Advance HE

The 3 Es: as easy as A, B, C?

Case study compendium 2026

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The 3 Es: as easy as A, B, C?
Edited by Stuart Norton and Miri Firth

Foreword

As we move through an era defined by rapid transformation, higher education continues to navigate the delicate balance between preparing students for the present and equipping them for an uncertain future. The 2026 Advance HE Employability Compendium – The 3Es: as easy as A, B, C? – brings together a vibrant collection of case studies that explore how educators are reimagining employability, enterprise and entrepreneurship across disciplines, sectors and professional contexts.

When we came together for the online launch on 1 April 2025, we reflected on how the 3Es remain as relevant as ever, but also more interconnected, dynamic and inclusive than before. The examples in this compendium capture that shift. They demonstrate not only how institutions are innovating, but how they are empowering students to become co-creators of their own learning and future careers.

Across the case studies, the emphasis on employability is clear: embedded, intentional and authentic. The University of Salford's work on curriculum-wide Personal and Professional Development modules illustrates how employability can be scaffolded from first year to graduation, ensuring every student has equitable access to the tools and confidence they need to succeed. Similarly, Manchester Metropolitan University's active learning environments demonstrate the power of teaching spaces and pedagogy to transform engagement, showing that employability is not a bolt-on, but a mindset that can be cultivated through practice and participation.

Enterprise, meanwhile, is increasingly seen to connect creativity and real-world impact. The University of Bedfordshire's postgraduate live projects, for example, show how authentic assessment can develop enterprise capability while meeting employer needs. At Edinburgh Napier University, professional re-accreditation of the MSc Human Resource Management programme has been used as a catalyst for embedding work-integrated learning and reflective professional practice. It's a strong reminder that enterprise is not limited to startups, but includes the everyday innovation that defines modern workplaces.

Entrepreneurship continues to evolve too, particularly through interdisciplinary and socially responsible education. The University of York's exploration of entrepreneurship and sustainability education demonstrates how students are being encouraged to think systemically and ethically, developing the competencies to address complex global challenges. At Nottingham Trent University, a focus on AI and equity highlights how technology and inclusion can coexist, preparing graduates for the social enterprise environments of the future.

Threaded through these examples is a shared commitment to collaboration between disciplines, staff and students, and academia and industry. The AGCAS Creative Industries Task Group's national approach to work readiness in creative higher education, led by colleagues at UCL and the University of Leeds, exemplifies how cross-sector partnerships can build scalable and inclusive models of employability.

Together, these contributions challenge us to think differently about what success looks like. Employability is no longer just about graduate destinations, but about graduate readiness: the confidence, adaptability and curiosity to navigate complex, hybrid careers. Enterprise education is not just about business skills, but about creativity, connection and courage. And entrepreneurship is not only about ventures, but about values such as sustainability, equity and purpose.

We hope this compendium will inspire further reflection and conversation across the sector. It celebrates innovation, but it also invites dialogue about how we, as educators, can continue to evolve our practice to meet the needs of learners and the wider world.

Our thanks go to all contributors who have shared their insights and practice, and to everyone who continues to advance the employability, enterprise and entrepreneurial agendas within higher and further education. The examples that follow demonstrate that when we bring people together around a shared purpose, the *3Es* really can be as easy as A, B, C.

Miri Firth

Embedding the 3 Es

Employability in the business curriculum: an embedded approach

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This case study explores an initiative undertaken at a large metropolitan university in the northwest of England. It details the motivations behind its inception, the steps taken to implement it and the findings from research conducted with participating students.

The initiative involved developing and delivering employability modules, called Personal and Professional Development (PPD) modules, on undergraduate courses within one school in the university, for all undergraduate students at each level of study. New modules were introduced between academic years 2020-21 and 2022-23 and have continued since then.

Graduate employability stands as a central concern for higher education institutions across the UK. The prevailing impetus originates from national surveys such as the Graduate Outcomes Survey and the Teaching Excellence Framework (TEF), as well as institutions' commitment to equipping students with the skills for a successful future beyond their studies. In recent years, changes in the graduate labour market have come about due to factors such as the introduction of new technology, including AI. This has intensified the need to focus on the skills and knowledge students will need to secure graduate roles and be adaptable to ensure they are equipped to deal with changes in the job landscape, which may involve adapting to careers not yet be in existence

As a result of these factors, employability is now widely recognised as a key indicator of institutional performance and student satisfaction, shaping both policy decisions and educational practice across the sector.

To pursue the goal of equipping students with the employability skills needed to prepare them for the employment landscape described above, it is important that educational institutions focus on enhancing the personal and social resources that can support students. Theoretically, the language of 'capitals' is useful to describe such resources. Career capitals have been defined as, "knowing why," "knowing how," and "knowing whom" (Arthur, 1994; Brown and Wond, 2019). Graduate capitals have been summarised as human, cultural, social, psychological and identity capitals (Tomlinson, 2017). An emphasis on 'capitals' has informed our approach in this case study. This approach is further supported by research demonstrating that active engagement in career planning during university is positively correlated with improved graduate outcomes (Shury et al, 2017) and research exploring the role and impact of career readiness (Cobb, 2019).

For institutions serving a diverse student body, spanning a wide range of socioeconomic backgrounds and ethnicities, it is vital that the university experience equips all students with

the tools and confidence needed to compete effectively in an increasingly competitive graduate labour market.

Therefore, drawing on the findings from a previous employability initiative that ran between 2018 and 2020, the decision was taken by the School to embed employability modules at each level of study.

The previous employability initiative, which led to the development of the PPD modules at each level of study, comprised a two-year employability pilot delivering targeted interventions to 800 final year students, meaning approximately 1,600 students participated. These interventions included a range of activities such as career coaching, online learning, reflective writing and a simulated assessment centre, and were embedded into the curriculum.

The students involved were from the two largest programmes in the School and were selected as the students on those programmes came from a range of backgrounds. Evaluation of the project provided clear evidence that embedding employability interventions within the curriculum was highly beneficial to students (Christie et al, 2025). These benefits extended beyond improved outcomes, as they also fostered greater confidence and resilience among participants, clearer career aspirations, and an expanded understanding of career planning and networking. This all contributed to a notable increase in both graduate and career capitals.

These findings were key when developing the PPD modules. Deciding to create standalone PPD modules at each level of study required clear planning to ensure that, when students finished their programme, they had the career literacy needed to be able to compete and be successful in the graduate labour market. Standalone modules allowed for the breadth of content needed and for adaptability as technology and the graduate labour market evolve.

The career and graduate capital frameworks were used to guide the development of the modules at each level of study. For example, opportunities to build social capital through interaction with a range of external speakers and contributors were integrated at each level, and an iterative focus on reflective learning was important in nudging the development of identity capital as students were obliged to consider their own skills and strengths and the alignment of these to relevant careers.

Taking all these insights into account and using the career and graduate capital frameworks as a guide, a set of principles for the PPD modules was developed.

The focus of the modules was on the development of academic and professional skills. Each module was a 15-credit, standalone module, and there was one at each level of study: 4, 5 and 6, with each module using a scaffolded approach, inspired by longstanding ideas around a spiral curriculum (Bruner, 1960) and building on the knowledge and skills developed at the previous level. These principles were shared with the School and each department within the School was allowed to develop their own modules using these principles.

The principles were detailed. However, the following shows a simplified version of what was recommended to be covered:

+ **Level 4:** introduce employability skills alongside academic skills
+ **Level 5:** prepare for placements/internships/other development activities
+ **Level 6:** learn about the labour market, refine career planning and job-hunting skills

To exemplify the project, the PPD modules in one of the departments in the School will now be examined. Two lecturers were responsible for overall module design with a team of four tutors contributing to teaching of classes. This team was tasked with adapting the recommended approach to its own department context.

At Level 4, the PPD modules focused on developing foundational skills by having students complete tasks such as building a CV, creating a LinkedIn profile, developing presentation skills, exploring work experience opportunities and networks, completing an action plan, and increasing self-awareness.

At Level 5, these foundations were built upon by developing critical thinking skills, allowing students to explore relevant theories and problematise ideas about employability. Self-awareness was further enhanced through strengths profiling, and students revisited work experience in more depth by further developing their CVs, enhancing their LinkedIn profiles, writing cover letters and developing and practising interview techniques. This ensured students were well-equipped to apply for placement opportunities and other work experience.

At Level 6, these skills were developed yet further, with students also participating in an assessment centre simulation at this stage and conducting independent research about an occupation of choice.

Activities were enhanced and supported by digital resources that introduced a gamification element to the modules. These resources enabled students to engage with learning both inside and outside the classroom, as they could access and use them independently whenever required by their tutor.

To explore the impact of introducing standalone PPD modules at each level of study, approximately 80 graduates who had completed all three modules as part of their programme (in 2023) were asked to fill in a questionnaire to ascertain how they perceived the effect of the full three-year programme on their employability (see Partridge, 2024).

The questionnaire was sent to them approximately six months after they graduated to see how they reflected on their learning. The evaluative research was part of a small-scale practitioner research project in which Careers Service staff and academics worked together (see Christie, 2024). The survey generated interesting insights, albeit the response rate was low with 18 respondents.

This is what was found:

Firstly, we found 16 of the 18 respondents felt that the approach improved their career prospects or employability.

Secondly, the majority of graduates felt that they understood what employers value. However, only half of the 18 respondents felt that they knew which employer they would like to work for.

Thirdly, when asked about the curricular content there was a varied response from graduates, with differing activities cited as most impactful, indicating the need for a variety of activities within the modules to appeal to a broad range of needs. Many graduates (13 out of 18) used the career service, and careers workshops and careers networking events were among the activities they got involved with outside the curriculum.

Finally, the scaffolding approach to embedding employability at all undergraduate levels was examined, with questions about career management. The responses showed that the scaffolded approach had a positive effect on graduate skills. Responses to the survey indicate that embedding standalone PPD modules enhance students' employability skills, confidence and career readiness at undergraduate level. Graduates reported improved career prospects, greater self-awareness and increased confidence in navigating the graduate labour market, particularly in areas such as CV building, interview skills and assessment centre performance. It underscores the need for ongoing collaboration between academic departments, careers services and employers to ensure that employability provision remains relevant and impactful in the current climate. It indicates that having standalone modules at each undergraduate level of study could be beneficial to other HE institutions to enhance the employability and career literacy of students.

This approach can be replicated or adapted by other providers using the approach outlined. Given the current environment, and the increasingly competitive labour market, using a percentage of the curriculum to prepare students for future challenges at the beginning and throughout their careers can be seen as a worthwhile investment.

Future research in this area may examine how best to ensure that employability education keeps pace with rapid changes in the labour market, including the rise of AI and new forms of work.

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Designing effective curriculums for the creative business industry

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Introduction

In an era defined by rapid technological change, shifting market demands and increasingly complex global challenges, business education must evolve beyond traditional approaches. Employers now require graduates who are not only technically competent but also agile, innovative and equipped with the creative confidence to navigate uncertainty. This case study examines how Norwich University of the Arts (Norwich) has developed a distinctive curriculum model that integrates creativity, industry engagement and wellbeing into the fabric of business education, offering students a transformative and future-facing learning experience.

The importance of creativity within higher education is now widely recognised. Lane (2024) notes *"Creativity now sits among the top critical skills that employers want from business graduates", aligning* with industry trends emphasising innovation, adaptability and hands-on experience. Creativity enables individuals to solve complex problems, work collaboratively, embrace risk and drive innovation – qualities that align with employer expectations across diverse industries. Advanced HE research further supports this trend, observing a marked expansion of enterprise and entrepreneurship education across the United Kingdom's higher and further education sectors, where it is no longer confined to business schools but embedded within teaching, research and extracurricular activity (Norton and Sear, 2021).

The growing integration of creativity within business education raises important questions about how institutions can best prepare students for careers that demand both critical thinking and creative capability. HEPI (Earps, 2024) stresses that marketing education must evolve beyond theory, embedding practical assignments, industry placements and collaborative projects with professional partners. Such applied approaches not only enhance employability but also deepen students' ability to critically engage with contemporary business practices.

Norwich's position as a creative arts institution offers unique advantages: opportunities for interdisciplinary collaboration, exposure to experimental methodologies and the capacity to test original ideas in real-world contexts. In addition, the university's project-based curriculum model with no exams uses a framework that integrates creative practice, research and professional development, lending itself well to exploring entrepreneurship and enterprise. Within this setting, students pursuing business and marketing degrees do not merely study abstract models; they actively co-create campaigns, strategies and entrepreneurial initiatives in partnership with industry and creative practitioners.

This case study sets out to explore the evolution of Norwich's Fashion Marketing and Business degree, its pedagogical strategies and the outcomes achieved through embedding creativity, wellbeing and industry engagement at the core of its curriculum.

Approach

The development of the BA (Hons) Fashion Marketing and Business (FMB) degree at Norwich emerged from both student demand and broader industry shifts. Prior to the 2020 periodic review of the existing BA (Hons) Fashion Communication and Promotion (FCP) course (which launched in 2015), it became clear that two distinct groups of students were emerging: those who sought to pursue creative practice in greater depth, and those who preferred a more strategic, theory-driven route. The FMB pathway was introduced in response, launching in the 2020–21 academic year.

The intention was not simply to create another classroom-based business course, but to design a degree that preserved the Norwich ethos of creativity while appealing to students more interested in research, strategy and business. By sharing first-year curriculum components with FCP, the programme maintained coherence across pathways while allowing students to pursue their preferred direction in subsequent years. This design ensured that students could engage with a strong foundation in fashion communication before specialising in strategic marketing, branding and business-focused work.

Arts schools such as Norwich offer a unique environment from which students can explore the business side of the industry, developing entrepreneurial skills and testing ideas. Here, business students are surrounded by designers, media practitioners, artists and architects, offering opportunities for interdisciplinary projects and authentic collaboration.

This cross-pollination enables students to approach business problems creatively, devising marketing campaigns, retail concepts and entrepreneurial ventures that reflect real-world industry contexts. Students learn not only about branding, consumer behaviour and digital marketing strategies but also about how to translate theory into practice through experimentation and collaboration. The curriculum emphasises active outputs such as campaign proposals, strategic plans, group debates and 'Dragon's Den'-style pitches, allowing students to build confidence in both ideation and execution.

Students have access to unique opportunities, including week-long projects held in the university's Bank Plain Project Hall – a multi-purpose creative studio housed in a converted bank. The space is designed to support large-scale projects, collaborative work and experimentation. It provides a home-like environment that allows students to fully immerse themselves within projects, such as the creation of immersive marketing campaigns and interactive installations in collaboration with other creative courses.

Central to the course's design is authentic engagement with industry. Drawing on HEPI's (Earps, 2024) recommendation that marketing education embed practical experience, the FMB programme integrates live briefs, placements and professional collaborations into its

structure. Students benefit from direct interaction with clients, site visits and feedback sessions with practitioners who challenge them to meet professional standards.

Such industry integration not only enhances employability but also creates what Meyer and Land (in Kent, 2016) describe as **"**threshold concepts": transformative learning experiences that fundamentally shift a student's perspective. For example, during a Year 2 project with the retailer Philip Browne, students were challenged to devise a new marketing concept. One graduate reflected that the project pushed them out of their comfort zone, enabling them to pitch ideas directly to industry professionals. This experience directly contributed to them securing a marketing role at Speedo, demonstrating the powerful career impact of live projects.

Experiential learning also extends to group projects, reflecting the collaborative nature of the creative industries. As Rutherford (2014) argues, dialogue, interaction and shared responsibility are cornerstones of collaborative learning. While group work inevitably presents challenges, conflicting motivations, misaligned communication and differing expectations, it can become a transformational process when students confront and resolve these difficulties. The inclusion of industry feedback within such projects adds further authenticity, prompting students to negotiate professional standards and expectations.

Alongside industry engagement, the course integrates wellbeing as a form of creative capacity building. The "Need to Know" programme embeds wellbeing strategies into subject-specific contexts across all years of study. Rather than framing wellbeing as an external support mechanism, the approach contextualises it within the creative process, aiming to build resilience, confidence and a sense of belonging. Students engage with projects that require them to reflect on audience, positionality and sustainability, linking personal growth with academic and professional development.

Sessions support students across all years in fostering community, respect and personal growth. The programme begins with foundations in wellbeing, belonging and resilience, progresses to development through reflection, creative risk-taking and collaborative connections, and culminates in consolidation by empowering students to take control of their learning, refine their working approaches and build confidence in communication and self-promotion.

This approach resonates with contemporary debates around education and wellbeing. By reframing wellbeing as a creative enabler rather than a remedial intervention, Norwich encourages students to see resilience and adaptability as integral to their professional identities.

Another defining feature of the programme is its emphasis on co-creation, a pedagogical approach rooted in constructivist learning theory. O'Hara (Advance HE, 2023) defines co-creation as a process whereby "*students collaborate with teachers in designing their own learning experience, with an emphasis on student perspectives*." This approach challenges traditional one-way models of teaching, instead recognising students as active partners in curriculum design.

At Norwich, co-creation is operationalised through alumni consultation, student representative engagement and continuous feedback loops. Graduates contribute valuable insights during the programme's development. For example, a recent graduate provided feedback that emphasised the importance of real-world learning opportunities, advocating for greater industry engagement through workshops, trips and placements. As a result, the curriculum was adapted to embed more industry-facing projects and site visits.

Current students are also engaged through feedback platforms such as Vevox (for anonymous idea-sharing), the National Student Survey and regular group sessions. These practices ensure that the course evolves in response to student needs while holding staff accountable for genuine engagement in co-creation, rather than tokenistic consultation.

Outcomes

The implementation of the Fashion Marketing and Business (FMB) degree has yielded significant positive outcomes, both in terms of student achievement and broader institutional impact. By embedding creativity, wellbeing and industry engagement into its curriculum, the programme has demonstrated how a specialist arts university can deliver a distinctive and highly effective model of business education.

The clearest evidence of impact lies in the outstanding results of the National Student Survey, which recorded 100% agreement in several key categories.

Students* affirmed that:

+ Staff are good at explaining things (2024/2025)
+ They are challenged to achieve their best work (2024)
+ Staff make the subject engaging (2024/2025)
+ They have the chance to explore ideas or concepts in depth (2024)
+ They have the chance to bring ideas together (2024/2025)
+ They have developed knowledge and skills for the future (2024)
+ They feel to express their ideas, opinions and beliefs (2025)

* Cohort sizes of approx 20 in 2024 and 15 in 2025

In addition, Norwich made its debut in the Guardian University Guide in 2026, achieving an impressive ranking of 26th out of 119 for Business and Management.

These results underline the success of the programme in balancing academic rigour with professional relevance. They also reflect the effectiveness of embedding industry-led projects and wellbeing support into the curriculum, ensuring that students feel both challenged and supported.

A decade after the launch of the original FCP course, the success of the FMB programme has assisted in informing the development of two additional business-oriented degrees at Norwich: BA (Hons) Business Management and BA (Hons) Marketing. This expansion underscores the scalability of the model and its potential to be applied beyond fashion-specific disciplines.

Several key messages emerge from these outcomes:

1 Creativity enhances employability by fostering innovation and adaptability

2 Active industry involvement provides authenticity, builds confidence and develops real-world problem-solving skills

3 Wellbeing can be integrated meaningfully into the curriculum by framing it as creative capacity-building rather than external support

4 Collaboration and co-creation deepen student engagement, leading to richer learning outcomes and higher satisfaction

Together, these outcomes show that Norwich's creative-first approach to business education not only meets industry expectations but also prepares students to thrive in an uncertain and rapidly evolving professional landscape. They highlight the potential of embedding creativity and wellbeing into business education in ways that can be **adapted across disciplines and institutions.** While Norwich University of the Arts benefits from its specialist arts environment, the principles underpinning the programme – industry engagement, co-creation and wellbeing as capacity building – are transferable to wider higher education contexts.

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Embedding live projects at postgraduate programme level with the University of Bedfordshire Business School

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Background

Following a 2020 review of the curriculum of the postgraduate provision conducted by the University of Bedfordshire Business School, its Graduate School of Business (GBS) implemented authentic assessments (AA) as a central feature of its assessment strategy. Multiple factors converged to warrant that AAs be embedded in the curriculum. Specifically, they support student learning and outcomes. The university had strategic commitments to enhance students' experience, success and progression to relevant employment and to benefit business organisations. There were also challenges facing the sector vis generative AI.

Firstly, AA is associated with improving teaching experiences and outcomes. Research suggests that students find AAs more interesting than traditional formats (Dixon, 2022). Pedagogically, they are also more effective since they involve identifying real-life tasks through meaningful engagement with businesses. As such, they comprise a form of "service-learning" which has been evidenced as a "high impact educational practice" on account of facilitating the development of 21st century skills for students from demographically diverse backgrounds and communities (Kuh, 2008). Moreover, for academics, AAs generate a two-way flow of knowledge and insights between them and businesses, exposing them to current realities of industry, enriching the applied understanding and impact of academic knowledge.

