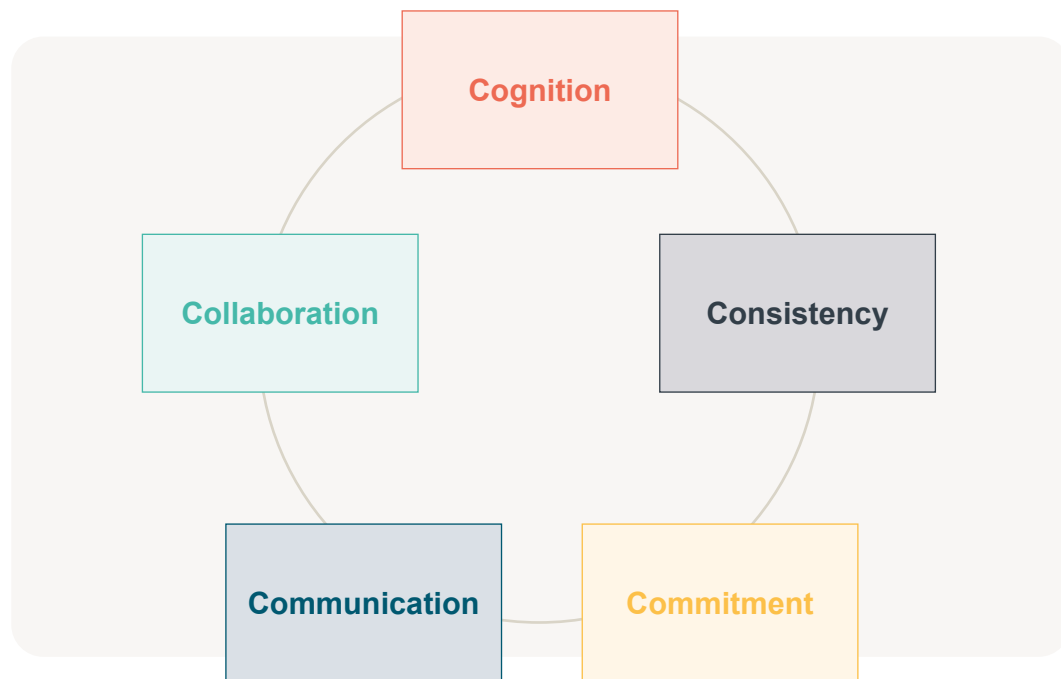
Reflections on the four-year long practice, placement towards sustainable education to enhance students’ employability becomes the next milestone design for improvement. Despite the 5C matrix (Fig.1) to be framed emphasising the internal employability: such as

- + cognition in relevant knowledge and skills
- + consistency in transiting from educational ability to employability
- + commitment in tasks and time management
- + communication in telling stories with data insights
- + collaboration with teammates.

The external employability (O’Leary, 2013) framework is on the agenda for the next stage.

Sustainability issues, such as whether the placement should be paid (Smith et al, 2015), what the payment rate would be, who will be the supporting shareholders (Carter, 2021), and what is the optimal model, as well as the impacts on students’ careers (Taylor and Hooley, 2014) should be reviewed and developed with expanded discussions.

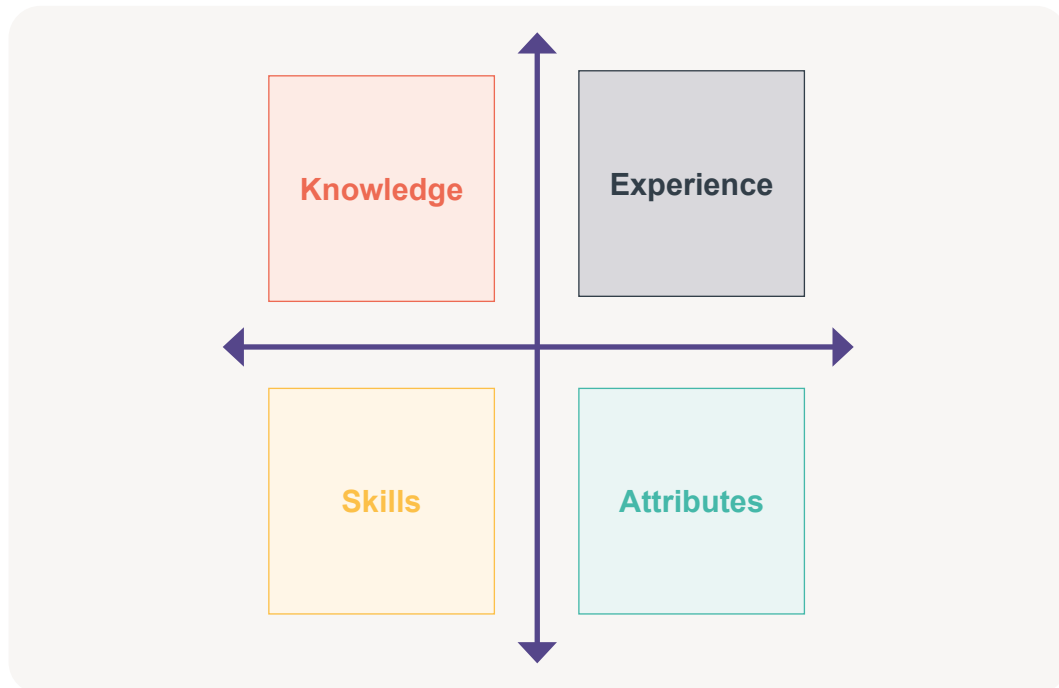
Figure 1. 5C Matrix for Internal Employability



To realise such prospects, the case study has successfully secured some grant support from the home NMES Faculty at King's College London. This is to develop its comprehensive teaching innovation model and external and enterprise financial model for a sustainable progress in the coming year. The aim is to expand the module to wider postgraduate taught programmes featuring, for instance, data mining, analytics and visualisation.

The sustainable matrices will be designed using the concepts of the Employability KEAS matrix, encoding knowledge (taught knowledge from similar programmes), experience (working environment endorsed experience), attributes (personability and interpersonal communication) and skills (education-employment skills) (van Eeghen et al, 2019), annotated by identified indices from interviewed employers (host organisations) and employees (student alumni). This set of matrices will be further circulated among and with networking programmes and career and employability departments from corresponding universities, to benefit wider groups of students.

Figure 2. KEAS Employability Framework (Career and Employability, KCL)



The placement module has provided our students with invaluable real-life experience, equipping them with an enhanced skillset, over and above the academic requirements to achieve a pass mark within their programme.

This includes, from the initial application for the placement, confidence building, CV writing and interview technique, through to understanding office processes, comfortable liaison with stakeholders, health and safety and the importance of equality policies within the workplace, to working with data in different formats, collating and processing this, ultimately leading to policy change and implementation.

The students complete this module with a heightened sense of achievement and ability to apply their academic data analyses in the workplace. While studying, they also have a wonderful understanding that the university and module leads are investing in the future aspirations of each student, plus relationships with academics and partners are nurtured. This has also led to publications and collaborative projects being undertaken after the MSc UI programme has been completed (Wu and Li, 2022). It is due to these relationships that the support and collaborative spirit is also embodied; alumni return to insights and induction events to impart their experience and knowledge to the current students and they are also updated with any emerging opportunities from other alumni or partners that would assist their careers. This continued relationship is inspiring and attracts excellent partners, academics and students alike due to their exciting ability to have a real impact in the cities in which they work.

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Wider context

Development of partnerships with students to co-design employability initiatives and resources

Gavin Bunting, Sam Rolland and Nishan Clarke
Faculty of Science and Engineering, Swansea University

Background

Since 2017, the Faculty of Science and Engineering (FSE), Swansea University, has co-designed and co-delivered employability provision by employing students as summer interns, ambassadors throughout term-time and delivering a student mentoring scheme. This enabled students to become an integral part of employability support, with co-design harnessing their creativity and experiences to develop engaging, relevant and inclusive resources for students from a wide range of backgrounds. The team supports around 4,500 undergraduate and postgraduate students studying engineering, with many of the partnerships comprising students from all university faculties.

Before implementing this approach, the challenge we faced was how to effectively deliver employability support that students value and want to engage with, recognising that communication preferences, preferred social media platforms and style and tone of delivery rapidly evolve. As with many institutions, over the years we have engaged students through staff-student forums and employability committees. However, although useful, these interactions only allow for brief discussions, with limited ability for re-engagement. We therefore had the objective of how to facilitate deeper, more meaningful engagement with students, which allowed them to play an active role in the creation and delivery of employability support.

Pre-pandemic, top UK employers suggested that they are unlikely to recruit graduates with no previous work experience, irrespective of academic achievements or university attended (High Fliers Research, 2020). Recognising this, the university set up a summer internship programme to provide students with paid work experience with the university and local employers. This funding proved critical in providing resources to engage students through co-created content over longer periods and, due to placements being paid, indicated that we valued their contributions.

To ensure robust, fulfilling and productive partnerships with students, we reviewed the approaches and experiences of others, including in different contexts. Ribes-Giner et al (2016), conducted a literature review highlighting how co-creation can raise student “*satisfaction, trust and loyalty*” and highlighted that participative communication leads to students’ aspirations being met. Bovill, 2014, investigated factors underpinning students’ satisfaction in greater depth. They were mainly found to be “*individual responsibility, engagement and autonomy*”, and the benefits were “*improved levels of confidence and motivation [...and] improved student performance. Students [involved in co-production] were reported to have a deeper understanding of curriculum design and learning processes*”.

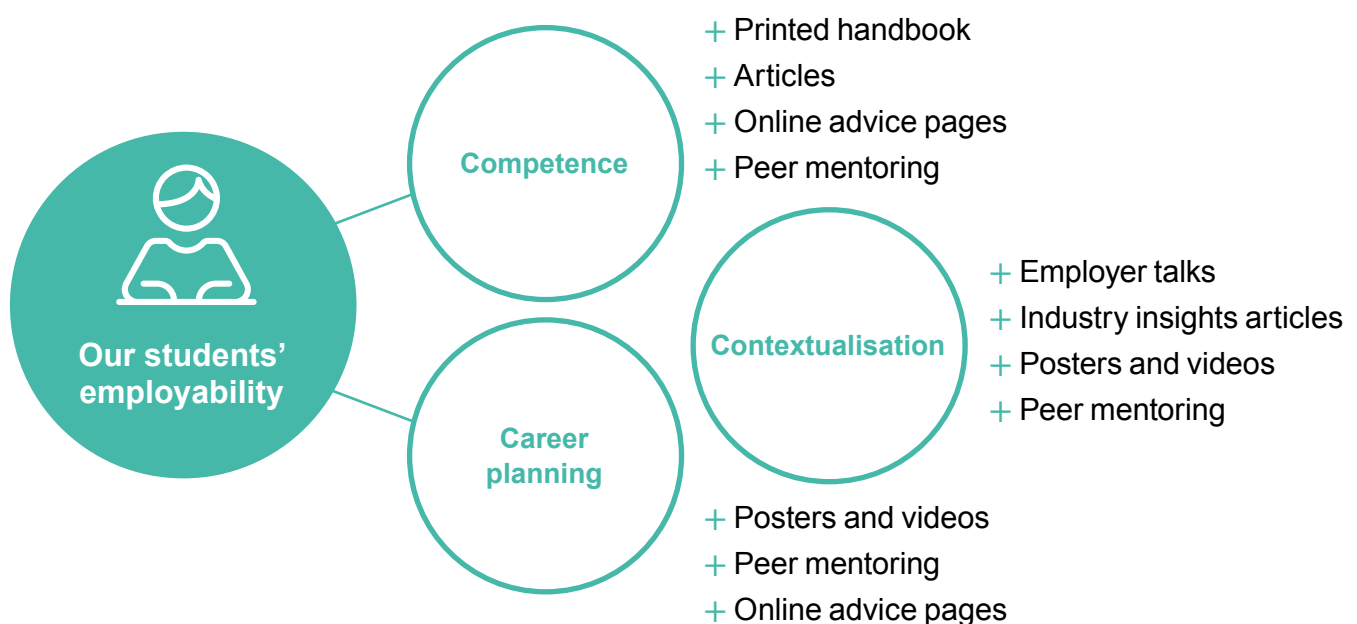
An important factor that informed our partnership strategy was to involve past, present and future students. This enabled a perspective, mixing current students' view of what is desired with recent graduates' view of what is required, with recent graduates bringing an experiential context much closer to the learning experience, an approach validated by Bovill (2020). Hill and Reddy (2007) showed that peer mentoring enables students at different stages of studies to be involved together, bringing insights from students' and graduates' contemporary industry experience.

Additional benefits of co-creation for students are that it forces them think about what and how they want to learn (Andersson and Clausen, 2022). This helps contributors reflect on experiences, a key skill for employability.

The FSE approach

The development of co-created resources revolves around our perception of the key components of employability. This includes developing competences, knowledge of the employment context, and helping students define their aspirations, plan their career and take steps towards attaining their goals. Defining these areas for intervention helped us map the resources for co-creation and how co-creation addresses our employability priorities. Figure 1 maps how different materials were generated and delivered. Some co-creation addresses delivery modes (creation of a website, handbook), while others address the content (articles, recruitment insights). This was significant as it meant that students engaged with what is delivered and how it is delivered. Although a broad scope was defined by staff, students had the freedom to innovate and take the brief in the direction they felt would have the most impact and relevance. This inevitably resulted in the development of resources and initiatives that were truly tailored to students' needs.