Secondly, AAs develop employability skills. By developing students' capabilities to apply knowledge and experiences in tasks that address real-world issues, AAs facilitate meaningful engagement in career-related activities and, as such, serve to prepare them for the world of work. Hence, for the University of Bedfordshire, with its aim to nurture 'career powered education' (University of Bedfordshire, nd a) and the corresponding emphasise on work-based and work-related learning, AAs were seen as a valuable approach to render the curriculum relevant (University of Bedfordshire, nd b). In enhancing skills and graduate readiness through real-world applications, authentic assessment design is viewed as an approach to support students from all backgrounds to progress into graduate employability and meet employer needs (OfS, 2020).

Thirdly, AAs are associated with reducing the likelihood that students resort to academic misconduct (Sotiriadou et al, 2020) and so address the UK Office for Students' requirement that universities adopt robust assessment methods (OfS, 2022). The imperative to embed AAs in the curriculum is greater given the advances in generative AI (GenAI) systems such as ChatGPT, which can readily create, modify or reproduce assessments. Hence the emphasis, by policymakers and higher education sector organisations, on AA as

one approach to secure academic authenticity before the GenAI challenge (QAA, 2024; Hack and Knight, 2023).

Fourthly, AAs deliver value to businesses (and other organisations) by connecting employers meaningfully – through universities – with the next generation of talent and as such comprise a knowledge exchange activity. In the UK context, universities are required by national organisations to demonstrate how they provide mutual benefit to external partners (UKRI, 2025) and to report their contributions annually into the Knowledge Exchange Framework (KEF).

Approach

The GSB teams used the practical AA typology offered by Kaider et al (2017) and the elements suggested by Ashford-Rowe et al (2014) to develop their approach to AAs. Kaider's typology offers a meaningful test to determine whether an assessment is of high, medium or low authenticity. They use two dimensions: i. relative proximity to professional workplace and ii. relative proximity of tasks to authentic activities at workplace (Figure 1). Ashford et al (2014) offer guidance in designing AAs that achieve authentic learning while safeguarding the integrity of assessment. This contribution is critical as choosing a medium or high-level AA is not a sufficient safeguard against academic misconduct in the context of current GenAI developments (Kofinas et al, 2025).

Kaider et al (2017) assume that all assessments sit in a continuum comprised of the two dimensions of authenticity and proximity to the world of work. In their model they plot all authentic assessments against two axes: level of authenticity in terms of the task and level of authenticity in terms of proximity to business. When we mapped our assessments against the Kaider et al (2017) typology in 2020, we found that most of our assessments occupied the lower levels of authenticity (the white-shaded areas in Figure 1). We decided we should move towards the upper-right-hand corner (the magenta and green-shaded areas).

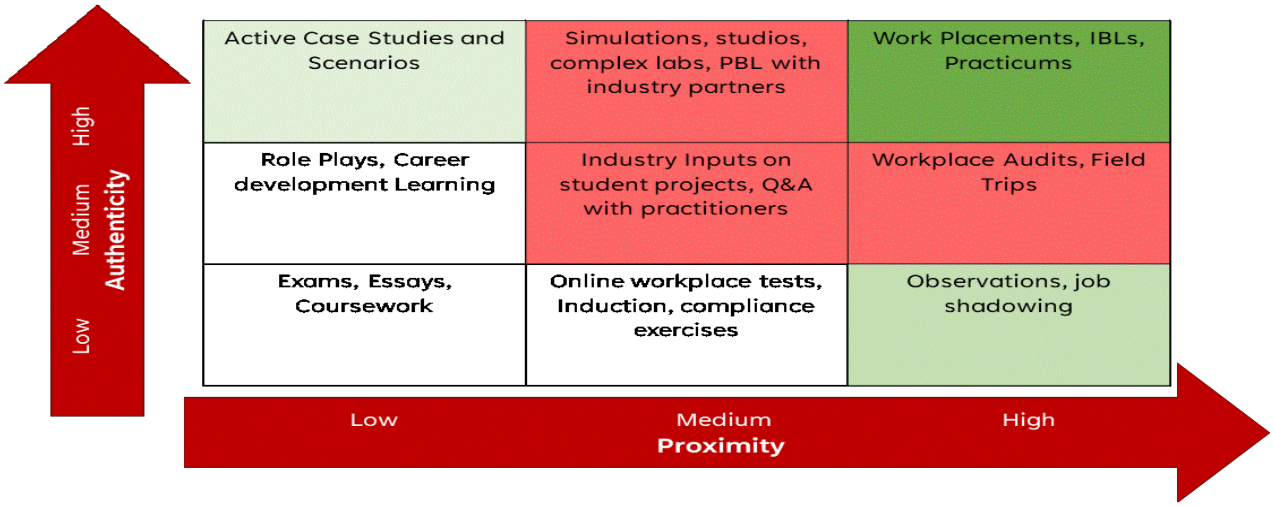

Figure 1: Authentic assessments Typology (Kaider et al., 2017)

A conscious decision was taken to adopt live projects (LPs) as the curriculum-wide base for our shift to AAs because, firstly, LPs offered a gentle introduction to the UK world of work, which was helpful to our students who were predominantly international with limited experience of the UK. Secondly, LPs provided opportunities for problem-based learning and enhanced our students' employability. Thus, we moved our assessment portfolio towards the magenta shaded areas, upgrading our assessments to AAs of medium/high level of authenticity.

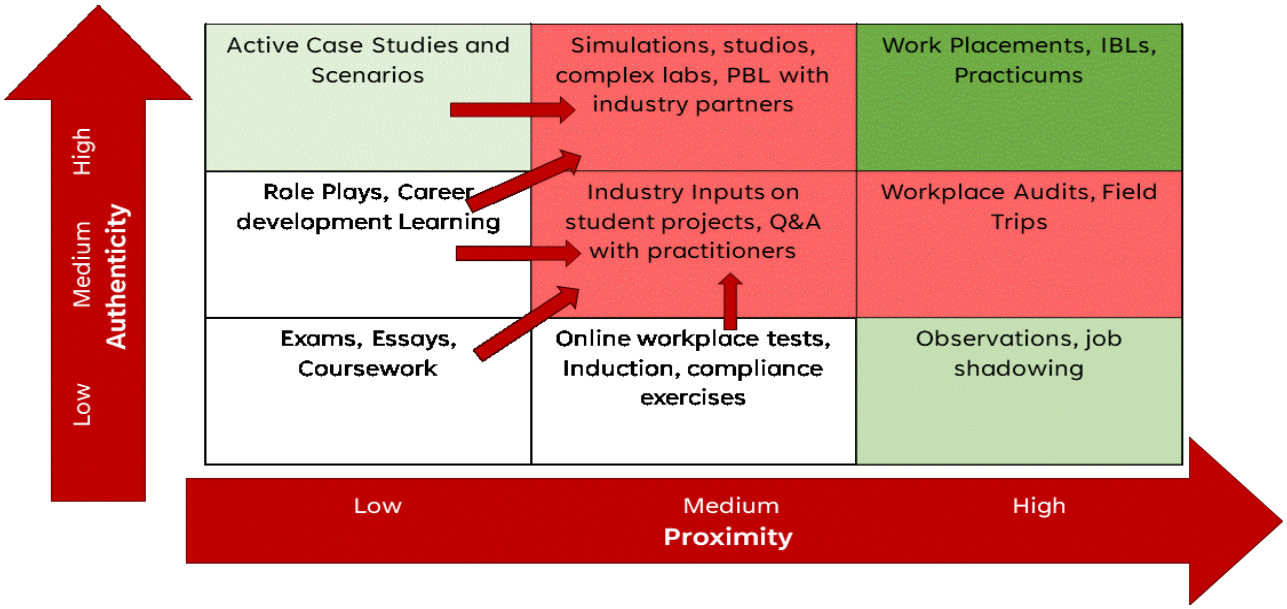

Figure 2: PG provision moving towards medium/high level authentic assessments in 2022-23 (Kaider et al, 2017)

At the same time, LPs minimise the risk and the administrative and operational pressures for the university while providing a good base in terms of skills and experience for staff who may wish to move towards higher level AAs (see Figure 3).

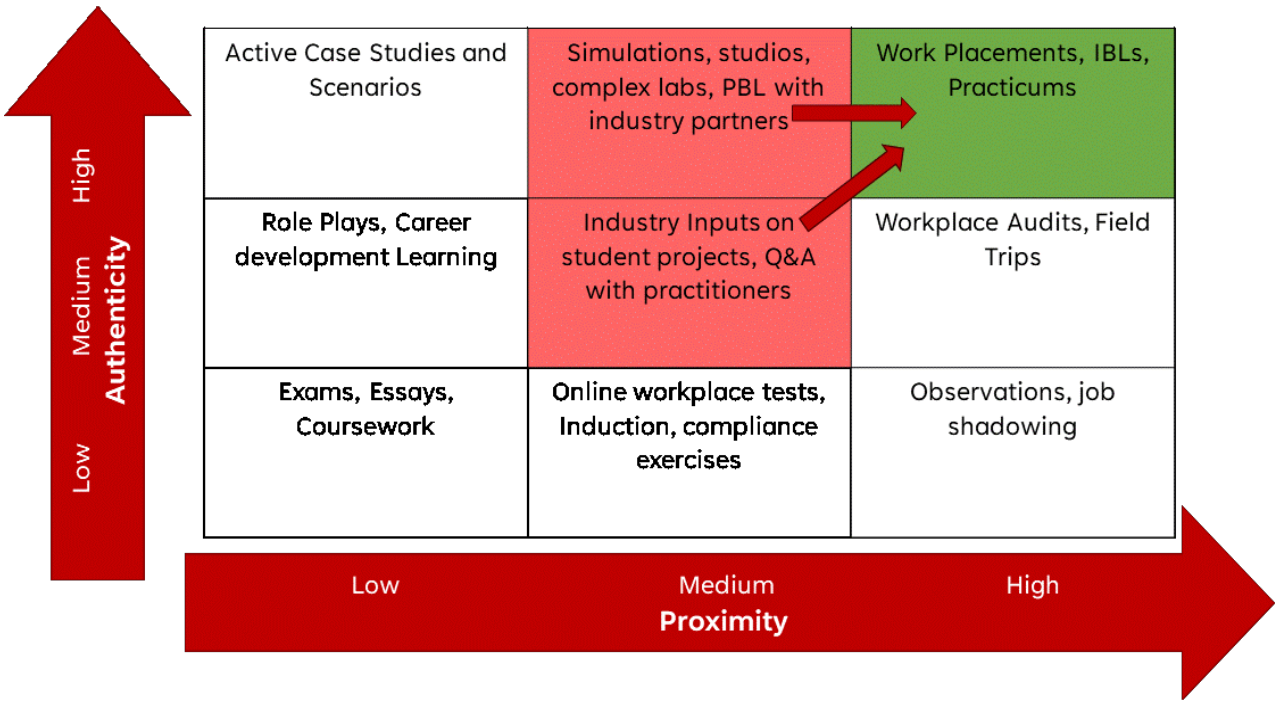

Figure 3: Possible future direction of travel

Once the decision to adopt LPs as the main vehicle for AAs was taken, we had to ensure it was meaningfully embedded at programme level. We mapped all our modules/units across the MBA and the MSc portfolios against (among other key themes) the theme of Enterprise and Employability and developed the curriculum and assessments to be aligned to this mapping. From a single Master's perspective, E&E engagement would look like Figure 4:



Figure 4: Structure of authentic assessments within the MBA degree (one year): four modules and a dissertation

The module-based map of the MBA course has module/unit in position 1 of the carousel delivering an aspect of employability via a live project, the module/unit in second position a different employability aspect via a simulation and so on. Overall, the course shown here offers to the student three LPs (the last one being a consultancy engagement) with companies aligned to the full range of employability skills our careers staff deem important.

Within each of the modules the AAs became the central structure for delivering enterprise and employability related skills, often using live project as the main vehicle. Figure 5

provides an example of the timeline and breakdown of such activities within a single module/unit:

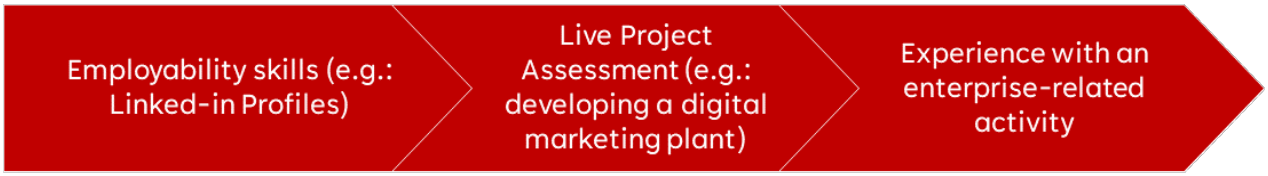

Figure 5: Single module with a live project

This approach to curriculum development has benefited GSB. Since 2021 GSB has had more than 10,000 students both on-campus and on various TNE locations. The implementation of the block carousel delivery model was key in ensuring a consistency of student experience. As students may start their studies at various point of the course's cycle, the pedagogical approach was designed so that the journey could be delivered in a non-sequential manner, relying on a flipped classroom approach to learning and teaching. Since the student cohorts continuously mix as the new students join existing students, this allows for peer-to-peer learning, while having a new cohort join every eight weeks made LPs a meaningful AA for experiential learning and peer learning as it provides continuous opportunities for career development and enterprise engagement.

> "In live projects, sometimes we have to make quick decisions which is different from traditional assessments"
>
> MSc Student (2025)

> "When I wrote my CV, I put the live project in my list and it gives me the boost."
>
> MBA student (2025)

The most surprising challenge was the emergence of a pantheon of stakeholders. For example, to facilitate the creation, delivery and management of LPs we had to form strategic partnerships with the business development unit of the university and the career services. Figure 6 shows the range of internal and external stakeholders that have emerged since 2021.

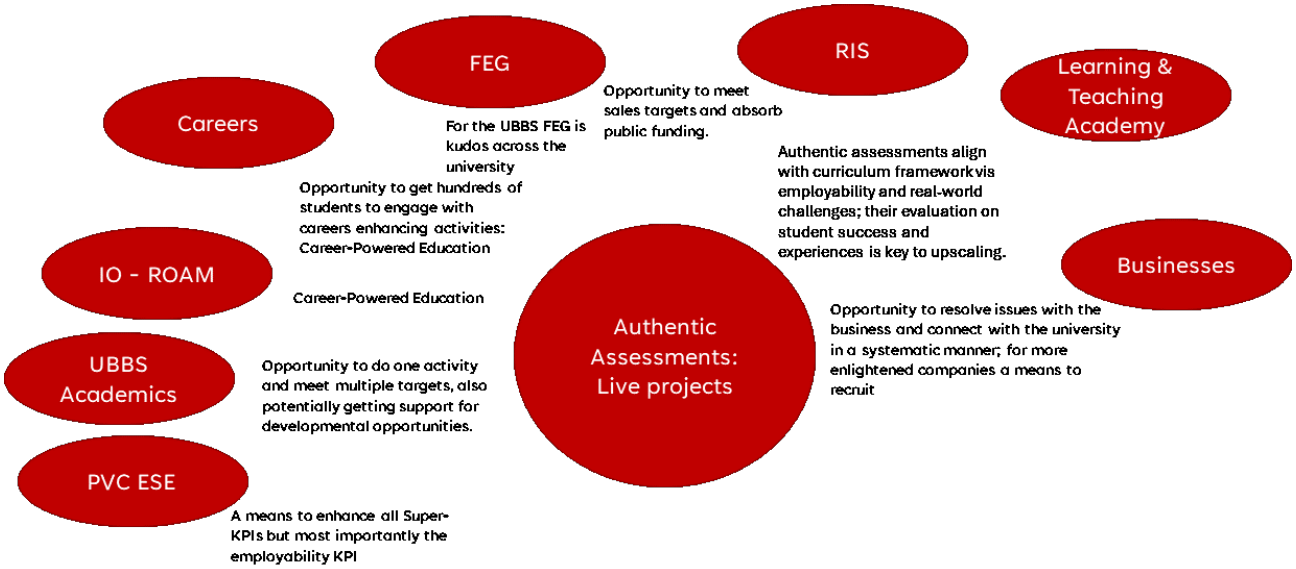

Figure 6: Stakeholder pantheon and perspective on GSB's Live Projects

Translation became a critical component in managing AAs with communications with our stakeholders occupying much of the AA management process. An important new protocol has been the establishment of a weekly meeting including key internal stakeholders: the business development unit, career services, the academy and other key academics from the wider Business School community. This forum has allowed a space to discuss any emerging issues and unblock any challenges in running LPs. Furthermore, we had to provide appropriate guidance documentation and training for staff, students and partner tutors (TNE). That has supported staff and our TNE partners with the rollout of LPs in each of the chosen modules. LPs required additional hours for staff to manage their LPs and the companies associated with them and we also had to allocate academics within GSB to become Enterprise and Employability Leads who could support staff who were unfamiliar with managing LPs.

Outcomes

The shift to AAs and the decision to focus on LPs proved to be fortuitous. Since 2021 we have more than 80 companies engaging with us and providing more than 13,000 instances of student engagement with an LP. Table 1 summarises the scale of engagement so far:

Academic Year	Live projects	Companies	Student engagement instances
2024-25	57	35	3,379
2023–24	36	26	7,000
2022–23	20	20	2,300
2021–22	5	5	1,169

Table 1: Scale of engagement thus far

This resulted in placements and additional consultancy engagements. In the last four years, we have had more than 100 staff/company consultations. Most recently we have had companies offering placements to students – thus far three placements – but this has led to the formulation of a process of deriving further placements. There are also three paid advisory engagements derived from this activity. Furthermore, when the Business Development Services (RIS) secured four Shared Prosperity Funds (SPF) in the period 2023-25 with three different local councils (Luton, Central Bedfordshire and Northants) to the tune of £1m, the academic contributions were primarily by GSB staff. We had the experience to engage meaningfully and at scale with the industry. For example, an SPF with Luton Borough council involved 20 companies from the Luton area focusing on a strategy for zero-carbon emissions. Some of these consultations subsequently became the source for LPs, which were embedded into AAs, enhancing the virtuous cycle.

On the academic front, the average marks on some units increased and fewer students failed overall when LPs were implemented. However, for other units, the marks decreased or showed no clear trends. AAs do not necessarily lead to a higher academic performance; LPs are complex while their impact can be long-term, often demonstrating itself at the workplace; which provides methodological challenges as well as opportunities for future research. One unexpected benefit was that for modules with high levels of academic issues, the implementation of AAs resulted in a drastic reduction in academic offences and AI scores (in some cases to nearly 0 academic offences!).

"Live project… made us realise what we are doing in class is achievable and practical."

MSc Student (2025)

"It's very realistic."… "In live projects, the views are real and there is always going to be pushback."

MBA Student (2025)

Student focus groups indicated that live projects offered invaluable hands- on experience. They were seen as enhancing skills such as teamwork, problem-solving, critical thinking and decision-making. Students also gained up-to-date industry knowledge and developed insights into business practices. Therefore, by engaging directly with professionals, students can develop a deeper connection to local communities and businesses, which would prepare them for their future careers and provide opportunities for advancement.

"I was making recommendations and they (businesses) were listening. So, I can add value while I'm still in class"

MSc Student (2025)

Managing the LPs in GSB is a never-ending process and challenges remain. The graph below summarises the key ones:

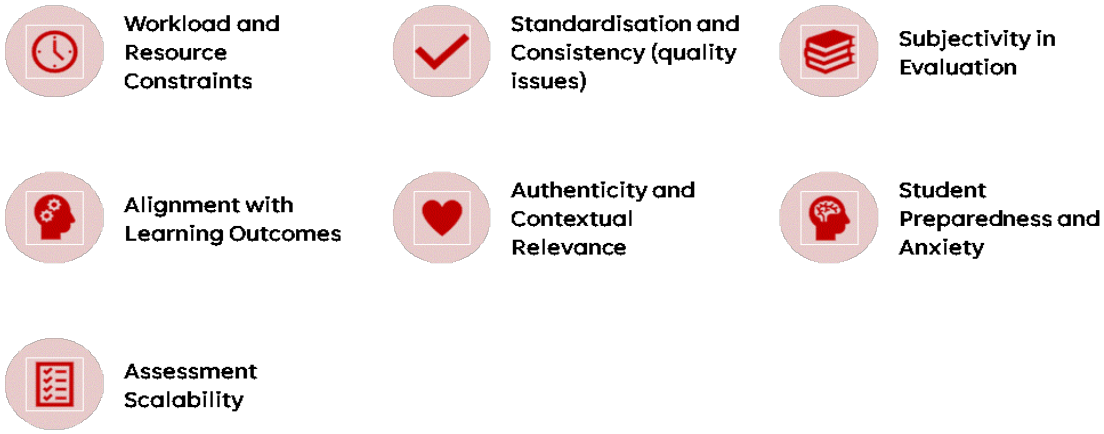

Figure 7: Summary of key challenges in managing AAs

Some of the challenges are ongoing, such as the management of resources and workload constraints, and although we have been creative by developing strategic partnerships we still explore new ways of managing workloads. Other challenges have become more nuanced such as the issue of authenticity as GenAI is posing an academic challenge to AAs.