Figure 1. Co-created material and employability objectives they fulfil



Resources students have been critical in co-creating:

Employability handbook: summary of employability resources and key concepts. Originally proposed by one of our students, it has been added to and improved year on year and provided our initial co-creation trial. Its success paved the way for expanding the partnership approach.

Weekly employability newsletter: comprises articles relevant to the sector or employability and circulated to all students and staff. Written by interdisciplinary students each year on topics they feel are relevant and interesting.

Engineering employability website: co-built and contents contributed by summer interns. Hosts information on placements, recruitment and job vacancies.

Experiences of graduates in the workplace continually evolves, depending on technology and industry practice. Recognising this, we developed a peer mentoring scheme, where returning YII students disseminate information to peers. This provides a valuable up-to-date resource for placement seekers, and provides returning students with mentoring experience, enhancing their employability.

Mentors also provide feedback on the employability resources they used to secure a placement and have first-hand experience of the skills and competencies required for near graduate work in industry. Feedback is collected via a questionnaire embedded into the peer mentor scheme; verbally during the YII poster session and student-staff fora and analysed by employability staff.

Who are the contributors?

- + **Students from all disciplines:** summer placements work on content creation, web development and data processing, with backgrounds in media studies, languages and all STEM subjects.
- + Our **alumni** return to deliver employer talks, mock recruitment experiences and advise on curriculum content through industry advisory boards.
- + Returning **YII students** produce posters, videos hosted online, and participate in peer mentoring.
- + Student contributions are on a voluntary basis (articles, peer mentoring, events), and through our **summer placement** scheme (website development, articles, handbook).
- + Co-creation and co-delivery is long term. However, students intervene at critical points – co-creation over the summer and co-delivery during term-time.

Table 1. Summary of Initiatives

Initiatives	No of students involved	When activity takes place
Website	4 since 2018	Creation – June/July Dissemination – term-time
Publications (articles, newsletter and social media)	10 since 2017	
Handbook	2 since 2017	
Peer mentoring	136 since 2017	October–May
Feedback: YII mentors Student staff fora	~ 45 since 2017 ~30 per session	June/ July One per year
Ambassadors	35 since 2017	Term-time

Outcomes

Co-creation with students has resulted in much improved creativity and diversification of employability support. The impacts were:

- 1 Capacity to deliver “nice-to-do” projects which otherwise may not have been resourced.
- 2 Increased engagement with online resources. We have seen a 270% increase in student engagement with the employability website from 2019-20 (378 applications logged) to 2021-22 (1022) and an average of 1227 unique opens per newsletter, totalling 27,000 opens over 22 newsletters, a 27.7% open rate.
- 3 A rich source of material for all students to consult.
- 4 Improved employability of students through a portfolio of work experience in a multidisciplinary team.
- 5 Knowledge exchange between staff and students that enabled students to improve their knowledge of employability, and staff to understand how to create accessible and relatable communications.

The co-creation approach is embedded within annual review and planning, with a long-term review due in 2023. The approach is transferable across all disciplines, demonstrated recently through co-creating resources for six science disciplines. Staff capacity and placement funding are main challenges associated with wider implementation. Further development would involve employing a YII student within the team, thus enabling co-creation in greater depth.

The success of the employability team's student partnerships has led to expansion of the summer placement scheme across the whole faculty (research groups and professional services). This provides valuable work experience for students and provides capacity and creativity for teams across the faculty. Students have worked on a wide range of projects, from lab research and fieldwork, to resources for learning and teaching and student recruitment.

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Co-designing a transferable skill course based on students' development needs

Patricia Perlman-Dee, University of Manchester

Background

This case study offers the reader an innovative and sustainable approach to supporting students to develop their transferable skills, with the aim of ultimately enhancing their employability. The approach is to hear the student voice on which skills students feel they need most support. To help students in developing these skills, a co-designed new employability course is being created. The course will focus on the top 10 skills identified by students, with input from employers.

At University of Manchester (UoM) there are about 40,000 students and about 6,000 students at Alliance Manchester Business School (AMBS). The career service is a complex entity, which operates on numerous levels, as well as having recently undergone a restructuring.

These organisational challenges made for a complex question, but equally represented a fantastic opportunity to add sustained and impactful value in the role as employability lead. Other universities may face similar structural challenges, and therefore need to consider the possibilities of support in launching an initiative like this. Timing is also important as resources may be limited. Additionally, a large university may have many different employability initiatives happening the same time. It should not be assumed employability support must go through career service.

The author undertook a high-level review of academic literature about employability models, reviewing models such as Knight and Yorke's USEM Model (Knight and Yorke, 2003), Dacre Pool and Sewell's CareerEDGE model (Dacre Pool and Sewell, 2007) and numerous others. The review also included further material from Advance HE, including the Employability Framework (Cole and Tibby, 2013) as well as an industry report from Confederation of British Industry and NUS (CBI/NUS, 2011).

University Career Services generally do a good job in assisting students in CV writing, preparing for assessment centres and interview training. However, studies show that students often lack the skills most desired by employers and the gap is increasing. The CBI/NUS report from 2011 reported that over 70% of employers think university students must do more to make themselves more effective employees. The same document reports that 66% of students want support in developing their employability skills (CBI/NUS, 2011). The Chartered Management Institute's publication "Work ready graduates" (CMI, nd), states that, in 2021, nearly 80% of employers believed that current graduates do not arrive fully equipped with the skills they need to be ready. The same report also states that only 27% of students feel confident they can demonstrate transferable skills. This increase in concern from employers, together with a decline in confidence in students show there is an explicit need to support students to develop transferable skills today.

Approach

Discussions took place with other universities to understand their careers services and employability proposition for students and employers. Manchester City Council and recruitment firms were also consulted to understand what skills were lacking and what skills were desirable.

Every year, there are endless organisations and institutions publishing information or lists of “top skills” for those entering employment. There will be job-specific skills, but consistently at the top, are transferable skills. In 1997, the Department for Education and Employment defined transferable skills as *“those skills that are central to occupational competence in all sectors and at all levels”*. The skills defined in this report were project management, leadership, communication, working in teams and problem solving (Department for Education and Employment, 1997). The Pedagogy for Employability Group (HEA) (Pegg et al, 2012) from 2004, identified skills sought by employers based on 25 years of research. It also references the initial work from the SkillsPlus project, which identified 39 skills. This was later published by Yorke and Knight in 2003 in “Embedding employability into the curriculum” (Knight and Yorke, 2003).

In 2008, the Council for Industry and Higher Education (Archer and Davison, 2008) also published the “top 10 skills sought by employers”. A survey was conducted with 233 employers ranging from small to large. Communication and teamworking were still top skills. A later report from the World Economic Forum (2020) advises on the essential skills to develop today and tomorrow. The Future of Jobs report 2020 presents information is based on the Future of Jobs survey (Schwab and Zahidi, 2020), which assesses the short- and long-term trends and impact of technological adoption on labour markets. It is supplemented with data from LinkedIn and online learning platform Coursera. (Whiting, 2020) The top skills sought by employers today and for the next five years are problem solving and critical thinking. New skills in the field of self-management have also emerged such as resilience and flexibility.

The author reviewed the above lists in addition to recruiters' lists, along with those 25 skills identified at UoM through University Careers Key Skills and Attributes (The University of Manchester Careers Service, nd). These skills were identified by engaging focus groups of recruiters, employers and students. The focus groups are held twice a year to make sure the key attributes and skills are relevant and up to date with what employers require. The author concluded a list of 34 skills (Figure 1) based on frequency of skills identified across the lists investigated. The list can be subject to further discussion, as below.

To be able to truly co-design with students, the author conducted a study over nine months. The survey's purpose was to understand which transferable skills students felt least confident in, combined with which areas the students would like more support. The study was distributed through programme and course directors and career services at AMBS. The survey was conducted across all year groups and programmes at AMBS. In addition, the survey was also sporadically distributed through employability leads in the other three schools within the faculty of humanities.

Figure 1: 34 Combined/extended skills

Skill/behaviour	Skill/behaviour	Skill/behaviour
Ability to work under pressure	Dependability	Providing feedback
Accountability	Flexibility	Put things into perspective
Active listening skills	Influencing/persuasion	Resilience
Adaptability	Leadership	Responding to feedback
Adapting a growth mindset	Negotiation skills	Self-motivation
Analytical skills	Networking	Taking initiatives
Being innovative	Non-verbal communication	Taking responsibility
Commercial awareness	Organisational skills	Teamwork
Conflict resolution/management	Positive attitude and outlook	Time management
Creativity	Presentation skills	Work ethic

Figure 2:

For each statement, please click one choice in each of

Current state – Confidence (Yellow)/University support (Blue)

Click any you want the University to focus on to assist you further develop

High importance (Purple)

	Current state – I am confident	Current state – I am not confident	University support – Good	University support – Need more training/support	High importance
Self-motivation	☒	☐	☒	☐	☐
Positive attitude and outlook	☐	☒	☒	☐	☐
Providing feedback	☐	☒	☐	☐	☐
Responding to feedback	☐	☒	☐	☒	☒
Analytical skills	☒	☐	☒	☒	☒
Taking initiatives	☐	☐	☐	☐	☐

With 34 skills to review, the survey had to be of a simple nature to ensure completion. The survey was therefore created as a matrix-style questionnaire. In total, the survey had over 350 respondents. The response rate from AMBS was equally spread across all year groups. The response rate from outside AMBS was low. This is likely to be due to more distribution channels within AMBS.

Outcome

The results of the survey are found in the tables below.

Confidence

Having to adapt and being flexible was a necessity during Covid. All students also had to take more of their own responsibility and therefore seemed to have increased their confidence in their work ethic. Commercial awareness is listed as a UoM key skill independent of subject degree. It is worth noting that business school students feel a particular lack of confidence in commercial awareness.

Confidence				
<i>Most confident</i>			<i>Least confident</i>	
Flexibility	39%		Being innovative	27%
Taking responsibility	38%		influencing/persuasion	24%
Work ethic	37%		Commercial awareness	23%
Adaptability	36%		Creativity	22%
Active listening	36%		Negotiation skills	22%

University support

The table below reports the skills in which students find the university gives them good support as well as areas they would like more support. Worth noting is the good support perceived in active listening skills, but how more support is desired in non-verbal communication. Many lists have “communication” as a top skill. However, from this limited survey, it shows that communication needs to be broken down further to be able to support students in specific areas. This level of granularity is important for a true student partnership.

University support				
<i>Good support</i>			<i>More support</i>	
Work ethics	31%		influencing/persuasion	27%
Adaptability	30%		Creativity	25%
Flexibility	28%		Negotiation skills	25%
Active listening skills	26%		Non-verbal communication	25%
Teamwork	26%		Being innovative	24%

Bringing it together

It should not be a surprise that students feel confident in the areas where they feel the university is already providing good support. It is worth noticing that “top skills” from both 1997 (Department for Education and Employment, 1997) and 2021 (Schwab and Zahidi, 2020) are present, indicating that students are, to some degree, aware of and engaged with the transferable skills needed both today and for the future.

More confident		Good support	
Flexibility	39%	Work ethics	31%
Taking responsibility	38%	Adaptability	30%
Work ethic	37%	Flexibility	28%
Adaptability	36%	Active listening skills	26%
Active listening	36%	Teamwork	26%

There is a similar pattern when looking at the skills where students feel least confident and where they would like more support from the university. Students do not feel overly confident in being innovative and creative, which are again key skills set out by UoM. It should be noted that this could possibly have a different outcome if a larger sample of students from other schools had taken part in the survey. Therefore, a partnership with students is important to be able to shape and adapt to individual student need. Another interesting note is the wish for more support on non-verbal communication. A further study could possibly be investigating the impact of Covid and virtual teaching on non-verbal skills.

Least confident		More support	
Being innovative	27%	influencing/persuasion	27%
influencing/persuasion	24%	Creativity	25%
Commercial awareness	23%	Negotiation skills	25%
Creativity	22%	Non-verbal communication	25%
Negotiation skills	22%	Being innovative	24%

What is next

Having identified students' perception of their own confidence or lack thereof for certain skills, combined with the support or lack of support, a new approach is required. The new proposed initiative is to create a concentrated employability course. The course is initially intended to be structured in a modular approach around each of the identified 10 skills where students feel least confident and need more support. This will help students fill the existing gap in this area and assist students in developing employability skills.

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Graduate attributes at Queen Mary: a co-created approach

Stephanie Fuller, Janet De Wilde, Queen Mary Academy; **Megan Clinch**, Wolfson Institute for Preventative Health; **Michelle Henderson**, School of Law; **Radhika Thiagarajan**, Queen Mary Students' Union; **Shazil Shariff** and **Tim Edkins**, School of Politics and International Relations, Queen Mary University of London

Background

In 2021 Queen Mary University of London embarked on a project to update the Queen Mary graduate attributes. This was one of a number of workstreams falling under a broad 'Curriculum Enhancement' project across the university. The Graduate Attributes project sought to update attributes for all undergraduate and postgraduate taught courses across all disciplines at the university. Queen Mary is a research-intensive UK university and a member of the Russell Group. The diverse profile of our students is distinctive for a Russell Group university and any research-leading university across the world.