Reflecting back on the last four years, it has become apparent that adopting AAs as a core aspect of the curriculum in such an embedded manner as we have done here has led to some very explicit benefits. The main benefits are:

1. A close engagement with the regional business ecosystem leading to a high-impact engagement primarily with small and medium enterprises.
2. The development of academics who are aware of industry requirements and can manage industry-informed assessments and thus provide a meaningful and career-enhancing live experience to students.
3. Live assessments implemented thoughtfully have reduced academic integrity issues.
4. Currently, there are unexpected benefits such as opportunities for placements, additional paid consultancy and opportunities for engaging with local councils and the wider business community in Bedfordshire county.

The approach is currently evaluated by the Academy as good practice and has been presented in internal learning and teaching conferences. Furthermore, we have secured two QAA-funded projects related to this process. The first one aims to evaluate the hidden costs of implementing and managing AAs in the curriculum and some of the data presented here is a result of this project. The second project looks at the impact of GenAI on assessments and how to develop assessments in collaboration with GenAI. Internally, we are evaluating the pros/cons of the GSB approach to develop a good practice for further dissemination within the university.

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Enhancing student success, connecting the dots and creating the conditions for all our students to flourish in this ever changing and complex world of work: a case study

Frantzeska Kolyda, University of Westminster; Johnathan Lucky, Sky; Helena Disu, University of Westminster

Background

Universities invest significantly in enhancing graduate employability. Employability is relevant to all students (Advance HE, 2024) and a priority today for most institutions. At the University of Westminster, our Strategy 2022-29 has four core objectives: two directly related to education success and employability. We aim to ensure that all our students benefit from employability-led learning. Our education objective is to "offer personalised and authentic education, underpinned by an inclusive curriculum, to enable all our students, from all backgrounds, to engage in transformative learning and to succeed in their studies and professional lives" (University of Westminster, 2022, 14). Our employability objective is "to ensure that all our students benefit from employability-led learning and purposeful engagement with employers, business and industry, to give students from every background the best possible preparation for the world of work and enable the best possible employability outcomes" (p16).

As Advance HE's framework highlights (2024, 6), "Excellence in employability provision enhances graduate outcomes, institutional reputation and global standings. This influences student recruitment and engagement with employers. By helping shape strategic priorities a shared vision is developed, further enhancing culture and practice".

Graduate Outcomes data is used by the UK Government and others to understand the higher education (HE) sector and the state of the graduate labour market. It is often used within league tables as a proxy for student employability and linked to employers' expectations in relation to the necessary competencies of graduates to ensure a positive impact upon recruitment (Advance HE, 2025). Therefore, it is important that educators understand how to support students' career development during HE as well as the factors that influence how their career interests develop so that they can design learning environments that best support students (Quinlan and Corbin, 2023).

It seems (Quinlan and Corbin, 2023) that students mostly rely on their course curriculum in clarifying their career interests and develop their professional skills as opposed to interactions with their university's careers services. As a result, embedding employability and work-based learning (WBL) in the curriculum is necessary to support students and to enable them to engage in employability-led learning.

Students in computing need to develop not only technical but also soft skills to be successful in their career (Glazunova et al, 2022). Studies (such as Jackson et al, 2024) have found

that WBL opportunities were effective in enhancing the perceptions that graduates had of overall preparedness for employment and their perceptions of employability.

Some universities report (O'Grady et al, 2023) that there are second year students in Engineering and Technology subjects who admit lack of confidence in their academic skills to proceed with a full-time placement, or students who are too nervous or anxious to engage with the recruitment process. Research (for example, Jackson, Shan and Meek, 2022) and anecdotal evidence suggest that lack of confidence often seems to be one of the reasons for some students not actively seeking work-based/employability opportunities or applying for internships or placements. Research studies (for example, Jackson et al, 2024) also identify lack of confidence as one of the barriers to participation in employability-building activities and lack of awareness and appreciation (of the value of such participation), as well as barriers such as work/study commitments, and financial/health pressures, while highlighting the importance of embedding such activities in the curriculum to increase engagement.

So, how do we prepare our students to be 'fit for the future' in such an increasingly complex, rapidly evolving and interconnected world? This case study focuses on a work-based Level 5 module, Agile Project Management and Professional Experience, in the School of Computer Science and Engineering at the University of Westminster, and the approach followed during 2023-24 and 2024-25 academic years.

Approach

The module aims to provide students with an understanding of what Agile Project Management is, respective methods, practices and frameworks and the importance of adapting an agile approach. The assessment consists of an in-class test (weighting 30%) and a group coursework (weighting 70%). After successfully completing the group coursework, the students should be able to demonstrate the learning outcomes presented in Table 1 (University of Westminster, 2025, 2).

	Module learning outcomes linked to the group coursework
LO2	*Collaborate as part of a team to deliver appropriate project documentation and present and defend the results.*
LO3	*Create a high-level software prototype in compliance with the project plan.*
LO4	*Demonstrate an understanding of the importance of relevant current issues and trends which affect information systems professionals (for example, ethics, legislation and security).*
LO5	*Work in a professional workplace setting using necessary employability skills.*

Table 1. Module learning outcomes linked to the group coursework

The module's learning and teaching methods are inclusive, with practical, active and inquiry focused learning activities designed to support students in their engagement with the assessment. In this way, the assessment is placed at the very heart of the module and becomes its central component.

The group coursework is authentic, industry-relevant and allows students to actively learn, build on and demonstrate knowledge and skills. In 2023-24 and 2024-25 academic years, it focused on a live brief. Our team (consisting of the Module Leader, our Industry Exchange Project Officer and our industry partner, a Delivery Manager at Sky) worked together to create a live group project, where students worked in an agile framework, and proposed a solution (a proof of concept/prototype), to a real business problem that Sky engineering teams were facing.

Students were introduced to our industry partner and the live brief in Week 5. In Week 6, students had the opportunity to visit Sky HQ and meet several inspiring professionals, hear about graduate opportunities, and find out how Sky teams build great products and continuously innovate in an agile environment. This took place during the Engagement Week when there are no classes across the University while various career events take place. This visit motivated the students to engage with the project and to see its connection to the world of work. Such alignment plays an important role on engagement, ongoing motivation and successful completion, as well as towards equality of opportunity.

The students worked in groups of approximately five members. To optimise engagement and participation, we ran three workshops (across Weeks 7-9), led by our industry partner, where students had the opportunity to work on the first iteration of the project. In Week 10, groups presented their work and ideas in class and obtained constructive formative feedback from our industry partner and the module leader. What was particularly valuable to students was that, in addition to obtaining feedback on the technical part of their project, groups also obtained feedback on their presentation skills. Afterwards, students had two further weeks to improve and complete their project before the formal (portfolio) submission (in Week 12). Students were immersed in a live situation and problem solving and this offered a unique opportunity to participate in authentic learning and to obtain valuable WBL experience.

To address any potential challenges, each group needed to create and submit an agreement (a sample ‘group contract’ template was provided) regarding ground rules, roles, responsibilities and expectations, that could help members become more responsible and accountable. A group agreement aims to support students in their learning. Each group assumes collective responsibility to complete the work. Ideally, each group indicates in their agreement that all members worked equally on the assessment. If this is not the case, they must indicate each member’s contribution. This contribution is also demonstrated during the group presentation. As a result, any uneven participation is addressed. Researchers, such as Brannen et al (2021), found that group work contracts are effective in reducing student anxiety and improving group dynamics and communication, resulting in an improved learning experience overall.

Outcomes

This case study provides preliminary insights in relation to embedding WBL in the computing curriculum, particularly in a Level 5 module, and an example of how we could create the conditions for students to flourish in this ever changing and complex world of work.

The experience has been invaluable to students and fully aligned with our employability provision, helping our students to be 'fit for the future' in the most challenging, cutting-edge labour markets and economic environments. The approach followed was an example of how employability could be best embedded in modules and courses. It provided insights and evidence that such initiatives should not be considered as 'one size fits all'. There is a need to focus on specific module requirements. The role of the educator/module leader is crucial as well as the need for institutional and departmental support.

The nature of the module, assessment and WBL element benefit significantly from rich feedback, iterative improvement and reflection. Each cohort consisted of 40-50 students. The format and timing of the workshops as well as the overall project were designed based on these requirements and the need to focus on the process as well as the output. This case study includes elements (such as structured feedback cycles, industry co-delivery and authentic briefs) that could be transferable to larger cohorts and different settings.

Adopting a holistic approach to curriculum design ensures that students develop practical skills and are engaged with authentic learning, as well as having opportunities to develop skills such as problem solving, creative and critical thinking, iteration, teamwork and collaboration, presentation and communication. The skills and knowledge covered in the module can enhance employability by equipping students with essential skills that are valued in the workplace. Agile methodologies are widely adopted across various industries for their flexibility and efficiency in project management and software development. By mastering agile principles, students learn to manage projects effectively, adapt to changing requirements and deliver high-quality results promptly.

There is a need for a strategic approach to develop and maintain long-term and meaningful industry partnerships that will be both beneficial to HE as well as to industry. Such collaboration offers opportunities, informs the curriculum and is a key element of our approach to employability (Advance HE, 2024). Khan et al (2025) conducted a study that highlighted the transformative potential of structured university-industry collaboration. Co-designing curricula meaningfully with industry partners as well as students will help us provide students with a clearer understanding of how learning connects to their future careers while supporting retention and graduate success (Naumann, Baker and Goode, 2025). At the same time, it will help industry gain insights about student needs and how best to enhance their career readiness.

Furthermore, what the experience highlighted was that, in order to be able to create effective and successful WBL environments, institutions and departments should invest in building and maintaining relationships with industry and employers, as well as supporting and recognising educators and teams who play a crucial role in developing such partnerships by

designing and implementing innovative, evidence-based pedagogical approaches and managing live projects as part of WBL modules and curricula.

Student feedback and comments

Student feedback has been excellent and demonstrated how much students valued such opportunities and how the project made them more determine to learn, grow professionally and further develop their knowledge of agile methodologies, approach and mindset.

Comments from internal moderators and external examiners have been consistently positive. In particular, the external examiner commented on the fact that the coursework included the application of agile practices to solve a real business problem, encouraging practical learning in groups and the application of theory to real-world scenarios. Feedback from our industry partner has also been very positive and we are currently reflecting on this experience, and considering how this work and our partnership could be developed further.

	Comments from our industry partner (Delivery Manager, Sky)
	"I was truly amazed by the students' creativity and enthusiasm throughout the project. They adeptly navigated intentionally vague requirements, posed insightful questions to clarify their understanding, and ultimately presented solutions that addressed a real need within my department at Sky. This experience mirrors the dynamics of real-world projects, where teams must often work through uncertainties, collaborate with stakeholders, and devise solutions that genuinely benefit customers."

Table 2. Comments from our industry partner

	Comments from our Industry Exchange Project Officer (University of Westminster)
	"Within my role as an Industry Exchange Project Officer, I see how impactful it can be when academics work alongside professional services and industry to bring WBL to life for students. When these relationships are aligned, it creates a model that delivers an experience for students that is embedded in the reality of work."

Table 3. Comments from our Industry Exchange Project Officer

Acknowledgments

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Appendix: Student comments (sample)

	Student comments 2023-24
1	*The project with Sky has been a great learning curve, being able to immerse ourselves in various techniques related to agile and project management, covering a wide range of skills and methodologies. For me, the Sky project was multifaceted and dynamic, encompassing both technical and leadership responsibilities. It was a rewarding experience that allowed me to further develop my skills, expand my knowledge, and make a tangible impact within our team and beyond.*
2	*It was fun*

Table 4. Sample of student comments

	Student Module Evaluation 2023-24
1	*The fast-paced nature of agile methodologies posed a challenge for me. Adapting to frequent changes and shifting priorities required a steep learning curve. Despite the difficulty, I value the real-world exposure and am determined to enhance my adaptability skills for future professional growth.*
2	*it was quite interesting and unique that they brought someone from a company to work with us through our coursework*
3	*I like the fact that we are doing workshops with Sky and ..... hands-on experience with ... the outside work life environment is like. I find this module interesting to learn and I enjoy learning more about this module*

Table 5. Sample of student comments from the Student Module Evaluation 2023-24

	Student Module Evaluation 2024-25
1	*The exposure to real world projects was very interesting*
2	*There was a trip to Sky for people who done this module, i really enjoyed that and i hope there .... be more arranged trips like this*
3	*This was a very interesting module, definitely stimulating*
4	*this was best optional module so far, i enjoyed it a lot.*
5	*everything was perfect*
6	*Great module overall*
7	*I learnt how to be more professional and how to work better as a team. This module is definitely a must for all students at the university.* *Thank you..... and ... for this opportunity!*
8	*team work and engagement*[1]
9	*that it was WBL and we also had a tour to SKY as a part of studies, thinking something out of box too.*[2]

Table 6. Sample of student comments from the Student Module Evaluation 2024-25

[1] This was a student response on "What did you most like about Agile Project Management and Professional Experience"

[2] This was a student response on "What did you most like about Agile Project Management and Professional Experience"

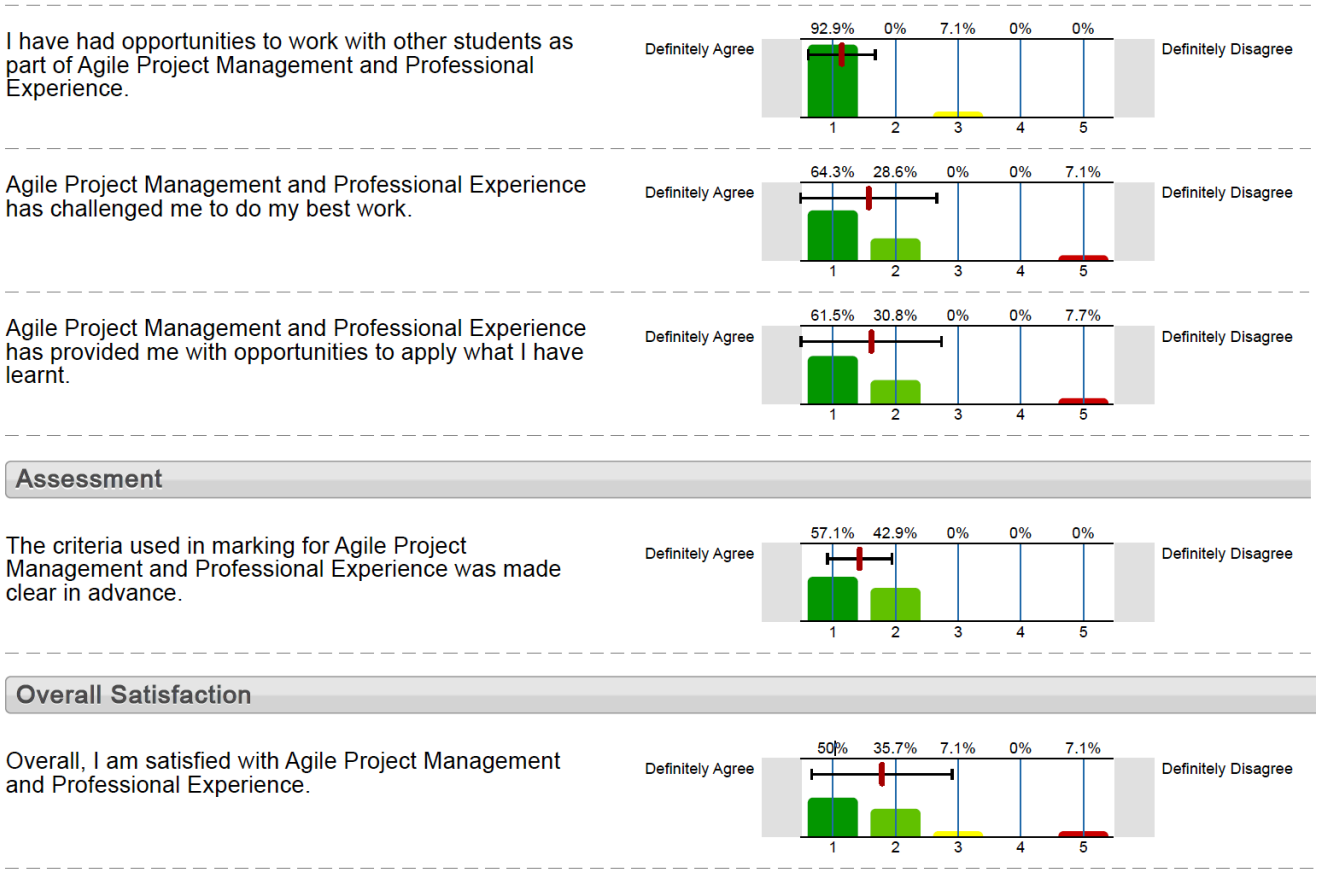

Figure 1. Student Module Evaluation 2024-25 (extract)

	Student Module Evaluation 2024-25 (N = 14, response rate: 30.4%)
1	92.9% definitely agreed/agreed that they had opportunities to work with other students as part of the module.
2	92.9% definitely agreed/agreed that the module challenged them to do their best work.
3	92.3% definitely agreed/agreed that the module had provided them with opportunities to apply what they had learnt.
4	100% definitely agreed/agreed that the criteria used in marking for the module were made clear in advance.
5	85.7% definitely agreed/agreed that overall, they were satisfied with the module.

Table 7. Student Module Evaluation 2024-25

FACE the future: a framework for ethically using generative AI in career education design

Barnaby Mollett, London School of Economics and Political Science (LSE)

Background

The rapid integration of generative artificial intelligence (GenAI) into the daily lives of students presents a significant challenge and opportunity for higher education (HE) careers services. At the London School of Economics and Political Science (LSE), a research-intensive university with a global student body, we observed widespread adoption of GenAI for career planning, exploration and the creation of application materials. This is not unusual among students across other HE institutions, as we see a backdrop of a hyper-competitive graduate labour market, where the average number of applications per graduate role has surged to 140, a 59% year-on-year increase largely attributed to AI-assisted applications (ISE, 2024).

This presented a ‘dual-fold’ challenge to our service (Westman et al, 2021). Firstly, students required guidance to move beyond being passive recipients of AI-generated content towards becoming critical, effective and ethical users of these powerful tools. With 58% of LSE students disclosing they had used GenAI in applications (Cibyl, 2025), there was a clear demand for support. Secondly, our careers education practitioners needed the confidence and pedagogical tools to provide this guidance. An internal LSE Careers staff survey (2025) highlighted a confidence gap, with 44% of staff in our team feeling either neutral or unfavourable about their confidence in using AI tools.

The institutional context supported this work, with the Russell Group (2023) advocating that "staff should be equipped to support students to use generative AI tools effectively and appropriately in their learning experience". There are several research projects looking at how educators can use AI in their pedagogy and learning design (for example Queen Mary University of London’s Centre for Excellence in Artificial Intelligence and AIEOU at the University of Oxford). Yet there was very little, at the time of writing, in the way of an attempt to apply a set of working principles *specifically* to the unique domain of *careers* education and guidance, which requires working with learners to use these tools effectively and safely while also being subject to AI-led changes in the subject matter of careers directly from, say, use of AI in recruitment, different technology-enabled skills needs, or different demands from employers for graduates to operate in this new work environment globally. For example, the OECD (2025) ‘AI capability indicators’ will be used as an ongoing look at propensity of how tasks within roles can be carried out by AI, and future of jobs and work reports (WEF 2025) will be valuable in a global perspective. Learners also navigate a distinctly individual subject matter when applying learning to their career planning, underlying the case for a distinct consideration of AI usage applied to the careers education domain. Our initiative was designed to provide a framework for this, helping staff and students alike develop the

"critical judgement" and "moral judgement" essential for the effective use of large language models and generative AI (Brown, 2023).

Approach

The approach was practitioner-led and iterative. In early 2025, the LSE Careers Framework for Using AI in Careers Education (FACE) was developed to provide a foundational set of principles for our work (Mollett, 2025). This was created by synthesising and evaluating three viewpoints. Initially, the CDAA (2024) Guidelines were used. These include five overall guidelines for 'considerations when using [GenAI] technologies' – Privacy and Security; Fairness, Ethics and Transparency; Accuracy; Legislation and Copyright; Accountability and Safety. There are 11 separate principles connected to these. As noted, at the time there were few other attempts to truly distil how the discipline of career guidance and AI usage could ethically work together. These were analysed alongside the AGCAS Code of Ethics (AGCAS, nd), to incorporate sector-wide principles for career guidance and education, and the institutional School Position on AI (LSE, nd). The resulting framework is built on five core principles for staff to use in action in their own work and work with students in the careers education space: Security, Ethical Balance, Reliability, Student Empowerment and Accountability, and Continuous Review and Development. The emphasis is on equipping facilitators to apply their professional and critical judgement, encouraging practices such as 'sensibly iterative' use of AI rather than accepting initial outputs.

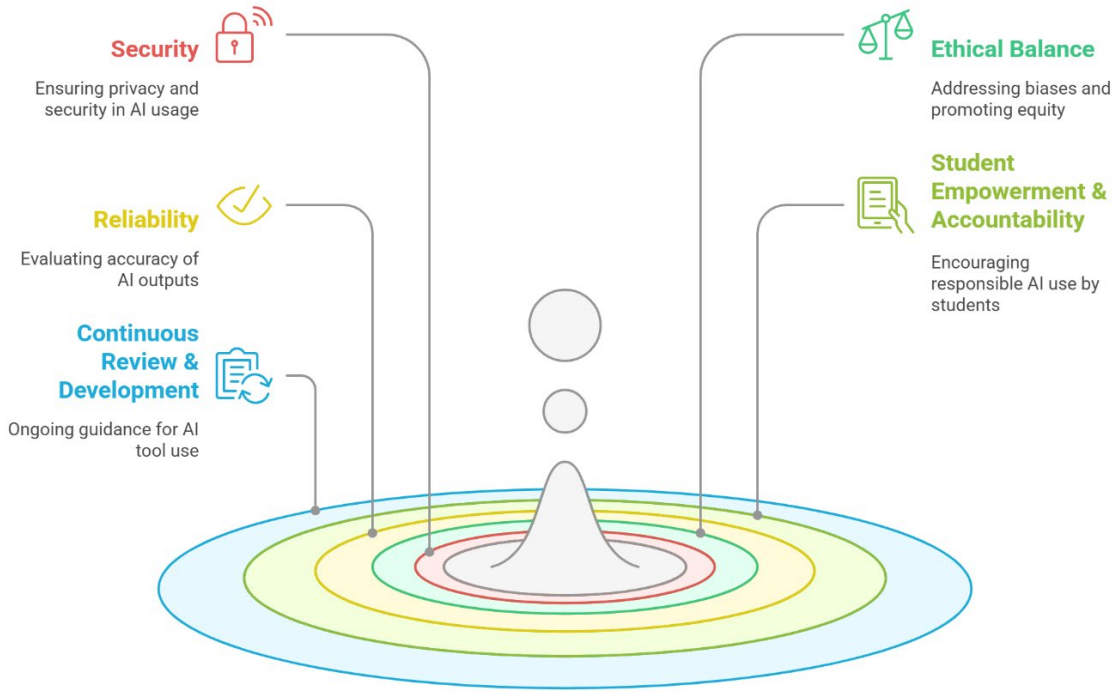

Figure 1: FACE Framework (Mollett, 2025). *Image creation supported with napkin.ai.*

Following the framework's creation, an existing digital staff working group in LSE Careers was refocused to have a focus on AI. This group's remit includes to operationalise the FACE principles and build the team's capacity for ethical and effective AI integration. To do this, the group had an initial focus on several practical streams.

+ The FACE framework itself is updated and monitored to take into account relevant developments in the careers education field and in response to AI evolution.
+ The FACE principles are to be used to underpin team actions using AI and in work with students using AI in careers education, with examples of educational resources and good practice uses of particularly GenAI among the team shared and discussed.
+ An AI Tool Review Form was created for staff to evaluate new tools against the five FACE principles before wider team use.
+ A process for monitoring employer AI insights was established, ensuring our guidance remains aligned with real-world recruitment practices.
+ A bi-weekly AI update was introduced in the LSE Careers internal newsletter to share knowledge and best practices.

While student-facing resources, such as an ‘ACRES’ model (a five-step guide to help students structure their interactions with GenAI for career-related tasks), have been developed from these principles, the primary focus of our approach has been on embedding the core tenets of the FACE framework into our professional practice, so that as careers educators and staff in this domain we have an ethical and guiding code to tackle the dynamic change AI is enacting. The LSE Careers team has varied levels of experience with AI, and several different staff remits in terms of education. It was therefore introduced differently to teams working directly and embedding its principles in learning design, to those involved in observing and engaging with employers for their views on AI, and the wider practicalities of an AI-informed student body for those in operational roles. The Framework was examined in team meetings to align it to relevant use cases for different staff user groups by the end of summer 2025, enabling a student-facing rollout underpinned by its principles for the start of the 2025-26 academic year.

The framework is treated as a live document, regularly reviewed to ensure its principles are mapped holistically against key developments, such as new guidance from the Department for Education (DfE, 2025), to keep our approach relevant in the multidisciplinary field of careers education. The recent AI Fluency Framework (Feller and Dakan, 2025), more broadly applicable to education, has also been reflected on against our FACE principles and aligns closely – ‘Delegation’, for example, fits with developing agency and critical judgment in staff and student collaboration with AI in the careers education space.

Outcomes

The primary outcome of this work so far is the successful, if gradual, embedding of a shared language and ethical foundation for using AI within the LSE Careers team. The key message is that a practitioner-first framework is essential for building the confidence and capability needed to guide students effectively. Our phased rollout plan, informed by the principles of the Jisc AI maturity model (Jisc, 2024), has provided a structure for moving the team forward collectively and carefully, while keeping a degree of flexibility to respond to external factors.

A significant pedagogical outcome has been the development of a clearer vision for how our careers educators should engage with AI in their learning design. In short, we advocate that professional knowledge must bookend any use of AI. As Pratschke (2025) notes, "using AI to get past the blank page... is a mistake because doing so means skipping the stage where we use the declarative memory". This insight, aligned with the FACE framework and further taking into account a backwards learning design process (Wiggins and McTighe, 2005), led to a visualisation of a five-stage careers education design process. This positions AI as a powerful tool for ideation in the middle stages but emphasises that the initial conceptualisation and final refinement must be driven by the facilitator's professional judgement (human interaction). This is particularly pertinent in careers education due to the individualised nature of it. The potentially 'live' impact on future professional decisions of learners being guided by AI requires the discipline of reviewing both the input and the output before acting on AI-generated information. This model has become a talking point in team discussions about pedagogy in our careers education going forward, especially as learners continue to evolve their use of AI in this area, and the working environments they look to enter evolve, too.

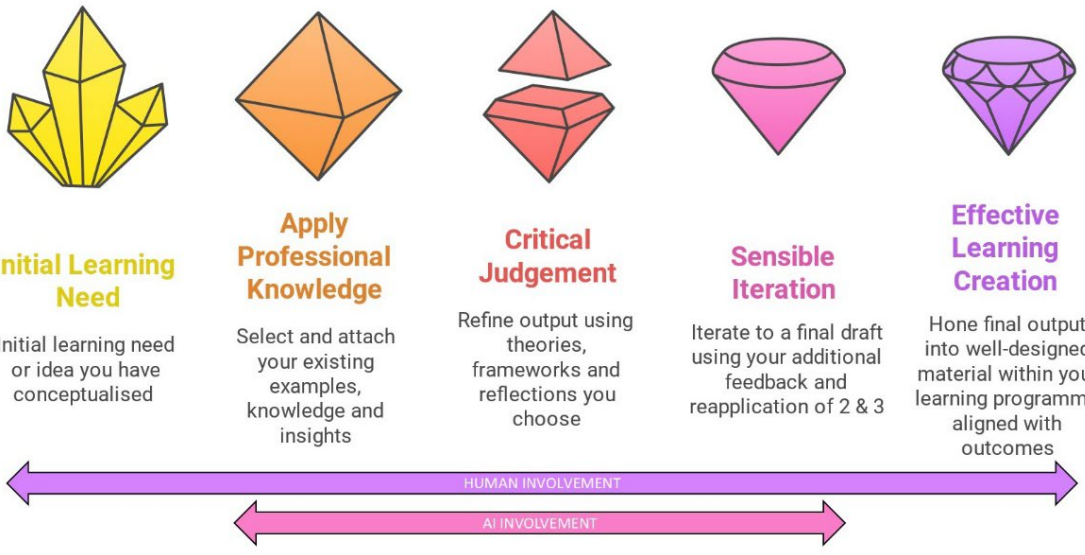

Figure 2: Careers Education Design: Human and AI Roles (Mollett, 2025). Image creation supported with napkin.ai.

The insights from this work are highly transferable to careers services and anyone working adjacent to careers education in this sector. The principles of the FACE framework are applicable to any student service department, while the practical outputs (such as the tool review form and employer monitoring process) provide a simple, scalable model for other institutions seeking to implement a structured approach to AI governance.

Next steps involve continuing to apply the FACE principles within the learning design process of careers education at LSE, launching further student-facing resources and systematically continuing to gather employer intelligence on AI in recruitment to ensure our practice remains grounded in the realities of the evolving labour market. This would then be evaluated to consider how both learners and careers staff are acting in line with the Framework's principles. Additionally, scaling impact to reach a larger proportion of learners will be considered through increasing visibility, ensuring in the first instance an 'AI audit' of each careers education topic and, for each, creation of materials and exemplars of AI good practice. Wider aims as this work continues would be to share this work across the sector and professional bodies for wider benefit to ground what is an ethically underscored profession of career guidance and education in suitable, mindful, ethical AI usage principles fit for this burgeoning AI-enabled age.

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Future-proofing graduates: building professionalism through active learning and incentivisation of career learning

Lindsey J Munro and Patricia E Linton

Background

In an era defined by rapid change and uncertainty, the challenge for higher education is not to predict every skill or technology that graduates will need by 2030, but to ensure they are equipped to thrive amid constant transformation with strong communication and teamwork skills and a willingness to take opportunities to upskill.

A key challenge in preparing our undergraduates for their future careers is the fear of moving away from the traditional didactic lecturing approach to creating an active learning environment similar to the professional workplace so that students have no choice but to engage with graduate skills development (Børte, Nesje and Lillejord, 2023; Cohen et al, 2019; Hood et al, 2020). Much literature extols the use of active learning to support higher student motivation, improving self-advocacy in students with specific learning disabilities, narrowing achievement gaps and promoting transferable employability skills in students (for example, Olivares et al, 2020; Pfeifer Cordero and Stanton, 2023; Stieha et al, 2024; Theobald et al, 2020).

Universities across the UK offer students a range of activities to help them prepare for their future careers. In our university, these start with embedding career preparation activities (such as skills audits, exploring career pathways, CV, applications, psychometric testing and interviews) into the curriculum as part of assessments from Year 1. Some students immerse themselves in these opportunities and really value the collective discussions, peer learning and individual feedback. However, too many students do not engage. This is particularly concerning for disadvantaged students such as those who are first generation or have external factors that limit their time available for studying, since they could potentially benefit the most from this targeted preparation. Students can also build their skills and experience through on-campus paid jobs, our extracurricular programme, internships, VR interview training and graduate careers fairs. These activities only work if the students engage with them and can translate what they have learned into successful applications for graduate jobs or further study.

Discussions with students have highlighted several barriers to engagement, which includes external commitments such as part-time work or caring responsibilities, as well as the belief that it is more important to spend time on their assessments than on activities which don’t lead directly to marks (Dickinson, Griffiths and Bedice, 2021). Some students will flag that they feel overwhelmed, lack confidence or exhibit imposterism (Murray et al, 2022) especially when articulating skills to employers. Staff members can also flag that they lack confidence in helping students prepare for their future careers – preferring this to be the focus for the careers team.

Our departmental career registration data indicates that existing initiatives have increased the numbers of students who start each year either ready to apply for or already having gained a graduate job / further study (12.5% in 19/20 to 24.8% in 24/25). Similarly, we know that, on average, 45% of each year group has engaged with our extracurricular programme at some point. All of which is a good launch pad for these students but there are still parts of our cohort that do not feel ready to apply for their future careers and are not engaging with career preparation activities, and this is noted as an issue across the sector (Jackson et al, 2024 and Bradley, Quigley and Bailey, 2021).

This case study explores the impact of active learning and authentic learning environments to enhance employability skills as well as a weekly guided approach to engage students with career learning opportunities. Our focus was on Level 4 biology and chemistry cohorts but the approaches could be extended to other disciplines and year groups with increasing autonomy.

Approach

In this case study, we discuss two approaches we have taken in the 2024-25 academic year to make it harder for students to avoid engaging with career preparation and skills-building activities, and easier for staff to embed these activities into their teaching with the ultimate goal of enabling everyone to apply for and gain a positive graduate outcome: (1) Leveraging the shift in mindset from our new suite of active learning spaces to embed professional practice from Year 1; and (2) The impact a of new non-credit bearing career-preparation focused module (see Table 1).

Approach	Student numbers	Employability needs	Challenges	Outcomes
Approach 1 – Focus on active learning and authentic teaching for employability skills in bespoke spaces (replacing didactic delivery)	N = 115, Level 4 Chemistry students	To embed a culture of professional practice in the classroom	• Staff engagement with active learning training. • Radical change to teaching content & delivery which can require significant preparation time. • Keeping all students engaged.	Student and staff reported increased: • Clarity of online learning resources for pre-/post-class preparation / review. • Communication and group work. • Confidence in problem-solving & analysis. • Staff engagement with active learning methods.
Approach 2 - Non-credit bearing, pass-fail employability module to incentivise engagement	N = 165, Level 4, Biology students	Enhance engagement with careers and employability resources and workshops	• Student perception of career learning as being less important than course activities. • Requires engagement with extracurricular activity which is not on students' timetables. • Competition for student time due to external commitments.	• Increased engagement with self-directed and in-person careers activities. • Engagement with LinkedIn from Level 4 showcasing the student career learning journey and building their external profile. • Peer support to encourage engagement, enhancing the student community. • High pass rate at first sit.

Table 1. Summary of approaches, student cohorts, employability needs, challenges and outcomes

In 2024, we moved into a new building for the Faculty of Science and Engineering that was designed to be a collaborative and inclusive space to bring students, staff and external organisations together to innovate and create solutions to global challenges. A key element of the building has been the inclusion of flexible learning spaces with round tables and write-on walls that can scale to accommodate different group sizes, as well as designated active learning rooms which enable groups to work together with access to screens, projectors and write-on walls. Over the past few years, there has been a series of active-learning training workshops for staff to share good practice on how to redesign lectures to increase student engagement during classes and to move away from the lecturer-led didactic approach. This focus on active learning has been supported at university level through the appointment of four innovation scholars with dedicated time to support the rollout of active learning and authentic assessments, including the development of two communities of practice with well-attended cross-faculty monthly webinars and a collation of learning resources. Each department has a Digitally Enhanced Learning, Teaching and Assessment Champion, who helps staff to create supportive virtual learning environments for each module and embed interactive polling tools into lectures. These approaches have also been integrated into our regular departmental meetings so that staff can collectively experiment with them and experience the positive shift in engagement levels.

Implementation of the training has been embraced to varying degrees by staff members with the limitations of the traditional lecture theatre for group work being flagged as one key barrier. The transfer of classes to the active learning spaces has led to a requirement for staff to change how they deliver their classes and thus a step-change in staff and student mindsets towards this teaching approach and skills development. We particularly focused on the experience of Year 1 Chemistry students since they were timetabled in these new spaces throughout Semester 1.

The second approach we have taken to improve student engagement with career preparation has focused on Year 1 Biology students and arose in part from the low attendance of students at the many bespoke careers and employability activities. A non-credit-bearing pass-fail employability module was developed that launched in induction week with a view to engagement with the activities becoming second nature to the students. Each week, there is a clear list of tasks for the students to complete, which include attendance at employability events, extracurricular workshops and Microsoft certification opportunities. Students are required to demonstrate a threshold level of engagement to pass the module. Flexibility was provided by repeating some tasks in different weeks throughout the academic year with a clear indication of which were mandatory. A key element was enabling students to set up their LinkedIn profiles and providing guidance on how to share their learning journey and enhance their external profile through regular informative posts.

Outcomes

Moving lectures to a round-table flat room environment required staff to restructure how to engage students with the course content. This has included standardising the format of our online virtual learning environment to clearly identify pre- and post-class preparation / review

activities. In-class activities now include a shorter review of the key concepts followed by scaffolded problem-solving activities which have been designed to walk students through the analysis process and develop these skills further in a group with peer-led support. This has changed our students' approach to engaging with learning new material. In module feedback, they have cited reduced anxiety and increases in their confidence in analysing and solving problems, asking questions and communication skills. Students have also highlighted that they can see how their prior preparation enables them to contribute to discussions and that sharing their answers with their peers has enabled them to understand how to improve their revision and how to avoid errors. Progression to Year 2 of the overall chemistry cohort has increased by 6.7% compared to the previous year, with this active learning approach cited by students as one contributing factor.

It is noted that transformation to majority active learning can take several years to enact (Lau et al, 2024) and barriers are well known (Young, Mitchell-Yellin and Randall, 2024). Some staff highlighted that they found this approach more challenging since they could cover less material and the lecture focus may shift from their initial plan, requiring them to be agile and adaptable. Staff also cited the impact of not all students engaging with the online preparatory material. There is a perception that active learning is "more work" and that students prefer a standard lecture, since they are taught material by an expert who makes it look easy. However, lecture attendance on its own does not necessarily map to a deeper understanding of concepts, better assessment marks or improved communication and teamwork skills – all key aspirations. Our experience indicates that the rewards are worth the risks, and that combining this approach with new dedicated spaces can catalyse student and staff engagement and positive outcomes.

Next steps include using a Theory of Change approach to explain to students why we have moved to this new learning environment and approach, what they should expect, and how this will impact on their learning and results. We would like to extend the peer-learning groups from within classes to students supporting each other with the online self-study material through all years – with a greater focus on debate and critical analysis as students progress to more advanced topics and their independent projects.

The Year 1 Biology students started the year by engaging with LinkedIn, which created an online community and external recognition of the steps they were taking on their career journey. Students who posted about their extracurricular activities and articulated what they had gained from these were particularly impactful in encouraging other students to engage with similar opportunities. Some students even included videos about their experiences, building awareness of their skill gains and the opportunities available. The attendance at the Semester 1 careers activities was particularly high – with 57% of the department's attendees from this cohort, although they are only 12% of total department students, and the pass rate for the module was 91% at first sit.

Providing students with a separate non-credit module to collate and showcase their progress in engaging with steps to enhance their careers is planned to be rolled out to all students in the department.

Both approaches highlight that if student engagement in developing key transferable skills or taking part in career preparation opportunities is integrated, students will not only engage but they can see and articulate the positive impact of these experiences. Staff engagement has been supported through training and sharing of good practice – but ultimately it is through seeing students gain better outcomes and a wider range of experiences that momentum for this approach is achieved.

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Scaling-up employability: integrating Live Briefs following institutional merger

John Parkin, Academic Employability Consultant, Anglia Ruskin University

Background

This case study explores how Live Briefs, a curriculum-based employability initiative, were introduced into undergraduate courses at Writtle University College following its merger with Anglia Ruskin University (ARU) in February 2024. The merger brought together land-based courses and existing provision at ARU. The main challenge was adapting a well-established pedagogic approach in ARU to a new context with distinct disciplines and industry connections.

ARU Live Briefs are designed to engage students in real-world learning through challenges set by external professional partners. As well as supporting employability skills, Live Briefs can support student engagement in tasks which use real-life challenges (Yoon and Šegota, 2022). Across ARU, Live Briefs are embedded into compulsory Level 4 and Level 5 modules for all undergraduate degrees without placements. This approach helps to ensure all students experience activities to support their career-readiness and employability. Furthermore, Live Briefs support 'bridging theory and practice' by enabling students to apply concepts to external organisations and challenges (Hizli Alkan and Sahin Ipek, 2023, 2).

Individual ARU Live Briefs are created based on six critical attributes, which allow employability aims to be focused on as well as ensuring Live Briefs are adapted to the requirements of different disciplines (Boz et al, 2021). These critical attributes are:

1. **Inclusivity** – integrated in compulsory modules to ensure all students participate and gain valuable skills and knowledge to support career readiness.
2. **Externality** – designed in collaboration with professional partners who provide feedback to students at the end of the Live Brief.
3. **Currency** – based on current, real-world challenges faced by the external professional partner and relevant to the module.
4. **Meaningfulness** – fosters independent, professional-mindedness among participating students.
5. **Impactfulness** – assessed as part of the module and meets learning outcomes.
6. **Mutual benefit** – creates value for both students and partner organisations.

I currently work as an Academic Employability Consultant and work across the institution to support teaching staff to integrate employability into degree programmes, primarily through Live Briefs. Before joining the Employability Service, I was a Senior Lecturer Practitioner in Education and a Course Leader for the BA Primary Education Studies degree at ARU. Coming from a higher education background allowed me to understand the experiences of academics working towards further integrating employability into courses. Working as a

third-space professional (Whitchurch, 2008), allows me to navigate the space between teaching and employability service colleagues.

Approach

Following Yin's (2018) approach, this single case study examines in detail the introduction of Live Briefs in a newly formed School. The leadership team of the newly formed School of Agricultural, Animal and Environmental Sciences at ARU Writtle wanted to introduce Live Briefs across the portfolio of undergraduate degrees following the merger. Introducing Live Briefs would provide a consistent employability experience for students based on the needs of these land-based disciplines.