Queen Mary's Strategy 2030 includes the ambition to ensure the

"distinctive Queen Mary Graduate Attributes are embedded in all our programmes, so that our students develop the knowledge, skills, adaptability and resilience to succeed in an ever-changing global job market and become active global citizens."

(Queen Mary, 2019)

The Queen Mary graduate attributes also need to support the university to be 'The most inclusive university of its kind, anywhere' (Queen Mary, 2019). Strategy 2030 draws a clear link between inclusive practice that supports our diverse students and the development of co-creation as a core component of our education strategy. Involving students as partners in the enhancement of the curriculum can lead to improved engagement, motivation and understanding of both staff and students (Bovill et al, 2011).

Ensuring that graduate attributes are embedded within the curriculum, clearly defined and articulated to students is vital for supporting student transition to the workplace and life after university. It is also important from a professional development perspective, for example to support continuous professional development in a student's chosen field or to help enable professional membership/chartership.

The project to review and update the university's graduate attributes was initiated with a focus on supporting our diverse student body to succeed, and to do this through a collaborative approach. We wanted to ensure that students were fully involved in the whole process and took inspiration from the concept of 'co-creation of the curriculum' developed by Bovill and Woolmer (2018). The authors argue this approach can empower and involve students in a way that runs counter to the kinds of curriculum design models which are 'done to' students (p419). Graduate attributes are often developed by senior leaders and applied universally within an institution. We agree with the views of Wong et al (2021) that attributes should incorporate both staff views and 'the aspirations of students' (p1351). This will also support the development of attributes which are relevant to students' specific programmes of study because staff will be better equipped to embed attributes and link them to the subject material, in turn supporting students to "better appreciate and recognise the transferable qualities of their study" (Wong et al, 2021, 1351).

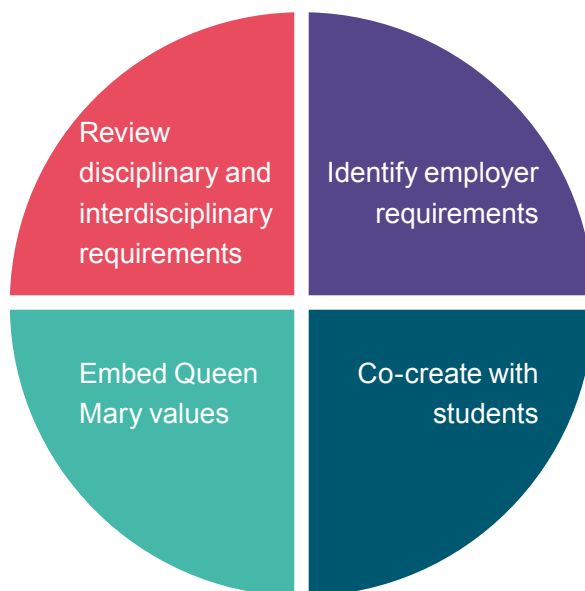
The aims of the project were to update the attributes to ensure Queen Mary students are as best prepared for the workplace as possible. The project also offered a chance to align our attributes with the priorities set out in Strategy 2030, including co-creation with students. Other aims included to enhance the communication of attributes to students and enhance the support provided to students to help them articulate their attributes and apply these attributes to the workplace. Finally, the project aimed to positively impact individual graduate outcomes as well as key graduate outcomes and student satisfaction metrics.

Approach

The graduate attributes workstream was established and led by the Queen Mary Academy, the central education and research development unit. The project was given an 18-month timeframe to develop an updated set of attributes. The initial step was to convene a working group comprised of professional services staff from across functions, academic staff from all faculties, students' union representatives and paid student interns. Through a series of discussions and development sessions, the group collaboratively evolved an approach for updating graduate attributes. This drew partly on the process of 'extracting' employability from the curriculum, which had been introduced at King's College London (Daubney, 2021) but combined it with our commitment to co-creation of the curriculum (Bovill and Woolmer, 2018) and alignment with Queen Mary's institutional values.

The approach to updating attributes includes four key elements (see Figure 1). We wanted attributes to be aligned to any disciplinary or interdisciplinary requirements and to encourage colleagues to consult the latest QAA Subject Benchmark Statement. Secondly, we wanted to ensure the attributes that we develop meet the current needs of employers. Queen Mary Careers and Enterprise team developed a list of top 10 employer skills which academics can combine with any discipline-specific employer requirements. Third, we wanted not just to ask academics to consult students or consider student views, but to co-create attributes together with students. Finally, to be a 'distinctive' set of attributes as set out in Strategy 2030, they needed to align to Queen Mary's institutional values.

Figure 1. Approach for updating attributes at Queen Mary



Initial formulation of the approach took around six months, although we continued to develop it further throughout the project. Once the approach was outlined, we planned a pilot to trial it with a range of diverse programmes from across the university. The programmes were chosen to represent different faculties, undergraduate and postgraduate taught courses, courses which were considered highly vocational and those which were not. Additionally, data from the Graduate Outcomes Survey and Postgraduate Taught Experience Survey was analysed in order to choose a range of programmes which had performed less well on questions related to graduate attributes, and also a number of those who received high scores. The rationale for this was to target areas of greatest need, but also to highlight areas of good practice which could be disseminated as part of the project. The pilot ran between months six and 18 of the project, including planning, delivery and analysis.

Student consultation and co-creation was a key element of the pilot. The student consultation research was planned, developed, delivered and analysed by student interns on the project. Ethical approval for this work was obtained from the Queen Mary Research Ethics Committee. The results of the student consultation were fed into workshops for the pilot programmes, which were attended by academics and students from the course. A student intern also developed a ‘student scenario’ for use in the workshop, which prompted productive discussion around the ways in which attributes can be communicated to students and better embedded in the curriculum.

Throughout the project the student interns developed a range of case studies of good practice in collaboration with academics. They spoke to academics from across the university about their experiences of embedding employability and graduate attributes in the curriculum and then distilled these conversations into written case studies. These are vital in communicating the work already being done on graduate attributes to colleagues across the university and in inspiring others to do more.

At the end of the project period, the graduate attributes group reviewed and consolidated all the information to develop an updated framework of Queen Mary graduate attributes. Together with guidance for staff and students, these are now available on the [Queen Mary website](#). Work now continues to embed the new attributes across all university programmes.