As a first stage, continuing professional development (CPD) sessions were provided for the senior leadership team and then teaching staff about Live Briefs. Sessions included discussing how employability was currently integrated into degrees and the rationale and examples of Live Briefs from elsewhere in ARU.

Next, teaching staff audited modules and identified suitable modules for Live Brief integration. This stage required reviewing module learning outcomes and assessment tasks to see if they were adaptable for including a Live Brief.

After this stage, professional partners were identified to collaborate on Live Briefs. These professional partners were commercial and third-sector organisations. Mostly, these professional partners came from the external networks of teaching staff. Professional partners were then invited to co-create the Live Brief for students with teaching staff to ensure the needs of students, the module and professional partners were met.

Finally, Live Briefs were then delivered across the academic year 2024-25. For example, first-year Animal Management students worked with For Tigers, a UK-based charity supporting the welfare of captive tigers in Thailand. Students carried out an audit of the charity's website and social media channels. They focused on evaluating the charity's digital presence and proposed changes to increase visibility and donations. A recording and further information about this Live Brief can be found here.

Outcomes

Introducing Live Briefs into a range of land-based undergraduate degrees led to some positive benefits for students, staff and professional partners. By the end of the first year, 11 Live Briefs were delivered at Levels 4, 5 and 6 in disciplines ranging from agriculture to equine physiotherapy; 373 students had participated in a Live Brief and developed experience of working with those in relevant industries to help develop the skills needed in future careers. Students reported their enjoyment of the Live Briefs, which provided them with an opportunity to apply their skills and knowledge to an external real-life issue. Teaching staff embraced the opportunity to try a different teaching approach, which built on their pre-existing relationships with industry partners. Professional partners received useful insights from participating students, which also helped to raise awareness of partner organisations.

With higher education institutional mergers potentially increasing across the UK sector, the approach used in this case study demonstrates a route for implementing employability initiatives across newly merged institutions. The adaptability of the ARU Live Brief approach enabled implementation in a new context by adapting to institutional and disciplinary cultures. Furthermore, co-creating Live Briefs with teaching staff ensured that Live Briefs were developed to meet the needs of disciplines and students. This case study has demonstrated the transferability of Live Briefs to other institutions by focusing on the critical attributes of Live Briefs to ensure the projects fit and support different courses.

Next steps include expanding Live Briefs into postgraduate taught provision as well as exploring opportunities for interdisciplinary learning and working by drawing together students from different disciplines across the university to work on a single Live Brief.

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Embedding sustainability for professional development through entrepreneurship education: developing students for a sustainable future

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Background

Global sustainability challenges are driving significant shifts across the UK labour market, where the demand for green skills is rapidly intensifying. The UK Government's Green Jobs Taskforce forecasts that the transition to a net-zero economy could create up to two million green jobs by 2030 across all sectors (Department for Business, Energy and Industrial Strategy [BEIS], 2021).

The UN Sustainable Development Goals (SDGs) establish a clear mandate to prepare learners to bridge this skills gap. SDG 4.7 calls for learning that equips students with the knowledge and skills required to promote sustainable development (United Nations, 2020). Likewise, SDG 8.3 emphasises entrepreneurship, creativity and innovation as a key enabler of inclusive and sustainable economic growth. This positions education around both sustainability and entrepreneurship as highly important for future employability.

Yet, there is a gap in robust studies exploring the extent to which sustainability and entrepreneurship education can be deliberately integrated to enhance students' development and career readiness within a UK context. This case study is the beginning of a project that aims to directly address that gap. Our small preliminary study suggests that entrepreneurship education may be an important vehicle that can support the development of student sustainability competencies. We are lecturers in entrepreneurship, teaching a range of undergraduate, postgraduate campus and postgraduate online modules. Like many institutions, in recent years our university has moved towards a strategy and vision with sustainability at its heart, and as part of this, our programmes and modules began to embed sustainability into teaching and learning. One of our core entrepreneurship modules was redesigned and renamed 'Business Planning and Sustainable Entrepreneurship', with learning objectives aiming to support students to develop their knowledge and skills around business plan creation for a new sustainable business venture, aligned with the UN SDGs. In the first year of delivering this enhanced module, we observed that the sustainability aspect seemed to fit very well indeed with the teaching of entrepreneurship and we were curious to investigate this synergy further.

From a practical perspective, experimentation and experience-based pedagogy-focused (Fayolle, 2013) entrepreneurship education lends itself to practical activities and practical applications (Gielnik et al, 2020), such as: business model and business plan creation, market development activities, pitching activities, strategic and operational planning, financial analysis and planning, and new product development and innovation initiative development in aid of competitive advantage. Entrepreneurship teaching and assessment practices typically utilise problem-based, action-based and experiential learning strategies

(Hägg and Kurczewska, 2021, 22) and, in the classroom, these can be characterised by an emphasis on application of concepts through practice, critical self-reflection, groupwork and strong links to skills and employability. Of course, entrepreneurship education is not the only discipline to make use of these techniques, but these elements are certainly core to any entrepreneurship educator's toolkit.

We take on the responsibility as educators for helping to ensure that students are not only aware of the UN SDGs, but that they can acquire the knowledge and skills to act upon them throughout their lives and future careers. Indeed, scholars argue that there are several student sustainability competencies that can be developed through higher education programmes of study; these are: systems thinking, futures thinking, values thinking, strategic thinking, interpersonal competence, problem solving competence and implementation competence (Brundiers et al, 2021; Wiek et al, 2011).

The concept of sustainability, and the grand sustainability challenge that confronts society, is broad, but as we explored the links between entrepreneurship education and sustainability further, we started to hypothesise that the knowledge, skills and practices that students develop and experience in entrepreneurship education could be transferable and could be employed by students to deal with the myriad complex sustainability issues that they may encounter in the future. Current concerns about ethics and neoliberal market capitalism linked to the entrepreneur (Hägg and Kurczewska, 2021), may mean the place of entrepreneurship education is beginning to be questioned, so it is important that educators respond to these pressures through showing the value of this type of education in dealing with grand societal challenges. There is already a positive relationship between entrepreneurship education and the development of human capital and positive entrepreneurial outcomes (Martin et al, 2013), and we therefore wanted to do some initial exploration as to whether entrepreneurship education could contribute to the development of human capital associated with positive sustainability outcomes.

As universities respond to national skills priorities and the imperative to deliver impact aligned with the UN SDGs, this work offers the timely beginnings of a study with significant potential future for expansion and sector-wide influence.

Approach

We set about investigating the role of enterprise and entrepreneurship education in the development of student knowledge, skills and practice for sustainability. The first phase involved gathering some initial data from academics to gain their insights and perspectives to the following research question: What are the current practices, successes and challenges in enterprise and entrepreneurship education linked to developing students' sustainability competencies?

We ran four focus groups with higher education institution (HEI) educators involved in entrepreneurship teaching. There were 10 participants altogether, who were carefully selected as experts in their respective fields with significant experience in enterprise and entrepreneurship education. Participants were from five different UK institutions and one

EU-based institution and represented a deliberately diverse range of disciplines, including business and management, marketing, environmental sciences and law.

Participant	Role
E1	Lecturer, Department of Management, UK HEI
E2	Lecturer, Department of Environment and Geography, UK HEI
E3	Lecturer, Department of Environment and Geography, UK HEI
E4	Professor, Department of Law, UK HEI
E5	Assistant Professor, Department of Economics and Business, EU HEI
E6	Lecturer, Department of Management, UK HEI
E7	Interdisciplinary entrepreneurship & employability tutor, UK HEI
E8	Senior Lecturer, Interdisciplinary entrepreneurship & innovation, UK HEI
E9	Senior Lecturer, Department of Management, UK HEI
E10	Lecturer, Department of Management, UK HEI

Table 1: Entrepreneurship educator participants

During the focus groups, discussions focused on four broad areas in relation to the way in which sustainability was embedded (or not) into their entrepreneurship teaching: the extent to which the sustainability competencies (Brundiers et al, 2021; Wiek et al, 2011) were part of their entrepreneurship teaching, successes they had achieved, challenges they had encountered and plans for the future.

We chose the focus group methodology to help benefit all participants from the sharing of practice and to aid the overall generation of insights through group discussion. We were careful during the discussion to encourage a range of viewpoints, to avoid groupthink.

Following the focus groups, we conducted a thematic analysis of the 48,000 words of data collected, using NVIVO. Initial coding was undertaken by two researchers to identify, cross check, analyse and agree the themes and narratives from the discussions, which were documented in a coding tree format. We paid careful attention to points of disagreement or consensus, to take advantage of this strength of the focus group method (Breen, 2006; Saunders et al, 2016).

Outcomes

This exploratory study has helped us gain some initial insights into the role entrepreneurship education could play in the development of sustainability competencies and has helped us identify further areas for investigation.

Competencies

The educators who participated in the focus groups generally agreed that most of the sustainability competencies (Brundiers et al, 2021; Wiek et al, 2011) are commonly covered in entrepreneurship education, and this was the case even where the learning objectives were not explicitly linked to sustainability.

In particular, problem solving competency was strongly represented with students, for example, being asked to create a value proposition for their new venture that would solve a problem for consumers or society as a whole.

Systems thinking competency was also well represented due to the need for students to think about the macro environment for their proposed new venture.

Educators agreed that interpersonal competency was an important element in their teaching, with teamwork often incorporated into workshops, seminars and assessments. Participants observed, however, that students increasingly struggle with this aspect, perhaps as a lasting effect of the Covid pandemic, or an over-reliance among young people on digital methods of communication.

Values thinking and futures thinking were seen as very important for both sustainability and entrepreneurship, but for reasons of scope and structure, these were not always explicitly developed within entrepreneurship modules. Of all the sustainability competencies, these are the areas that may present the greatest opportunity for future integration.

Successes

Tutors reported that they felt the students' development of competencies could be seen most evidently through the workshops, groupwork and assessments they produced and through the achievement of the module and programme learning objectives.

Several academics reported student success through the winning of entrepreneurial competitions, products developed and businesses launched, though these were not always necessarily focused specifically on sustainability.

Overall, tutors felt that student awareness of sustainability and linked issues was usually quite developed and that student interest in sustainability has increased in recent years.

Generally, students provide positive feedback on the entrepreneurial modules, stating that although they can find collaboration challenging, they enjoy the practical nature of the learning and can see the value in this type of experiential learning for future employability. Indeed, tutors reported high employability levels among their students post-graduation.

Participants also noted that additional competencies are a focus in entrepreneurship education, which may be equally important to finding sustainable solutions in the future, including creativity, innovation and leadership.

Challenges

Academics identified several challenges in relation to this area of study.

Firstly, it was suggested that university structures and norms may be constraining innovative teaching practice linked to entrepreneurship and sustainability. For example, rigidity around the size and scope of credit bearing modules and departmental structures may pose an obstacle to the interdisciplinary requirements of entrepreneurship and sustainability, and to some of the creative teaching ideas tutors may like to enact.

As described earlier, it was reported that the development of interpersonal competencies are challenging for many students and this area requires further focus and innovation to truly support student development.

As well, although prior student knowledge of sustainability has increased in recent years, this should not be over-estimated, particularly with very large or diverse cohorts. Furthermore, we should be realistic about what a single module concerned with sustainability can do, compared to a full programme of study with sustainability at its heart. Participants suggested we should challenge ourselves on whether enough is genuinely being done to develop and measure sustainability competencies. Furthermore, there was a mixed picture on whether learning outcomes and module descriptors explicitly mentioned sustainability and the SDGs, which would seem to be an important factor in determining whether current teaching practices are truly configured in a way that is conducive to the development of sustainability competencies.

Future practice

There was a general perception that sustainability competencies can and should be developed in other subject areas but that entrepreneurship education may simply be slightly ahead at this time.

Tutors commented that different, new and innovative educational strategies may be needed to fully integrate the sustainability competencies into entrepreneurial education. This could include even greater use of live projects and a work-based focus plus the development of an innovation toolkit for use across programmes of study. This would also require the alignment of sustainability competencies with future career knowledge, skills and behaviours.

Structural changes may also be essential, to ensure a further focus on entrepreneurship and innovation at university level and to embed an extracurricular educational strategy unconstrained by module structures and assessments.

Conclusion

The initial insights described above have helped reinforce our hypothesis that entrepreneurship education could play an important role in the development of sustainability-based student competencies. Further research is now needed to gain empirical evidence in answering questions about the extent to which entrepreneurship education can be a vehicle for the development of sustainability among students. The research questions should involve looking at the extent to which programme and learning objectives are mapped to the sustainability competencies and measuring the impact of the various pedagogical methods used in entrepreneurship education in achieving the development of the desired competencies.

Furthermore, more representative data should be gathered from a greater sample of entrepreneurial educators to provide more representative evidence. And a similar data gathering exercise should take place with entrepreneurship students from a range of disciplines and locations to gather their perspectives with sufficient data to be able to draw empirical conclusions.

Overall then, our hypothesis and initial evidence suggests that entrepreneurship education may constitute a powerful and relevant (Loi et al, 2022) tool in which sustainability and the SDGs can be communicated to students, and experienced by students, in a way that lets them develop knowledge, skills and motivation (Oosterbeek et al, 2010) to act, that will be useful and applicable throughout their future endeavours, and will help contribute to the achievement of the SDGs. We look forward to gaining further insights in the future to be able to draw empirical conclusions in this area.

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Holistic model for AI-embedded futuristic skills and employability: implications for social enterprise environments

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Context

Skills connected to artificial intelligence, big data, technological literacy and creative thinking have been identified as among the top skills expected to be in increased demand by 2030 (World Economic Forum, 2025). AI and a technology-based labour market revolution is likely to reshape the enterprise environment, which may call for enhancing or aligning graduates' employability skills. This technological shift influences higher education more than ever as the academics are increasingly focusing on digital and technology skills and, without accurate predictions, future labour market needs. These dynamic and evolving needs can be addressed by equipping students with AI-based skills for the future enterprise environment.

The labour market is likely to rapidly shift due to AI. Tasks and businesses may embed AI in unique ways to enhance efficiency and productivity (Deloitte, 2025). It is anticipated that AI can support in solving societal challenges, such as ill-health and environmental degradation (Jung, Srinivasa and Desikan, 2025). Recent developments have already begun indicating how the labour market is being reshaped. AI-human partnerships, AI for social science and social science for AI, research into AI for social work and social work education, AI strategy in the legal sector, and the influence of AI in the fields of psychology are being focused on (Asfahani, 2022; Kramar, 2024; Research in Practice, 2025; the Law Society, 2024; Williams and Lim, 2024; Xu et al, 2024).

Although AI is often perceived as a purely technological field, its impact on individuals and society calls for meaningful contributions from philosophers, psychologists, sociologists and legal experts. These disciplines help ensure that the use of AI remains human-centric and ethically grounded. As a result, social scientists can play a crucial role in shaping and researching AI. To keep pace with the rapid evolution of AI, graduates in the social sciences must acquire new skills that enable them to engage with this transformative landscape.

The changing landscape requires embedding AI in teaching and learning. Integrating AI in the social sciences is notably more challenging than in business or computer science. AI integration goes beyond technical knowledge. Theories of perception, social cognition, discrimination, trust, leadership and innovation are being reshaped by the emergence of large language models, which affect interpersonal and group dynamics in unprecedented ways. Therefore, integrating AI into social science is as complex as understanding human behaviour itself, as it may alter the dynamics of social life. In this context, social science graduates must develop a sense of critical and responsible AI use. Furthermore, AI-related employability skills should prepare graduates to navigate the future labour market and identify complex nuances of AI use that may impact societal wellbeing.

Purpose

This study was conducted at a school of social science in a British university. The purpose was to explore the existing state of embeddedness of artificial intelligence (AI) in a social science programme to enhance graduate employability.

Institutional background

AI was at an emerging stage at the time of research. The broader policy context played a vital role in shaping higher education and steering efforts to integrate AI. The school of social science had a focus on embedding AI in the curriculum and was making efforts mainly focused on assessments and the safe and ethical use of AI. The efforts were supported by AI policy and continual discussions in higher-level meetings, conferences, increased research and delegating the responsibility to embed AI to academic integrity.

Methodology

Ethics clearance: ethics approval was sought from the UK-based university's ethics committee (Ethics approval No: 1900541). Ten experts from the school, including a strategy lead, academic staff and employability experts, participated in the study. Participants were involved following the research process and procedures such as obtaining informed consent. The names of the school and ethics committee have been anonymised.

Methodology: semi-structured interviews with 10 experts were conducted from the school of social science. The participants included academic staff, researchers, members of the employability team and strategists. This method was chosen because it allowed deeper exploration of multiple perspectives as well as individual experiences and perceptions, particularly valuable given the varied pace at which experts are adopting and engaging with AI technologies.

Key findings: six themes emerged as a result of inductive thematic analysis (Braun and Clarke, 2019). The initial themes were strategy, academic practice, knowledge and attitude, challenges, inclusion/exclusion in AI, and AI and employability. The themes were further merged into four broad themes: strategy, challenges, opportunities and matters of inclusion and equity.

Findings

Strategy: participants talked about a need for sectoral approaches and discourse within the institution**.** A comprehensive, explicit and clear strategy connecting the stakeholders and higher education institutions was deemed essential for the equitable employability skills of the graduates. Senior participants had a systems perspective while staff delved more into the organisational perspective. Furthermore, the responses indicated that the strategy to embed AI in the curriculum requires reviewing the curriculum and balancing AI-based learning with soft skills.

Challenges: both internal and external challenges served as barriers to adopting AI. The main challenges involved concerns about ethics and academic integrity in using AI. All the employees were aware of the limitations and risks, such as hallucinations, in using AI. The cautious approach was reflective of their consideration of evidence-based approaches and critical thinking. This supported a responsible attitude in adopting it and also led to a reluctance to encourage students to use it, mainly to prevent their overreliance.

Opportunities: a few academic staff and members of the employability team recognised the opportunities associated with using AI. They mentioned students can use it creatively and enhance their CVs but, again, a careful and ethical approach remained at the core. They also recognised AI use in interview preparation and its role in CV writing. However, they emphasised balancing soft skills with the use of AI skills for graduate employability. Both the strategy and employability team highlighted a need to embed AI in the academic programme across the school for equitable student employability outcomes. Furthermore, the changing landscape is an opportunity to connect with employers and explore how they prefer graduates to use AI, leading to academia-industry linkages for a discourse on AI-based pedagogical approaches in HE.

Matters of inclusion and equity are key concerns: matters related to inclusion and equity require sectoral attention as participants said that differences between universities could lead to competition, requiring a sectoral approach. This again indicates the likelihood that graduates' differences in AI-based employability skills could be the result of such differences and so equity and inclusion require attention through the wider sectoral approaches.

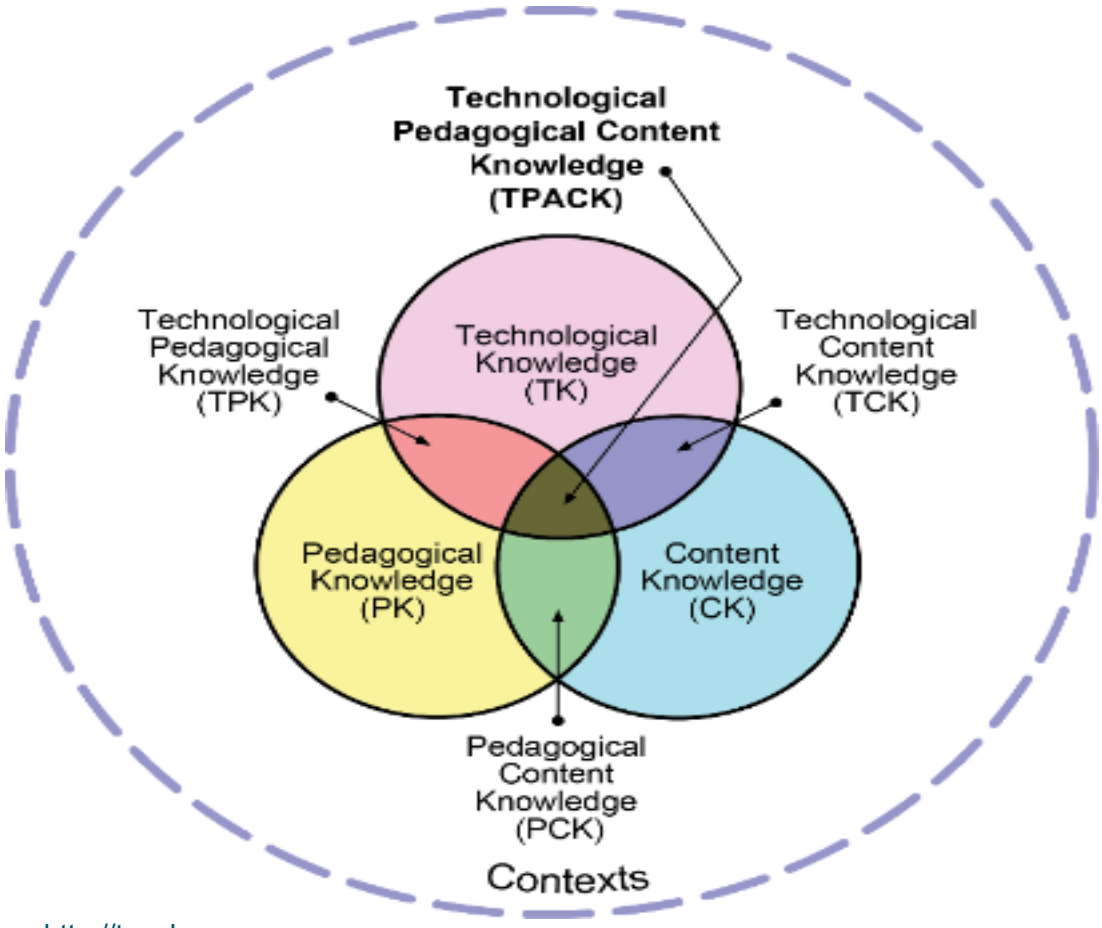
Participants reported that not all the students are equally ready for AI-based employability skills for a future enterprise environment: Findings indicated that not all students and staff have used AI. Students received varying levels of technological support, which may yield different literacy levels. Equitable access to technologies and premium versions is essential to enhance equity. Moreover, it was found that academic staff are likely to use AI differently depending on their own educational and professional backgrounds, which could further exacerbate differences in the development of AI-based employability skills among graduates.

Holistic model: findings indicated multiple factors that influence the integration of AI in the social sciences, such as the labour market, higher education context, and person-specific variables. Moreover, a focus on philosophy and AI can meaningfully contribute to critical thinking through an ability to analyse information with emotional intelligence, and acceptance of AI as a tool while considering ethical grounds, instead of over-reliance. A holistic model to develop AI-integrated employability skills should consider a philosophical understanding of working with AI, while taking into account the existential and humanistic perspective, values and readiness to learn in line with Ehlers (2024). The model can be applied and adapted to understand how stakeholders in academia use AI.

Viewing results from the lens of the TPACK model

The data also showed that some participants shared complex ideas in relation to integrating pedagogy, technology and content under the TPACK model (http://tpack.org). While most of the participants were familiar with effective prompting for quality content generation, some of the participants also shared a need to use AI for personalised learning, at the level of idea generation, and creative learning. Participants' ideas varied in complexity, which also indicated the possibility of their using AI depending on their expertise and understanding of how technology, pedagogy and content interact while using AI. This may also indicate that students might be developing differential levels of AI-based competencies for future employability. The study also identified a need for an in-depth exploration of teaching experiences of academics in relation to how they integrate the three components of the

TPACK model while integrating AI in teaching. With the data in hand, it may be said that some of the participants could reflect on integrating the three components by mentioning its creative use to enhance learning.



Source: http://tpack.org

Conclusion

Findings indicate equitable development of AI-based employability skills is challenging due to existing fragmented approaches. Ethics, academic integrity and the responsible use of AI are essential employability skills for social science students. However, a strategic focus to support its equitable and responsible use (while considering holistic approaches that highlight influencing factors and the roles of stakeholders, AI-integrated teaching pedagogy, the philosophy and use of AI, values, and individual traits such as critical thinking and emotional intelligence), is crucial for preparing graduates for a future enterprise environment. Future development in AI is unpredictable, therefore, social science graduates should be equipped with an ethical and philosophical understanding of AI use and its implications for larger society. This will allow them to catch up with the fast pace of technological evolution while maintaining an ethical mindset. This case study highlighted both the challenges and opportunities of integrating AI, emphasising the need for collaboration, consultation, shared practices and updated teaching pedagogy.

Practice recommendations

1. A wide orientation to ethics, ethical guidelines and practical examples related to ethical AI use is important for developing confidence in stakeholders. This may also enhance readiness to integrate AI.
2. Equity and inclusion in technology support, and access to premium versions of AI, are necessary for equitable employability outcomes. Infrastructure support and strategic approaches could help address matters related to equity at the sectoral level.
3. A sectoral framework and shared strategies may lead to equitable approaches for developing AI-based employability skills.
4. Open discourse on using AI is essential for building trust and ethical adoption of AI in academics.
5. Employer engagement may identify how employers are using AI and the ways they expect graduates to be able to use it.
6. Adoption of AI should be based on a philosophy of knowledge, ensuring graduates are well equipped to critically analyse the consequences of knowledge gained through interaction with AI.
7. Soft skills such as resilience are equally important and should complement AI-based employability skills.

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Work-integrated learning

Embedding work readiness in creative higher education: a national collaborative approach

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Background

In recent years, there has been growing sector recognition of the need for creative graduates to be better supported in navigating complex, evolving employment landscapes (Bridgstock, 2011; Römgens et al, 2019). As freelancing, hybrid work, AI disruption and portfolio careers dominate creative employment, higher education (HE) institutions are challenged to deliver employability, enterprise and entrepreneurial education that is inclusive and industry relevant. Yet employability interventions often neglect the creative sector or apply models unsuited to its nonlinear and precarious nature (Daubney, 2022; Homeshaw, 2016).

In response to this gap, the AGCAS Creative Industries Task Group (CITG), a voluntary cross-sector working group made up of 10 individuals, developed a national programme of collaborative outputs to support the creative industries across the full UK student population. The group spans traditional arts universities, Russell Group institutions and specialist careers services, with the aim of ensuring all students, regardless of discipline or background, are equipped with industry-aligned skills for employment in the creative economy. The CITG leads the engagement of a wider Community of Practice (CoP) of more than 200 active contributors.

The CITG's activities have been underpinned by the development of a **Creative Careers Toolkit** (AGCAS CITG, 2024), launched in 2023 and continuously updated through co-created content with students, staff and employers. The toolkit aligns with theories of work readiness education (Bridgstock, 2011; Turner and Winterton, 2019) and inclusive employability frameworks (Ng, 2022). It is also the backbone to a new QAA collaborative enhancement project on work readiness education (WRE) for creative industry employment.

Approach

The AGCAS Creative Industries Task Group (CITG) approach is intentionally multi-layered and participatory, combining national sector intelligence with grassroots practitioner expertise. We first identified a major gap in consolidated, tailored resources to support creative careers education across UK higher education. In response, and through extensive cross-sector consultation as part of online workshops hosted by CITG, we co-designed the Creative Careers Toolkit, a freely accessible, evolving digital hub (hosted via Padlet).

Members of CITG regularly add to the toolkit and participants in the wider CoP can submit materials for inclusion through our mailing list. The toolkit includes teaching resources, employer insights, interdisciplinary learning activities, inclusive guidance and assessment tools, all curated to support students navigating creative employment pathways.

To ensure sustained sector engagement and resource refinement, we established a thriving CoP (JISCmail, 2024), which now includes more than 200 active contributors. As a task group, we meet monthly and crowdsource practice-based insights from our CoP and networks, to co-develop content for the toolkit, making it a truly national, practice-led resource.

In parallel, the CITG has significantly contributed to the academic and practitioner literature on employability in the creative industries. We have published sector-leading reports on graduate outcomes (Whitefoot, 2024; Firth and Whitefoot, 2023b, 2023a; Robertson and Whitefoot, 2021; Burtin and Halfin, 2025 [forthcoming]), and our research has informed national blogs (THE Campus, 2024) and international higher education commentary (Conroy and Firth, 2024; Firth and Gratrick, 2024; Sharland and Slesser, 2024). These publications have helped shape discourse on inclusive employability and set benchmarks for practice.

To extend our reach and influence, the CITG has also led national workshops, institutional events and Advance HE symposium sessions, demonstrating how creativity, enterprise education and interdisciplinary collaboration can be embedded into employability curricula (Firth, 2025).

The group undertakes this work by meeting virtually six times a year for two hours, with clear agreement on actions for collaborators to take forward. Our work on events and publications typically occurs offline, in between meetings, allowing for time spent together to focus on decision-making, action-planning and horizon scanning.

Looking ahead, the group is currently delivering a QAA Collaborative Enhancement Project (2025–2026) titled *Enhancing Work Readiness Education (WRE) for Creative Industry Employment*. Though still in progress, this project is building three core outputs: a sector-specific WRE framework, inclusive employability guidelines and a curriculum toolkit. These future-focused resources will support diverse learners, including neurodivergent, international, carer and distance students, and will help scale the impact of the CITG's model even further. The development of this work began in January 2023, with iterative development embedded via our national community and practitioner partnerships.

Outcomes

The impact of our national, collaborative approach is demonstrated through both measurable reach and meaningful sector engagement.

+ The Creative Careers Toolkit has received over 3,000 unique users and more than 5,000 total views since its launch (AGCAS CITG, 2024).

+ Content from the toolkit has been adopted or adapted by over 40 UK institutions, ranging from Russell Group universities to specialist arts providers.
+ The CoP has grown to 200+ members, facilitating continuous knowledge exchange and directly influencing national employability strategy via AGCAS and Creative UK.
+ The toolkit has been referenced in multiple institutional TEF submissions and Access and Participation Plans, evidencing its role in supporting inclusive employability.
+ Our nine plus publications, ranging from sector reports to pedagogic thought pieces, have helped frame the creative industries' employability challenge and spotlight solutions that are co-created, scalable and inclusive.

Although still ongoing, the QAA WRE project is set to further cement the CITG's influence, with early feedback from pilot institutions already indicating a shift in how creative employability is conceptualised and taught.

Key messages

+ Co-creation and community-led design are powerful levers in addressing national gaps in employability support, particularly within disciplines characterised by precarity or non-linear career pathways.
+ Inclusive, sector-specific frameworks – which account for freelancing, AI disruption, and entrepreneurship – are critical to ensuring all students can succeed, regardless of background.
+ Cross-sector collaboration between academic staff, careers services, employers and students enhances the relevance and sustainability of employability education.

This work presents a scalable model for other disciplines with similar challenges, such as sports, humanities and technology start-ups. Institutions seeking to embed inclusive employability into their curricula can adopt this model by combining a co-created toolkit, a vibrant community of practice and a research-led framework designed for flexible, equitable implementation.

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Using digital showcase portfolios to demonstrate skills and achievements

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Background

In recent years, employers' expectations for digitally literate graduates have grown rapidly, driven by digital transformation across industries and national employability strategies. These wider developments have highlighted the need for higher education to equip students with skills to communicate and showcase achievements beyond text-based resumes. As part of this global shift, students increasingly require guidance on creating digital portfolios that capture both technical and reflective skills in an engaging and professional format. Students traditionally rely on static, text-based CVs or resumes to present their skills to employers. These conventional approaches do not always capture the breadth of students' achievements, particularly in practice-based or technical disciplines. In the context of the pervasive digital economy, there is a growing need to enhance students' visibility and enable them to pitch their capabilities more dynamically. Research in higher education has demonstrated that digital portfolios can improve both employability and engagement (Mitchell et al, 2021; Mahasneh, 2020; Gutiérrez-Santiuste et al, 2022; Guàrdia, Maina and Mancini, 2021). However, there remains a gap in institutional practice: while careers centres often advise on CVs, little formal guidance is given to help students create digitised showcase portfolios.

At Queen Mary University of London, the School of Electronic Engineering and Computer Science initiated a project to address this gap. The objective was to support students in developing digitised, visual, dynamic portfolios that demonstrate their knowledge, skills and achievements in a more compelling way, thereby strengthening their employability and confidence. Beyond employability, digital portfolios have also been recognised as an effective tool for continuing professional development (CPD). They allow learners and professionals to record and reflect upon their achievements over time, track progress against professional competencies, and provide evidence of lifelong learning. This broader perspective highlights how portfolios can continue to support graduates once they enter employment, offering an adaptable and sustainable means of career-long development (Gordon and Campbell, 2013).

Approach

A Digital Portfolio Resource Centre was established on QMPlus (the institutional VLE) to provide structured support for students. The centre included:

+ guidance on digital presence and online visibility
+ templates tailored for different types of portfolios and disciplines

+ step-by-step tutorials on portfolio creation, including editing video content
+ feedback mechanisms so students could seek individual advice
+ competitions where students submitted portfolios for recognition and awards.

Each of these components was carefully designed to respond to common challenges students face when creating digital portfolios. For instance, the guidance resources not only raised awareness of digital identity but also included practical examples of how employers perceive different formats of presentation. Templates were discipline-specific, meaning that an engineering student could focus on technical projects, while a humanities student could foreground writing samples, reflective narratives, or community engagement evidence. The tutorials provided hands-on guidance, breaking down what many students initially perceived as a daunting technical task into accessible, step-by-step stages. Feedback opportunities ensured that the process was iterative rather than one-off, and the competition element added motivation and recognition, creating a culture where students valued digital portfolio development as part of their academic journey. Table 1 summarises the project timeframe and staff involvement, designed to help colleagues replicate the model:

Phase	Description	Duration	Staff involved
1. Initial concept	Identified student employability needs and digital skills gaps	3 months	1 project lead, 2 research assistants
2. Resource design	Developed templates, tutorials and support materials	3 months	1 project lead, 2 research assistants
3. Pilot implementation	Tested with students and gathered employer feedback	4 months	1 project lead, 1 lead from each school and employers
4. Evaluation and refinement	Integrated feedback and improved tutorials	2 months	1 project lead, 2 research assistants
5. Full launch	Rolled out across multiple programmes	Ongoing annually	Cross-school academic and careers teams

Table 1. Project development phase

The project actively engaged both undergraduate and postgraduate students across a variety of programmes, encouraging them to reflect on their achievements and tailor their portfolios to their own personal career trajectories in a manner consistent with CPD principles. Co-creation was a central element: students were encouraged to critically select their own artefacts, from coursework outputs to extracurricular activities, and to contextualise these with personal reflections linked to their future professional goals. This process not only helped students build a narrative of growth and achievement but also ensured that they demonstrated evidence of ongoing learning and self-assessment in ways that align with CPD frameworks. Staff played a facilitative role, ensuring that technical and

pedagogical guidance was accessible, while still leaving creative ownership in the hands of the students.

To evaluate effectiveness, three graduate candidates participated in simulated job interviews with 19 employers, who assessed the portfolios as part of the recruitment exercise. This was a particularly valuable method because it exposed the portfolios to authentic employer scrutiny, providing insights that were both practical and externally validated. Employers were asked to evaluate clarity, confidence, technical and professional skills, and overall employability.

The project ran over several academic years, beginning with exploratory pilot work to identify key needs and gradually evolving into a permanent institutional resource. The staged implementation allowed for the refinement of resources, incorporation of student feedback and steady expansion of the initiative across modules and programmes. By embedding it in the wider curriculum, the project moved from being an optional add-on to a recognised element of professional preparation at the institution.

Outcomes

The project had measurable and positive impacts on both students and staff, with short-term and long-term impacts on employability and confidence. Institutional outcomes also aligned with wider objectives to embed employability and lifelong learning within the curriculum. The findings demonstrated how digital portfolios can serve as both assessment and CPD tools, supporting reflective practice and communication skills valued by professional accreditation bodies.

1 Employability and career outcomes

Students reported that the portfolios enhanced their visibility in the job market. One graduate reflected:*"It fully demonstrated my strengths to my current supervisor and made me stand out from the other students"* (Qianhang Feng, QMUL graduate). External validation was provided by a **sample testing exercise with 19 employers,** who reviewed digital portfolios created by three graduate candidates in simulated job interviews. The results indicated that candidates with digital portfolios were rated more favourably on criteria such as **clarity of presentation, confidence and professional skills** compared to traditional resumes (see Figure 1). These findings suggest that the value of digital portfolios lies not only in their content but also in their ability to engage employers in a richer and more holistic appreciation of candidates' skills. By integrating multimedia evidence, students were able to demonstrate attributes such as teamwork, leadership and creativity that are often difficult to capture in a static CV.

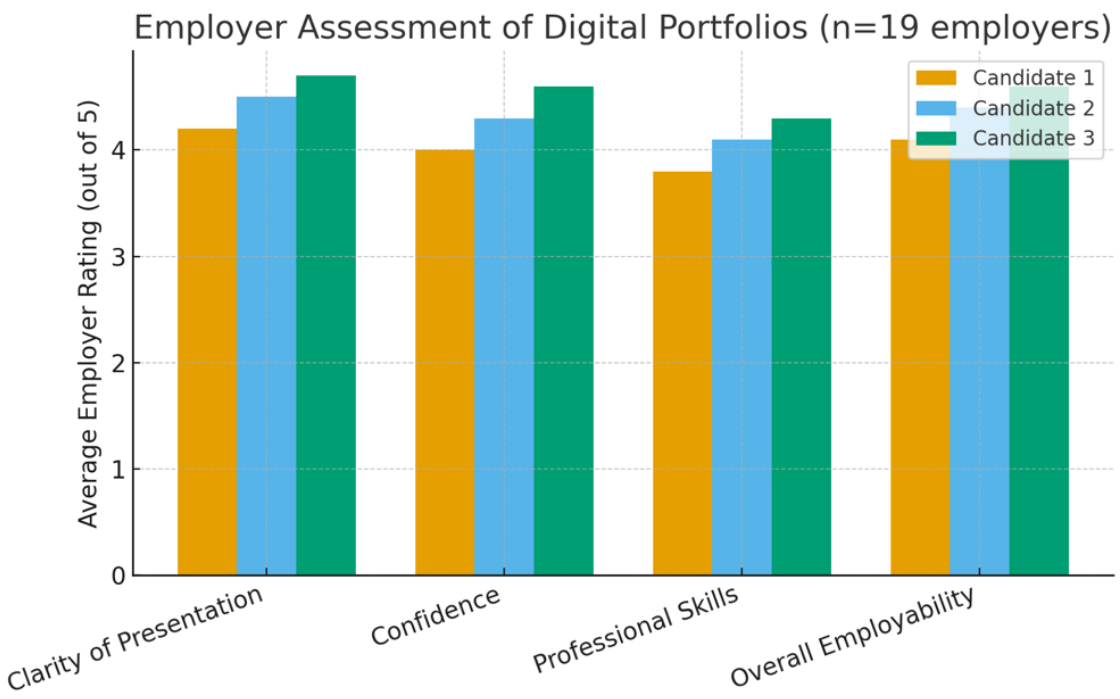

Figure 1. Employer assessment results (n=19) of digital portfolios produced by three graduate candidates in simulated job interviews.

In addition, follow-up interviews with students revealed that the exercise encouraged them to think more strategically about how to present themselves in future applications. They reported a greater sense of preparedness for assessment centres, professional networking events and even academic conferences. Several participants noted that they adapted their portfolios after the simulated interviews to better highlight transferable skills, indicating that the exercise fostered ongoing development rather than being a one-off showcase.

2 Engagement and reflection

Students valued the chance to review and present their academic journey. *"It was a great opportunity to review my four years of undergraduate experience"* (Xuanyu Chen, QMUL graduate). The act of reviewing and curating material offered students a structured means of connecting individual modules, projects and extracurricular activities into a coherent professional narrative. This reflective practice deepened their understanding of their own learning trajectories and highlighted how their skills could be transferred to professional and lifelong contexts in line with CPD expectations. The iterative nature of the portfolio process provided tangible evidence of growth over time, reinforcing habits of reflection and forward planning that are essential for sustained engagement with both past experiences and future professional aspirations.

Furthermore, students discovered new ways of articulating their achievements to a broader community. For example, one student explained: *"I often wanted to share my undergraduate studies with my parents, who do not have a background in computer science. After I made the digital showreel portfolio and shared it with them, they instantly understood what I have studied and achieved at the university."*

3 Confidence and identity

Students frequently reported increased confidence:*"I realised how much I had already accomplished at the uni, and I have never been so confident"* (student feedback). The process of creating a portfolio served as an exercise in self-recognition and professional identity-building. By compiling and reflecting on their work, students recognised skills and milestones they had previously overlooked. This enhanced confidence was rooted in evidence of achievement. It enabled students to present themselves more assertively in academic and professional contexts, reducing anxiety in interviews and presentations. Importantly, the sense of identity that emerged was both personal and professional, as students articulated not just what they had done but who they were becoming as practitioners in their chosen fields.

Several students also indicated that the portfolio process encouraged them to set higher goals and pursue opportunities they might previously have considered out of reach. By having a tangible record of their capabilities, they were emboldened to apply for competitive internships, postgraduate programmes and leadership roles within student societies. This suggests that the benefits of digital portfolios extend beyond employability into the broader realm of personal development and aspiration-setting.

4 Transferability and wider use

Colleagues also adopted the resource to showcase events they had organised, suggesting potential for staff as well as students. The project demonstrated that digital portfolios can be adapted across roles and contexts. For staff, they provided a mechanism to document teaching innovation, research dissemination and professional service, offering an alternative to conventional text format or annual review documentation. The adoption of portfolios by colleagues signalled a cultural shift, where digital documentation of achievement was valued not just as a student employability tool but as a broader institutional practice.