Outcomes

The key outcomes from the 18 months that the graduate attributes workstream operated have been the co-creation of: updated Queen Mary graduate attributes, case studies of good practice, and guidance for staff and students. The next phase of the work is to roll out the new attributes and approach across the institution. We intend that students should be close partners in this work.

Table 1. Updated Queen Mary graduate attributes, aligned with Queen Mary's values

Value	As a Queen Mary graduate, you will
Inclusive	P1 Communicate effectively in a range of formats for different purposes with a diverse range of people
	P2 Respect, listen to, and value others and their opinions
Proud	P1 Recognise and value your individual worth and identify the contributions you can make
	P2 Identify clear personal, study and career goals, taking responsibility for your own growth and development
	P3 Apply a flexible and resilient approach to your life
Ambitious	A1 Engage critically and reflectively with knowledge
	A2 Demonstrate an innovative and creative approach to problem solving
	A3 Apply your disciplinary expertise to broader contexts and society
	A4 Develop a set of relevant digital skills
Collegial	C1 Participate effectively and inclusively in different roles as part of a team , including as a leader
	C2 Collaborate with a diverse range of colleagues
Ethical	E1 Act honestly, fairly and ethically, including in academic conduct
	E2 Promote socially responsible behaviour for a global sustainable future

The findings from our consultations and co-creation with students throughout the pilot will inform the roll out and the way in which embedding attributes and employability in the curriculum goes forward. We feel that the new Queen Mary Graduate Attributes reflect what students thought were the qualities that studying at Queen Mary specifically enabled them to develop.

Table 2. Key themes from co-creation and consultation with students

Students are aware of what graduate attributes are, however, they are not generally aware what the graduate attributes for their course are.
No students reported that attributes are regularly mentioned in teaching or signposted, eg on the VLE.
When asked where they thought attributes were developed in their course, students could provide a range of examples eg group work, presentations, lab skills.
Students wanted more practical application of skills with academic content, and more compulsory careers support activities embedded into their programme.
A minority of students cited love of the subject as a motivation for studying; but most were more pragmatic and strategic with clear career motivations.
Common distinctive qualities of a Queen Mary graduate identified include: inclusivity, intercultural communication, international outlook, teamworking, networking.
The work in rolling out updated attributes across the university will be closely informed by these themes, for example in focusing on the ways in which attributes can be more effectively communicated and signposted to students. Next steps will include workshops with each university department to review and update their attributes, and plan further curriculum development to enhance embedding of attributes.
A further key outcome is the development of the co-creation approach for curriculum enhancement. Co-creation of the curriculum is one of the more under-developed areas of co-creation (Healey, Flint and Harrington, 2014), and the co-creation of graduate attributes is even more so. Involving students as partners in this process has strengthened the resulting approach and framework that we have developed. As the Queen Mary students' union Vice-President Communities commented: "I think gathering student feedback and incorporating this into the design of graduate attributes makes our process and overall result authentic and stand out."
The final outcome to highlight is the developmental opportunity offered to all parties involved. One student intern on the project observed: "I have got to work with an incredible team. I was able to meet academics and understand more about initiatives which contribute to the improvement of graduate attributes. I got to be creative, improve my communication and team working skills, and got to meet many talented students and academics!"
For the student representatives involved in the project, it has also offered a different way of working and a developmental experience: "This project has helped me listen and understand different opinions from different groups of people and consider these varied opinions in making a balanced decision. Having led the student engagement sub-group in this workstream, I constantly found myself thinking about new ways and ideas to engage students in developing the curriculum."

Similarly, for professional services and academic staff the project has offered a new way of working and recognition of the benefits of co-creation with students, and with staff across varied university functions.

The benefits experienced align with those asserted in Bovill et al (2021). As partners in this work, we experienced enhanced 'engagement, motivation, and enthusiasm' (p138), the power relationships between staff and students shifted, and a more democratic and inclusive process was developed.

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Every job can be a sustainability job: connecting sustainability to employability at Nottingham Trent University

Fiona Winfield, School Employability Manager and Principal Lecturer

Chris Harwood, Careers Consultant and Senior Lecturer

Nottingham Trent University

Background: the increasing demand for sustainability literacy

With a strategic theme at Nottingham Trent University (NTU) being Embracing Sustainability, the employability team's sustainability task group was formed in 2020. One aim was to create opportunities for students to expand their knowledge of sustainability, while linking it to their employability.

At NTU, we define employability using Cole (2022, 2) as “a combination of learning opportunities across multiple spaces in our lives ... both lifelong and lifewide and in this respect is developed both in the classroom, and critically, in life more broadly”. Our work presented here is based on Cole's (2019) Dimensions for Learning Taxonomy, since developed into the Employability Redefined Taxonomy, which is used throughout the university. Among other things, this guides us to emphasise extra-curricular opportunities and reflection, rather than focus on skills development, both within the employability team and the academic schools.

In order to embrace sustainability, staff were encouraged to become more knowledgeable, participating, for example, in accredited carbon literacy training. This encouraged us to address how we could support others at NTU to be part of the solutions in combatting climate change. We built on NTU's experience of embedding the UN's Sustainable Development Goals (SDGs) and sustainability throughout the institution, but especially in Nottingham Business School. There, we not only integrate Ethics, Responsibility and Sustainability (ERS) into our modules, we encourage regular participation in extra-curricular 'lifewide' opportunities, many with sustainability links. The range available includes NTU's Sustainability in Practice certificate, Enactus, and student competitions such as GeeBiz, along with sustainability-related volunteering opportunities. Having such opportunities is one thing, engagement is another. We needed a framework to structure the offer, and importantly encourage the students to reflect on their experiences, enabling them to link their sustainability literacy to their future employability.

Underpinning our approach to sustainability was a review of various sustainability-related competency frameworks drawn up by different bodies. These we mapped to ascertain what employers might seek to support a transition to net zero. Building on Cole's taxonomy (2019), we drew on the work of Advance HE/QAA (2021), the European Commission (Bianchi, Pisiotis and Cabrera Giraldez, 2022), Inner Development Goals (2022), UNESCO (2015-22) and WEF (Masterson, 2021), all of which have focused on competences for sustainable development.

There is a clear demand from employers, not just for 'green jobs' (the Local Government Association in England states that 700,000 could be created by 2030 [LGA, 2021]) but for a level of sustainability literacy in all professions. Klein (2020) asserts that "[i]ncreasingly, responsibilities for environmental management are going to be spread across an enterprise. Job postings are going to call on people with more and more sustainability skills". The UNEP (Nishimura and Rowe, 2021) confirms this, saying that students can bring their sustainability literacy to any role and can effect change as a green intrapreneur.