Importantly, several modules have now incorporated this approach directly into their assessment design. In these modules, students are required to produce a short video demonstration of their practical work, with the explicit expectation that the presentation should be comprehensible to both technical and non-technical audiences. This aligns with the professional requirement to "communicate effectively on complex engineering matters with technical and non-technical audiences," which is a core learning outcome for IET accreditation of taught engineering programmes. By embedding such tasks within portfolio development, the project ensured that students not only met academic learning objectives but also gained practice in addressing professional standards and accreditation expectations. The versatility of the approach suggests strong potential for transferability to other institutions.

Conclusion

Digital showcase portfolios have proven to be an effective bridge between academic achievement and professional visibility. By embedding them institutionally and aligning them with CPD and accreditation frameworks, universities can support graduates in

demonstrating competence, reflection and continuous professional growth. Sustaining this progress requires continued collaboration among academics, employers and professional bodies to ensure digital portfolios remain relevant, adaptable and impactful for lifelong learning.

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Work-related experiential learning (WREL) and the Living CV

Cooper, S and Lamb, R

The York St John University (YSJ) and Southampton Solent University (SSU)'s student demographics are such that students often have responsibilities outside of timetabled classes that impact their capacity for engaging with extra-curricular activities (ECA). The positive impact of ECA is arguable, and any impact is very much dependent upon the student demographic (Clark et al, 2015; Thompson et al, 2013). In addition, there is the muddying of waters relating to employability's position within the higher education (HE) curriculum, specifically relating to its relevance (Barkas and Armstrong, 2022; McCowan, 2015). Should we promote employability and integrate it into the curriculum, or should we focus on developing 'higher learning' in our students? It's this junction of thought that leads us to discussions relating to the role of the academic in the integration of employability: is it the job of the academic to embed employability in their curricula (no, according to Daubney, 2022), or is the role of HE to develop a sense of curiosity, open-mindedness and the soft- and applicable hard-skills ('higher' learning?) of each student in the HE environment?

The institutions are comparable with regards student demographics and this has shaped the background of both initiatives: our students are often the first from their family to go to university and are mindful of vocational purpose coupling with opportunities to innovate and iterate, as should be offered by their university education. Approaches involved collaborative working with academic colleagues, who were similarly mindful of this coupling with the outcomes, formed the shape of the case studies illustrated below. This then brings us to time commitment from academic colleagues. From empirical research, it would appear that different institutions have differing approaches to the prioritisation of employability: some academic colleagues have capacity built in their workload to support these initiatives, while others are perhaps relied upon to explore employability as a research subject and/or in addition to their workload.

Because the definition of employability is notoriously vague, it seems reasonable to establish a working definition and idiosyncratic application that is context specific to the higher education institution (HEI), at least while HEIs are in the unrelenting (for now) spotlight of the Office for Students (OfS) and the B3 conditions of student progression. YSJ and SSU are similar institutions in terms of size and student demographic (though SSU, with its coastal proximity, distinguishes itself from YSJ with maritime courses). For YSJ, the **work-related experiential learning (WREL)** initiative developed in 2023 has been designed to integrate skills development within modules that are external facing and hone career-readiness capabilities for students who do not have the capacity to attend sessions outside of their timetabled classes. In collaboration with the central careers and placement teams, WREL has involved the integration of live briefs, real-life briefs, guest speakers and panel discussions into the curriculum. An example of live-brief assessments is that of a third-year module within the York Business School, where the 'presentation' assessment was interpreted by the module leader as an opportunity for students to present to small businesses a strategy for their respective marketing communications. Students worked in

small groups and were each allocated a local business. They researched the business, met with the ‘client’, and then applied the learning, knowledge and skills iterated from earlier module-specific learning to present a new communications strategy.

An example of a real-life brief (and an effective initiative for larger cohorts) involves students producing work to weekly deadlines that then culminates in the summative assessment. Panel discussions can involve academics from other schools, graduates, students and external professional partners. Guest speakers are an asset to the student experience but, from a case-study perspective, a difficult one to recommend as it’s dependent upon the particular HEI’s budget (though its value to the student’s teaching and learning experience can’t be recommended enough). This is an approach that is not discipline specific: the work environment is pressured and requires adaptability in situations that don’t offer a 12-week deadline to ‘solve the problem’. WREL offers the opportunity to meet learning outcomes as well as develop self-management skills. Here, one might use the word ‘resilience’ but this appears a contentious term in certain circles. Instead, we will use the term ‘adaptability’: knowing that one must adjust, however subtly or dramatically, their approach to solving a problem.

WREL at YSJ will bear fruit in 2027’s graduate-outcome data from the OfS but, from empirical data, the integration of related initiatives has been interpretated positively by students, as reflected in the standard of assessment output and feedback. A vindication to WREL and its integration into curricula can be observed on an idiographic level: in 2024, a whole week in semester one was given over to employability activities in one school at YSJ. While there was a reach of 1,000+ students and an initial offer of 45 activities, lack of interest in sign-ups dropped that itinerary to 27 activities, of which there were 178 sign-ups (where students were able to sign up for more than one activity) and of which 12 activities had no more than five sign-ups. This echoes sector-wide observations, wherein students fail to recognise ECA as part of their learning (Clark et al, 2015).

Addressing similar challenges to YSJ, SSU introduced the Living CV in 2019, a learning gain tool that helps students redefine how they document their university experience. The initiative translates academic learning outcomes into career-focused language, providing an overarching framework for students to record their skills, experiences and learning gain from the first day of their academic journey.

The Living CV was created to bridge the gap between students' academic learning and the professional world, tackling the common issue of students failing to articulate the value of their education to potential employers. Initially developed in one academic department after a head of department noticed that third-year fashion students were not accurately reflecting their university experience on their CVs, the initiative encourages students to translate module learning outcomes into tangible CV outputs, making hidden learning explicit to themselves and future employers.

Following a successful departmental trial, the Living CV was strategically adopted by the university and rolled out to every department and programme.

Qualitative feedback in module surveys over a two-year period showed a surge in student engagement and appreciation of the learning gain their courses offered, leading to a building confidence in their own employability. Thematic analysis of data from focus groups and interviews further supported this, revealing that students found the Living CV's deconstruction of learning outcomes into CV-ready outputs more understandable and ‘useful’ than traditional academic language. It also helped them appreciate their degree as a holistic experience rather than a series of disconnected modules. In some areas, marked improvement in National Student Survey (NSS) scores, particularly around readiness to graduate and confidence in learning, were further testament to the initiative's success. This is consistent with survey data showing that students appreciated the sense of community fostered by the project and felt "reassured" that a network of people was invested in their success.

Another key barrier to engaging with ECA has been academics: those stakeholders not formally recognised as stakeholders in literature relating to employability, but who must deliver on present government policy and institutional benchmarks.

Academics can be perceived as a barrier to embedding employability when the government’s funding focus is on research as opposed to practice, an understanding from the OfS as to the contemporary role of higher education is established (as in: it is unreasonable to place the same B3 threshold across all regions), and equity in the application of the B3 threshold is considered. The implementation of the Living CV attempted to also address this, fostering a culture of ‘third space’ collaboration among staff. A study on the project's university-wide rollout highlighted the pivotal role of Living CV ‘champions’, who were drawn from academic departments, the central Learning and Teaching service, and the careers service. These champions worked across traditional boundaries to drive the initiative forward, acting as a catalyst for developing collaborative and social capital. The champions' roles provided opportunities for professional development and confidence building, as they embraced leadership opportunities and navigated cross-departmental partnerships.

The success of the Living CV project underscores the importance of clear and sustained institutional commitment. While some staff readily embraced the initiative, others expressed resistance due to competing workloads and a lack of perceived alignment with their formal job roles.

The Living CV project's journey, with its successes and challenges, offers a model for other institutions seeking to create a more connected and collaborative environment that directly addresses student employability. It is a positive addition to the university's suite of employability measures, empowering students to take ownership of their learning and enhance their self-belief. Similarly, WREL has facilitated a shift in perspective in key stakeholders, including academics, wherein employability isn’t simply the result of a duration of producing assessments, but a continual process, based on curiosity, adaptability and a deepening of appreciation as to the application of skills.

The experiences of York St John University and Southampton Solent University highlight a fundamental truth: a one-size-fits-all approach to employability is ineffective, especially for students with external commitments that limit their participation in traditional extracurricular activities. Both the WREL and Living CV initiatives demonstrate that when employability is woven directly into the curriculum and made explicit, students begin to see the direct currency and value of their academic journey, building confidence by making their learning gain explicit and valued.

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Professional (re)accreditation: future-proofing the MSc Human Resource Management at Edinburgh Napier University

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Introduction

The MSc in Human Resource Management at Edinburgh Napier University (2025a) aims to provide a model for how academic institutions can develop students' employability skills while maintaining relevance and quality in professional education. This has been achieved by aligning curricula with industry standards and evolving professional demands. The alignment of the CIPD Profession Map with academic content, delivered through core modules, showcases a flexible pedagogical approach. This approach blends theoretical knowledge and practical application while fostering reflective and sustainable learning and development. This methodology is transferable across academic disciplines that balance professional accreditation, academic rigour and practical experience. All while maintaining a focus on students' knowledge, skills and behaviours to future-proof their development and careers.

Background

The Business School at Edinburgh Napier University (ENU) supports students in a variety of degree qualifications. As part of its postgraduate programmes, it offers an MSc Human Resource Management (HRM) programme with a well-established reputation for developing people professionals. This MSc HRM programme has been accredited by the Chartered Institute of Personnel and Development (CIPD) for more than three decades – the longest such accreditation in Scotland. This enduring partnership demonstrates our commitment to providing high-quality human resource (HR) education that meets and exceeds professional standards, ensuring students grow professionally by reflecting on their own mindsets, behaviours and experiences (Advance HE, 2025a) while also supporting our graduates into CIPD membership. This is illustrated by ENU being named within the top five modern universities for career prospects by Guardian in 2025 (Edinburgh Napier University, 2025b). We adopt an enhancement-led approach in the programme, developing and building on our strong existing programme philosophy while enhancing content, employability opportunities, assessment and so on, to ensure we are preparing students for the evolving demands of HR practice.

The CIPD (2025) advocates for the betterment of work for the benefit of individuals, organisations, societies and economies in a responsible manner via an inclusive people profession. This philosophy is embraced and reflected in our programme curricula which acknowledges that HR professionals require a multitude of interpersonal, analytical and business competencies. It is, therefore, crucial for students to develop and adopt a critical, growth mindset (Armstrong, 2024). Translating theory from the classroom to organisational practice is fundamental. By embedding professional knowledge and behavioural criteria, we

are developing the employability skills our students need now and in the future (Advance HE, 2025a).

The CIPD Profession Map is presented as the '*international standard for the people profession'* (CIPD, 2025), designed to guide practitioners throughout their careers, helping them to succeed in a modern organisational context; see Figure 1.

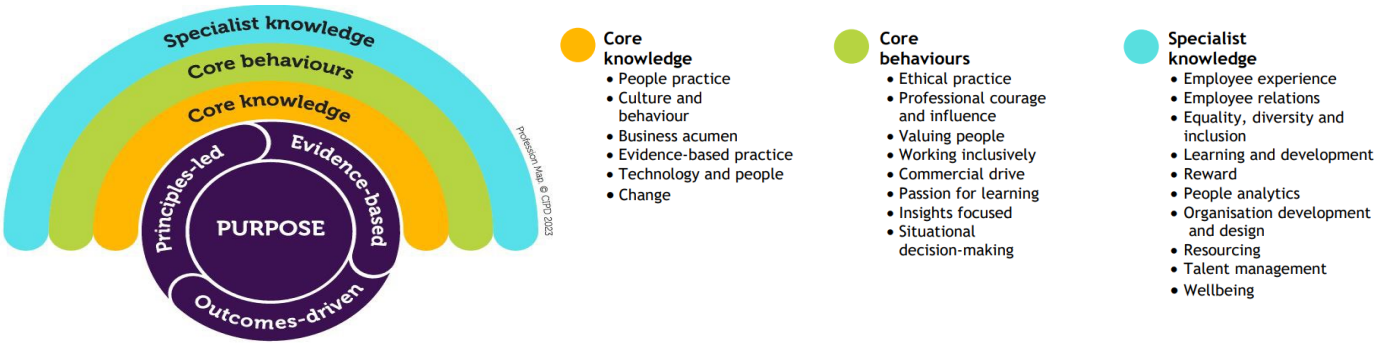

Figure 8: The Profession Map (CIPD, 2023)

From 2021, the CIPD moved towards using the HR Profession Map to inform the qualifications and requirements for CIPD approved centres delivering HR programmes. Consequently, the academic programme team at ENU approached the review as an opportunity to innovate and go beyond a mere compliance update. The re-accreditation process was used as an opportunity to build on the existing programme philosophy by constructing a future-facing programme of study that prepares students for the evolving demands of HR practice. This was achieved by integrating the CIPD core knowledge and behaviour criteria (outlined in Figure 1) within our curricula.

The professional focus of our pedagogy and course content embodies critical thinking of theoretical concepts and constructs alongside practical implications and considerations. It does so by embedding reflective, active learning throughout the curricula via authentic assessment in the form of writing employment contracts, designing training interventions, addressing challenges and so on.

Approach

The core programme pedagogy is grounded in research-informed inquiry and reflective, practice-based learning, encouraging students to bridge the gap between theory and practice. We encourage students to think critically about the learning process, how it affects them personally and professionally, building in capabilities of sustainable, reflective learning.

The 'mapping' to the profession map standards is achieved via learning objectives, assessments and modular contents with four core modules as the foundation of the MSc HRM curriculum. Students are provided with the opportunity to analyse and critique complex HR issues while exploring current and future practice by embedding reflective activities and continuous professional development opportunities throughout. The four core modules are

offered alongside 80 additional credits (Table 1), which includes a range of specialist HR and practice-based modules, depending on the programme title (for example, MSc HRM/MSc HRM with AI).

MSc Human Resource Management with CIPD accreditation – module structure (Shaded modules are mapped to CIPD standards / All modules worth 20 credits unless otherwise stated)						
Trimester 1			**Trimester 2**			**Trimester 3**
People and Organisational Development	Business Analytics and Change	Employment Law	Skills in People Manage-ment	Employee Resourcing	Labour Relations	HRM Master's Research Project (40 credits)
Research Methods for HRM						

Table 2: The MSc HRM structure (Edinburgh Napier University, 2025a)

This approach also offers flexibility for future programme pathways, providing students with the ability to tailor their learning experience with the addition of non-mapped modules, while still meeting professional body requirements. The curricula encourages students to understand the linkages between areas, developing critical skills in knowledge integration, critical thinking, creative problem solving and collaboration. Throughout our modules we embrace and focus on the transfer of knowledge from the classroom/theory to practice, encouraging students to adopt an evaluative mindset and develop their skills. We discuss and debate theoretical constructs and developments while asking them to engage reflectively, formally and informally. At the outset of the programme, students set a goal for their time studying with us, helping focus on their employability, skill development and future careers. Throughout the programme, we foster a deep learning environment by supporting students' development via case studies, role plays, active learning techniques and skills identification.

We have also preserved a core employability initiative that has been a hallmark of our accredited programme for over three decades: an HR-focused placement. This enables students to engage with organisations in a professional remit, establishing practical linkages and foci while also undertaking primary research for their research projects. This involves a balancing of meaningful work, experiences and learning from both parties (Parry-Slater, 2024). The placement adopts a flexible model of contact time where students are expected to engage in a variety of activities and reflect on the skills and knowledge developed via a reflective log. As a result, students work collaboratively with their placement host to agree on the content and scope of the placement and research project (ultimately their Master's dissertation). Consequently, students engage in a more entrepreneurial mindset with their placement hosts via collaborative working arrangements where students are encouraged to think creatively and innovatively about how they will execute their project (Advance HE,

2025b). They can gain valuable experiences and develop key skills relevant to the HR industry. They also grow professionally by reflecting on their own mindsets, behaviours and experiences – an essential part of cultivating the 3E's framework (Advance HE, 2025).

An emphasis on reflective learning throughout the programme (and via placement) ensures that students continually engage with the course content in a way that encourages critical analysis and real-world application. Moreover, continuous engagement and alignment with the professional body ensures that students transfer their academic learning to practice and engage with a growing professional network.

Our programme enhancements/redesign are informed by a rigorous, multi-stage consultation process, commended for its strength in philosophy, which engages with a wide range of stakeholders, including the University's HRM Professional Advisory Group, academic staff, external critical friends, students and alumni.

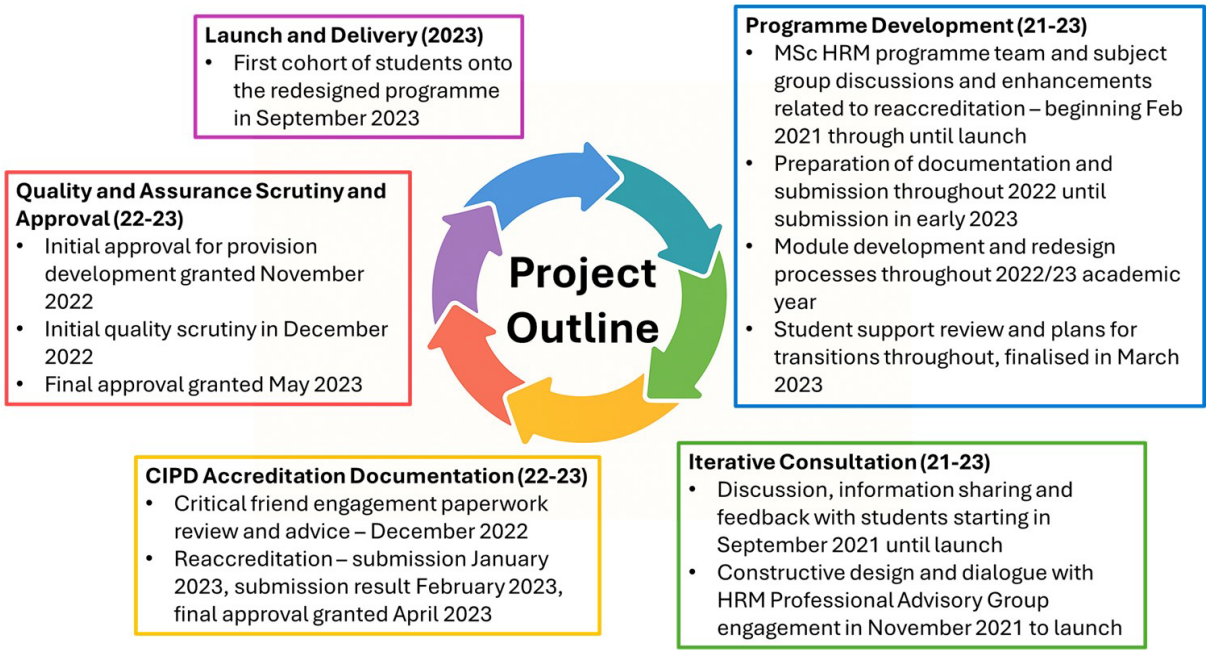

Figure 9: Project outline

Figure 2 illustrates an outline of steps taken during the project, giving an indication of dates associated with the development, including rigorous consultation and approval processes internally and externally with quotes from external peers in Figure 3.

What external stakeholders have told us:

MSc HRM External Examiner (2021-2025): *The curriculum is well-suited for the award, particularly for a CIPD award. Students are presented with diverse learning opportunities across various modules, covering a wide range of relevant topics. The resources provided are designed to be supportive and tailored to both assessment and learning opportunities.*

Critical friend, Emeritus Professor of HRM: *The [HRM subject] Group has taken the opportunity of the CIPD re-accreditation process to reflect not only upon their experience in delivering the MSc HRM programme but also upon the Group's wider approach to their teaching, research and practical application concerning the HRM provision offered in the Business School. The latter strongly informs the former.*

Figure 10: External stakeholder feedback

By incorporating feedback from diverse perspectives, the programme has remained responsive to student needs and industry requirements. This inclusive process fostered very positive discussions and the formation of innovative ideas that have strengthened the overall programme ethos and direction. Some examples of innovative practice embedded within the programme that bring the theory to practice and critical thinking skills to life for students include:

1. The active learning pedagogic approach that combines both theory and practice encouraging students' personal and professional development
2. A research into practice focus with co-written case study between an academic and a global HR director
3. An innovative assessment strategy including the use of narrated posters, portfolios, reflective reports and group assessments (to name a few)
4. Reflections on their own practice, experiences and skills (and assessing these reflections)

Ultimately, the programme aligns with Advance HE's (2025b) position that "the enhancement of appropriate skills, knowledge, attributes and behaviours necessary for transforming creative ideas into actions are of ever-increasing importance".

Outcomes

The refreshed programme, launched in the 2023-24 academic year, has already garnered positive feedback, with student satisfaction rates reaching 100% (n=8) (Advance HE, 2024), alongside a 100% pass rate of modules (n=23) (following reassessment diet). This high level of engagement and satisfaction reflects the effectiveness of the programme's structure and its capacity to support students in their academic and professional development as demonstrated in Figure 4.