There is also demand from students, as seen in the annual global survey by Students Organising for Sustainability (SOS). The 2021-22 UK results indicate there is a desire to work in organisations with strong sustainable development credentials: "54% would accept a salary £3,000 lower than average to work in a job that contributes to positive social and environmental change" (SOS, 2022,7).

Approach: the NTU Sustainability Award

NTU's generic Employability Award had been available to all students at all academic levels for around a decade, so there was an established methodology and processes in place. More recently, NTU introduced Digital, Enterprise and Global variants. It was therefore relatively simple for the sustainability task group to work with colleagues in summer 2021 to create the new award. Beyond employability, colleagues included NTU Green Academy, NTU Global and NTU Volunteering, and together we introduced the sustainability-themed award, which we launched during COP26 (November 2021).

To achieve the Sustainability Award, students complete mandatory and optional extra-curricular activities to accumulate points to reach bronze, silver, then gold levels. All start with the NTU Green Academy's Sustainability in Practice online course, in which they link the SDGs to their academic discipline, focusing on food, energy or clothing.

NTU Sustainability Award launched 2021-22

Bronze: Essentials (50 points)

Sustainability in Practice course (clothing/energy/food)
Employee Guide to Sustainability (LinkedIn Learning)
Sustainability reflection

Silver: Experience and Skills (50 points)

Personalised sustainability-related experience
and/or skills development/workshops/webinars
Sustainability reflection

Gold: 'Sustainable Graduate' Showcase (50 points)

Sustainability elevator pitch
Presentation
Sustainability-related interview questions/ blog
Sustainability reflection

Silver allows for personalisation in the activities, with a menu of extra-curricular opportunities. Additionally, students may submit their own events, competitions, roles etc. for validation. Importantly, reflection is required at all levels, again linking to Cole's (2019) taxonomy.

Outcome: impact and next steps

Between its launch in November 2021 and August 2022, 287 students signed up from across the university, and 64 achieved an award. Students move at their own pace, either working on a level each year, or moving swiftly through to Gold. In the space of nine months in 2021-22, six students completed all three levels, and it has proved to be the second most popular variant after the Digital Award.

Reflecting on the Award's impact on their future career and society in general, two participants commented:

"I want to ensure that both my personal and business practices are as sustainable as possible, and put goals and plans in place to ensure what is not sustainable now, can be converted to more sustainable options in the future."

Another stated:

"My goal [is] to find a job which supports my values and beliefs about sustainability, by confidently articulating the knowledge I've gained, and to continue challenging unsustainable practices."

The activities completed by students undertaking the Award go beyond 'environmental' sustainability and cover a wide range of SDG-related opportunities, both inside and outside the university.

This potentially has a positive impact not only on themselves, but on society at large.

Examples include:

- + **local community volunteering:** working with local groups such as food banks and local schools (vertical gardening, workshops and a sustainability storytelling club)
- + **behaviour – personal and beyond:** within the optional carbon literacy training, participants focus on reducing their own emissions, and encouraging others to do likewise (employers, family, students and course teams).

The approach adopted at NTU is transferrable to any learning provider. When creating the menu of options, the activities can be tailored to the local circumstances and personalised by the learners. We believe that engagement is also encouraged by allowing students choice in what they select, so it is relevant to their academic discipline and future career, and we reward success with a digital badge.

The Sustainability Employability Award is now established at NTU and will be offered in coming years, at all study levels, with an annual review to ensure currency. We now plan to promote it more widely, particularly to those parts of the university with lower representation. We consider that NTU graduates with this Award are ready to make a positive impact from day one, which is likely to be even more wide-ranging as they progress in their careers, bringing their wider sustainability knowledge and competences into play.

In a 2022 blog article for the Institute of Student Employers, Steve Mowforth (Coventry University) asked whether sustainability should be recognised as a graduate skill. We believe it *should*, and if *all* students had sustainability literacy, this could potentially benefit *all* communities, organisations and wider society. This is relevant to *all sectors worldwide, as all* jobs potentially can have a sustainability focus (in its broadest sense). This will not happen overnight, and in order to support, we would be happy to share our ideas and the overall structure more widely, and discuss with anyone interested how the Award could be adapted in other institutions.

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Leadership shadowing for career insights and networking

Phillip J Davey, Directorate of Development and Alumni Engagement and **Rosemary K Clyne**, School of Biological and Behavioural Sciences, Queen Mary University of London

Background

Yorke (2006) defined employability as the skills, understandings and personal attributes that make graduates more likely to obtain employment and succeed in their chosen occupations. Higher education institutions must evidence graduate employability skills and the proportion of graduates obtaining jobs is a key performance indicator (Goodwin, 2020; HEFCE, 2001; Mason, 2011; Succi, 2020). Most students cite career goals as their main reason for attending university and rate employability as very important in choosing their university (Bhola and Dhanawade, 2013; Orsier, 2019; UUK, 2016). However, surveys have shown that 70% of students are concerned about their employability, 81% are concerned about their job prospects and only 50% of graduates perceive that university was sufficient for finding the right jobs and opportunities (NUS, 2020; Montacute, 2021).

Not all students have the careers knowledge, professional networks or self-confidence necessary to succeed in a competitive jobs market. Queen Mary's Strategy 2030 communicates the university's vision and responsibility to provide support, "tailored to each and every student, to ensure that they can reach their full potential" (Queen Mary University of London, 2019). One such provision was the Future Global Leaders Forum, an institution-wide extracurricular work experience and skills development programme (58 participants in 2018-19, 104 participants in 2019-20). The Forum brought together students from diverse disciplines and year groups (undergraduate and postgraduate) to help build professional and cultural competencies and prepare students for future leadership (Clyne, 2021a, 2021b). When participants from the pilot cohort were asked what additional sessions would be helpful, several indicated that seeing a leader at work could further improve leadership skills.

This case study outlines the implementation and evaluation of the novel "leadership shadowing" initiative developed for the second cohort in 2019-20. The scheme engaged students with distinguished "leader hosts" and employers across London in government, policy, business and education, including university senior management and a diverse group of Queen Mary alumni. Leadership shadowing supported Strategy 2030 as an extracurricular activity that enabled students from varied backgrounds to enhance their employability skills through experiential learning (Kolb, 1984), including career discernment, networking, self-confidence and leadership. It also provided a valuable opportunity for alumni to connect meaningfully with their alma mater by sharing their professional experience with students to broaden knowledge and employment opportunities.

Approach

Work shadowing is typically an unpaid, informal opportunity to observe professionals at their work to gain insights into the role and aid career decision making (Buzzeo, 2017; Smith, 2019). Through a Forum feedback survey (November/December 2019) and informal discussions, several Forum participants indicated that they would have participated in leadership shadowing visits had they been offered in the previous year. For the participants, the ideal visit would offer the opportunity “to ask questions and see how the person works in a professional environment”, “insight into the leader’s career path and current work and how to boost self-confidence” and “referable experiences that allow for a greater understanding of leadership”. Based on the feedback that the ideal length of a visit would be two to four hours and the most popular format would be leadership observation, we (as the university’s Academic Lead-International Student Experience and Alumni Volunteer Coordinator) devised a leadership shadowing initiative for the second Forum cohort, which is the subject of this case study.

The timeline of leadership shadowing implementation is shown in Table 1. The scheme consisted of short visits to the leader host’s workplace (typically three to four hours) in small groups (four to five students or fewer). The timing and length were flexible but should include opportunities for small group career development and leadership discussions with the host. Hosts were drawn from senior Queen Mary leadership, Queen Mary alumni following an email call out (1985-2015 graduates) and personal contacts. Expressions of interest from prospective leader hosts were collated using online surveys (November/December 2019).

In total, 32 shadowing visits were organised, involving 29 hosts (some hosts offered more than one visit option). The visits were planned to take place between February and April 2020, with the dates and times agreed with hosts in advance. To ensure genuine motivation, student allocations were based on statements of interest and preference ranking (collected using online surveys). A visit brief agreed with the host was made available to the Forum cohort in January 2020 and typically included: professional background of the leader host; overview of organisation and work area; website; QMUL degree course (for alumni); visit itinerary; location; and number of students that could attend (as specified by the host).

All participants of the Forum were invited to participate in the leadership shadowing scheme. Sixty-nine participants submitted a preference ranking (66% of the cohort). The most common number of students attending a visit was five students, and the most frequent components of visits (as reported by students) included discussion/networking, company briefing, observing meetings, tour, attending an event and question and answer session. Twelve visits were unfortunately cancelled due to the 2020 lockdown, and two visits were implemented virtually, instead. Evaluations were conducted to assess the scheme’s impact and inform future improvements, from which illustrative respondent comments have been selected for this report (online surveys, February to April 2020).

Table 1. Leadership shadowing implementation timeline

Implementation stage	Timing
Concept development and discussions	August – October 2019
Callout to potential leader hosts and collating expressions of interest	November – December 2019
Launch of the Forum programme and deadline for finalising shadowing visit briefs	January 2020
Collecting student expressions of interest	January – February 2020
Shadowing visits	February – April 2020
Evaluation surveys for student participants and hosts	February – April 2020

Outcome

Observational learning can be very effective (Bandura, 1977; McCarthy and McCarthy, 2006) and the evaluations asserted that leadership shadowing did achieve the objectives, with students gaining insights into leadership and “more confidence in being a leader”. When asked to outline benefits gained, many emphasised the engagement with distinguished leaders, highlighting the opportunity to “meet and discuss things with a prominent figure”, “have in-depth conversations with successful leaders” and the impact of “making a personal connection with the leadership figures”. At the same time, the experience broadened career horizons by showing a “possible alternative career path I hadn’t considered” and prompting “to think what I truly like and how it will influence my choice of future career”. Other comments demonstrate a growth mindset, referencing use of leadership skills “to help you grow as an individual” and looking at career options “more in the long run”.

88% of survey respondents agreed that they felt more prepared to take on leadership following the visit (n=24). Respondents commented that “some misconceptions I had about leadership have been cleared”, “I feel more empowered to develop myself enough to take on leadership”, and “I understand what makes a leader versus what makes a manager”. Responses also recognised gains in confidence to “not shy away from any role of being a female leader” and the importance of diversity in leadership:

“She made me think that anybody could be a leader if they put their mind to it. You don’t have to be from a certain background or look a particular way”.

100% of students indicated that it was beneficial to attend the visit with other students (n=25). The format provided the opportunity “to meet peers who have similar interests” and participants felt “less nervous knowing I wasn’t alone”. It was “refreshing to hear different aspects” due to different ideas and backgrounds being represented, and they could “learn from the questions that other students asked”.

In the leader survey, 100% would host a shadowing visit again and would recommend the scheme to other leaders (n=9). They found the students “very keen to learn, asking insightful questions” and were “very impressed by how engaged they all were”, which likely reflects the diversity and prominence of the leaders and the opportunity to submit preference ranking. Hosts also reported benefits, for example:

“Our organisation was extremely glad to engage with young, diverse people and our internship team found speaking to the students extremely interesting.”

“It has given us greater insight into how we can encourage more students into leadership roles.”

“It’s always good to share information about yourself that is relevant to the students.”

For the responding hosts, the averaged ideal number of participants was between four and five students (n=9). The most common response for ideal visit length was three hours, with 78% of respondents indicating between two and three hours. For students, the most common response was four or five students attending (39% and 48%, respectively, n=28), and two or three hours in length (25% and 29%, respectively). To inform future schemes, it will be informative to collect targeted feedback on the range of visit formats, and further explore virtual delivery, to investigate which are most effective and if this varies across participant disciplines. To further enhance impact, we suggest integrating additional post-visit reflective exercises that would augment the preference ranking and feedback survey reflections, and collecting feedback from the hosts for individual participants (Buzzeo and Cifci, 2017). A final networking event with all the leader hosts would consolidate what was learned and provide a further development opportunity for all participants.

Our students asserted that these short but meaningful visits, co-created with leader hosts, supported development of the higher-level employability-related skills (including leadership) that employers seek, and increased their confidence in their career aspirations. The small group format with distinguished leaders and with peers facilitated networking, and the discussions among diverse participants, brought varied perspectives, which enriches learning. Such discussions can encourage a sense of belonging and community, which increases engagement and retention, and others have similarly demonstrated the successes of alumni-based approaches in skills and personal development (eg Larsson, 2022; McWilliams, 2021; Sword, 2002).

Work experience opportunities are often limited and may be inaccessible to many students due to numerous barriers (Montacute, 2021). Alternative forms of work-related learning have been developed but there has been limited reporting about the impact on career decision-making and employment, and how these schemes are best implemented (Buzzeo and Cifci, 2017). Leadership shadowing is an inclusive, scalable approach to skills development that can be implemented in person or virtually. Our evaluation illustrates that this form of employer-engaged experiential learning, which also engages alumni meaningfully, may be an effective alternative for career insights and networking across many fields of study.

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Ethical approval

The data collection and analysis plan was reviewed by the Queen Mary Research Ethics team and classified as service evaluation. Student and leader host participation in the surveys was voluntary and student responses were anonymous.

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