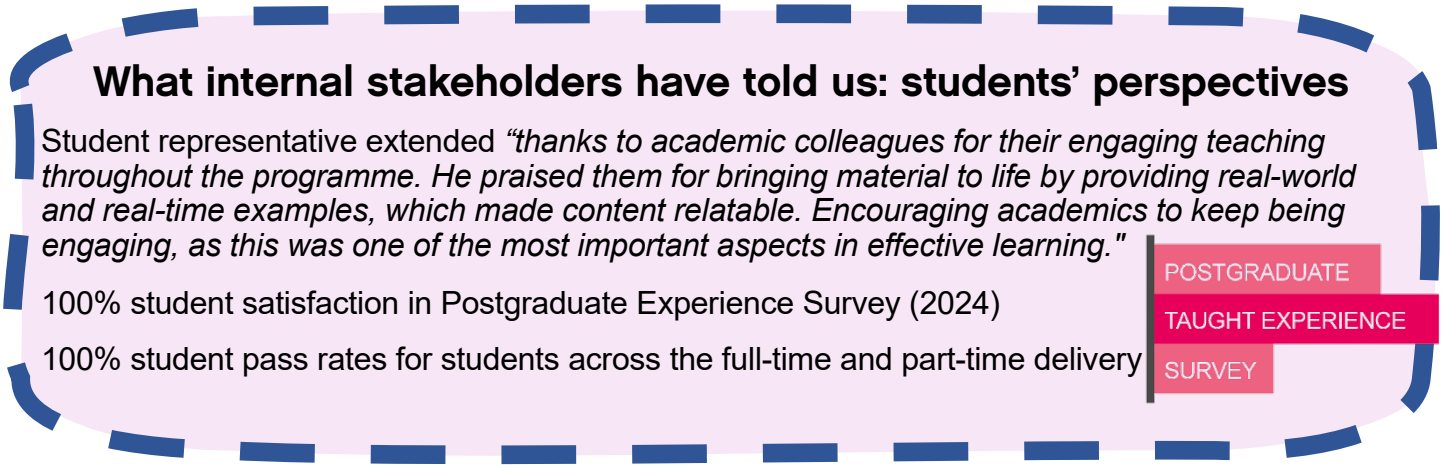

Figure 4: Internal stakeholder feedback and statistics

Our student outcomes continue to be highly positive, demonstrated via employability successes with a high proportion of our graduates' earning promotions and in professional or managerial roles. Moreover, we have had several students upgrading their professional CIPD membership to Chartered Membership, illustrating the alignment with the profession map as a positive outcome for these students.

Looking to the future of the people profession, our curriculum provides flexibility and exponential opportunities for development. We can be agile and adapt the programme contents to changing/evolving trends in HR and business education while maintaining the professional accreditation. Aligning HE curricula with professional standards, such as these, offers a transferable model applicable across a wide range of vocational subject areas while maintaining a clear focus on the future skills and career readiness of our students. Using relevant professional competency frameworks as a foundation ensures programmes reflect current industry expectations while maintaining academic rigour. This aligns with QAA Subject Benchmark Statements (QAA, 2025), which highlight the importance of integrating theoretical knowledge with professional practice, ethical awareness and transferable skills.

Beyond compliance, future-facing curriculum design should embed research-informed teaching, reflective practice and authentic assessment to support application in real-world contexts. Co-creation with employers, professional bodies, students and alumni ensures curricula remain responsive to changing workforce demands.

Focusing curriculum mapping on core modules enables depth, while flexible pathways support emerging specialisms. This approach strengthens professional identity,

employability and agility, ensuring programmes across disciplines, such as health, engineering and creative industries, are well placed to address evolving industry and societal needs now and into the future. Therefore, as the world of work continues to evolve so should curricula, ensuring graduates are equipped with the knowledge and skills needed to meet future challenges and opportunities.

Acknowledgements go to our colleagues in the HRM subject group and professional services teams who played key roles in the development and implementation of the programme.

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Assessing the importance of placements for civil and geospatial engineering students at Newcastle University

Henny Mills, Jean Hall, School of Engineering, Newcastle University

Introduction

As the engineering profession continues to evolve in response to technological advancement and global challenges, the need for graduates who are both technically proficient and industry-ready has never been greater. Industry placements offer students the opportunity to immerse themselves in professional settings, applying their academic knowledge to real projects and gaining invaluable experience (Rosselli et al, 2025; Mizumori-Hirst, 2024).

In civil and geospatial engineering, where the knowledge of real-world societal problems is fundamental, industry placements have emerged as a key strategy for enhancing graduate employability (Lock et al, 2009; Marinelli et al, 2022). Research has shown that students who demonstrate initiative are more likely to exhibit leadership and drive innovation in project environments (Beaumont et al, 2024). According to Calef (2024), employer engagement, through guest lectures, industrial fairs and placements, can enhance the relevance of academic programmes and better prepare students for the workforce. Employers increasingly seek engineering graduates who possess not only technical knowledge but also skills in innovation, leadership and design (Jamieson and Shaw, 2020). Placements benefit both students and employers – providing early access to talent, fostering graduate job offers and encouraging university-industry collaboration, while work-based learning improves academic performance, confidence and professional capabilities (Tennant et al, 2018; Beaumont et al, 2024; Blicblau, 2016).

This paper examines placement experiences among civil and geospatial engineering students at Newcastle University, focusing on how these opportunities support skill development and career readiness. Using institutional data and student feedback, it compares short-term summer placements with year-long industry placements. This study is timely as it aligns with current educational reform at Newcastle University (Education for Life 2030+) that aims to have a leading edge with industry and practice in all programmes. In addition, tangible and demonstrable links with industry embedded in a programme highlighting employability opportunities are an aid to student recruitment.

Placements in engineering degree courses

Students enter university with the expectation that their degree will lead to a career in their chosen field (Rolland et al, 2023). One effective mechanism for preparing students for employment is the integration of professional work placements (Mizumori-Hirst, 2024).

The Office for Students (2024) estimated that between 22,000 and 25,000 undergraduates completed a sandwich year annually in the academic year 2022-23 to 2024-25, showing a consistent engagement with year-long placements (Office for Students, 2024). Placements allow students to engage with current industry practices, technologies, project environments

and professional standards challenges, enhancing their technical and digital competencies (Tennant et al, 2018).

Internationally, placements are embedded more systematically into engineering education. In France, the stage de fin d'études is a mandatory component of engineering degrees, while in Germany, the Praktikum is a standard requirement, particularly in polytechnic institutions (Rolland et al, 2023). These models contrast with the UK, where placements are often optional, though increasingly encouraged through "year in industry" programmes.

In the UK, undergraduate engineering programmes incorporate work placements as optional but recommended to enhance employability (Lock et al, 2009; Marinelli et al, 2022; Rosselli et al, 2025). Over 85% of civil engineering courses in the UK offered placement opportunities in 2010, reflecting the recognition of their value (Oltean-Dumbrava and Galloway, 2012).

Rolland et al's (2023) review showed consistent improvements in student performance following placement experiences. Blicblau (2016) reported a 54% increase in academic achievement among students after a year-long placement. Students reported that placements enhance their confidence, maturity and career readiness and help clarify career goals and provide a clearer understanding of the engineering profession (Bovea and Gallardo, 2006; Lock et al, 2009; Marinelli et al, 2022).

Placements also foster stronger institutional ties between universities and industry, leading to further academic and professional opportunities such as dissertations or Knowledge Transfer Partnerships (Tennant et al, 2018). For companies, placement programmes offer early access to emerging talent and allow businesses to evaluate potential future employees in a real-world context. This early engagement supports corporate social responsibility by contributing to the development of the next generation of engineers.

This study investigated students' perceptions of industrial placements, examining their expectations and preparedness prior to the placement, as well as analysing their reflections and experiences during and after the placement.

University placement opportunities in Geospatial and Civil Engineering at Newcastle University

This study examines summer internships and year-long industrial experiences within the Geospatial and Civil Engineering programmes at Newcastle University. Short-term internships offer targeted exposure to specific tasks, while year-long placements allow students to engage more deeply with professional practice and workflows. Both placements are completed after Stage 2 with summer placements typically lasting 4–13 weeks. Most placements are paid, helping students adapt to professional environments. Year-long placements, lasting between 9 and 12 months, are supported by the Careers Service and assessed on a pass/fail basis and are formally recognised in the degree title (such as "Civil Engineering with Year in Industry"), aligning with practices at other UK universities (Rolland et al, 2023).

The year in industry option is usually paid and formally supported by Newcastle University's Careers Service. While the Careers Service provides guidance, the responsibility for securing a placement rests with the student. It is formally recognised as a placement module and recorded on the student's academic transcript. Students must submit a 3,000 word portfolio developed over the course of the placement, which is summatively assessed on a pass/fail basis. Around one-third of Civil Engineering students have chosen this route over the past six years and around half of the remaining civil engineering students, as well as nearly all Geospatial Engineering students, engage in summer placements.

Industry engagement and placement facilitation at Newcastle University

Newcastle University promotes industry engagement through initiatives such as GENIE (Geospatial Engineering Newcastle Industry Engagement) and ACCESS (Awareness of Careers in Civil Engineering for Second-Year Students). These annual recruitment fairs connect students with sector-specific employers and streamlining placement opportunities (Figure 1).

Originally launched as *Life During and Beyond Geomatics*, GENIE began with eight companies and now hosts up to 26 annually. Its popularity reflects its value to both students and employers (Pugh and Allen, 2019).



Figure 1: GENIE industrial event

Such events have been vital in securing both short-term and year-long placements. These fairs connect students with alumni and professionals, offering insights into real-world contexts and supporting early recruitment. For employers, placements offer access to skilled students who may become future hires. Early interaction helps identify talent, support development and strengthen academic partnerships. Newcastle students have secured placements with companies such as Arup, BAE Systems, Hollis, Plowman Craven, Skanska, BP and Wardell Armstrong.

Impact of placements on student development and employability

Data for this study was collected through structured questionnaires distributed to all students enrolled in Geospatial and Civil Engineering programmes before they started their placements and at the beginning of Stage 3 upon their return, allowing capture of both pre- and post-placement perspectives. Of the cohort size (approx 140 students), only those students who had secured a placement were invited to complete the pre questionnaire. Uptake of the questionnaire was approximately 50% of the student cohorts – however, to ensure robustness in data only those students who completed both the pre and post questionnaires were included in the analysis (20/98). Data was captured for both short summer placements and nine-month long placements, thus allowing the analysis to be considered separately. The analysis focused on assessing the employability and impact of placement on academic study using the students' perceptions and not academic performance. The final part of the study aimed to assess the career aspiration and the impact of the placement on their future direction.

The results of the questionnaires have shown that the high demand for geospatial graduates has made summer placements a sufficient and effective way of gaining industry exposure. Many students return from these placements with graduate job offers. Civil Engineering students have shown a stronger inclination towards year-long placements. This preference is supported by the structured nature within the construction sector, including the logistical and regulatory requirements when working on construction sites.

Irrespective of the planned placement length, when asked about their preparedness for placements, most students reported feeling confident (Figure 2).

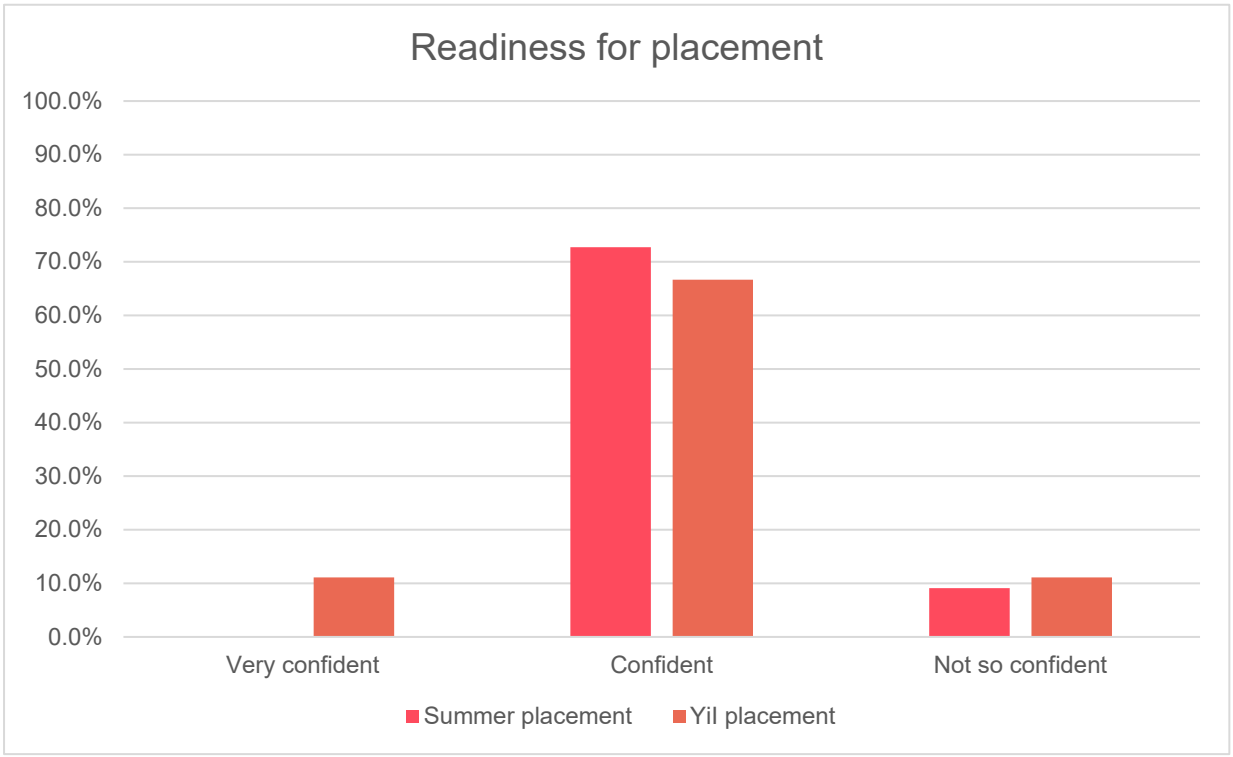

Figure 2: Students perceptions of placements prior undertaken them

The findings from the questionnaire indicate that students perceive both summer and year-long placements as beneficial to their employability, suggesting a strong recognition of the value of sustained industry engagement.

The study showed that placements contribute to broader personal and academic growth with students reported increased self-confidence, enhanced academic performance and greater clarity regarding their career aspirations. More than 85% expressed confidence that their placement experience would significantly enhance their employability prospects (Figure 3).

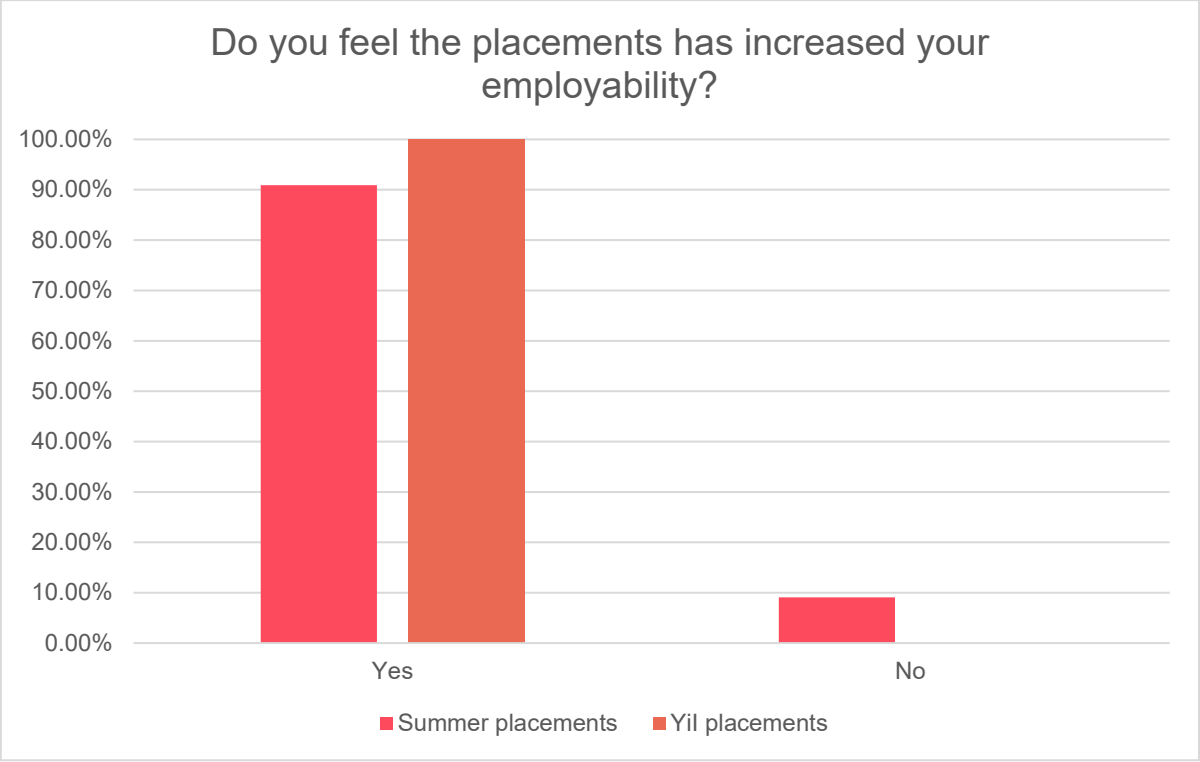

Figure 3: Employability reflection post placement

The placements have been shown to significantly contribute to students' skill development and overall academic experience (Figure 4). They strengthened the technical and professional competencies but also enhanced students' preparedness for entering the workforce, providing a smoother transition from university to professional life.

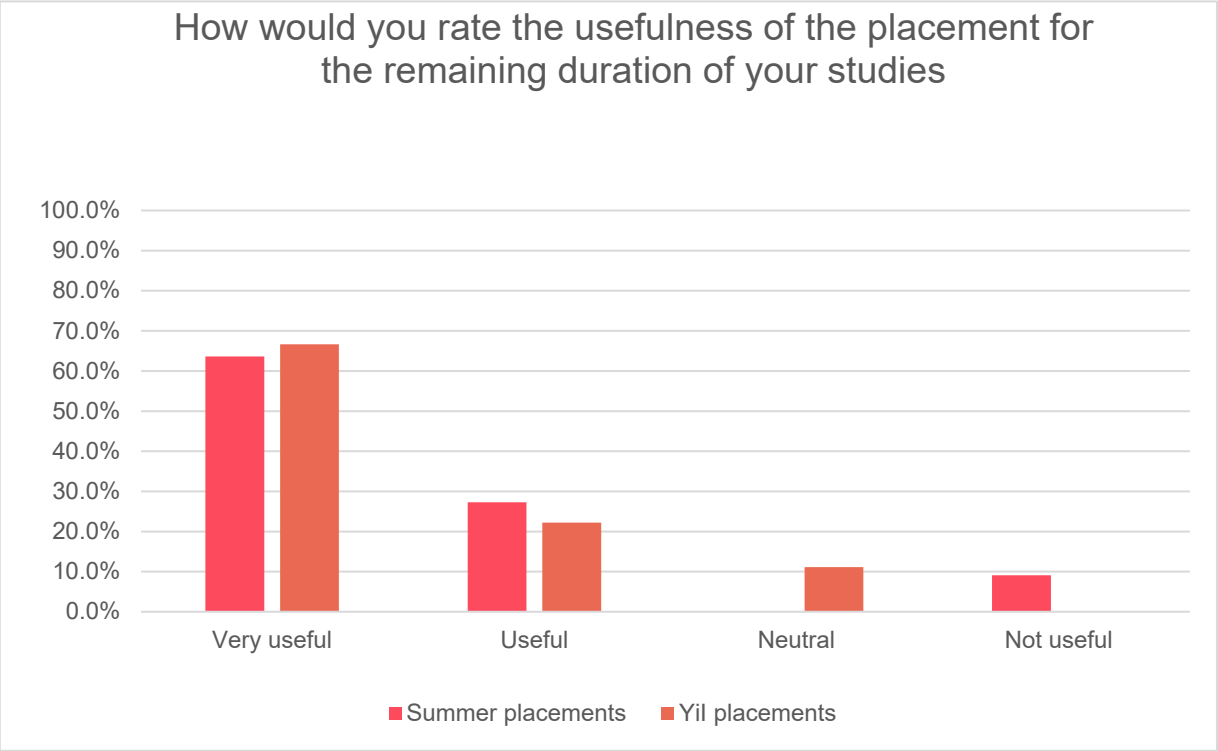

Figure 4: Student perception of usefulness of placements

The findings of this study underscore the significant role that industry placements play in fostering students' personal and professional growth. Placements play a pivotal role in helping students clarify their career aspirations as they broaden career awareness and support more informed decision-making regarding future professional pathways (Figure 5). They enhance employability but also support the cultivation of a professional identity aligned with sector-specific demands.

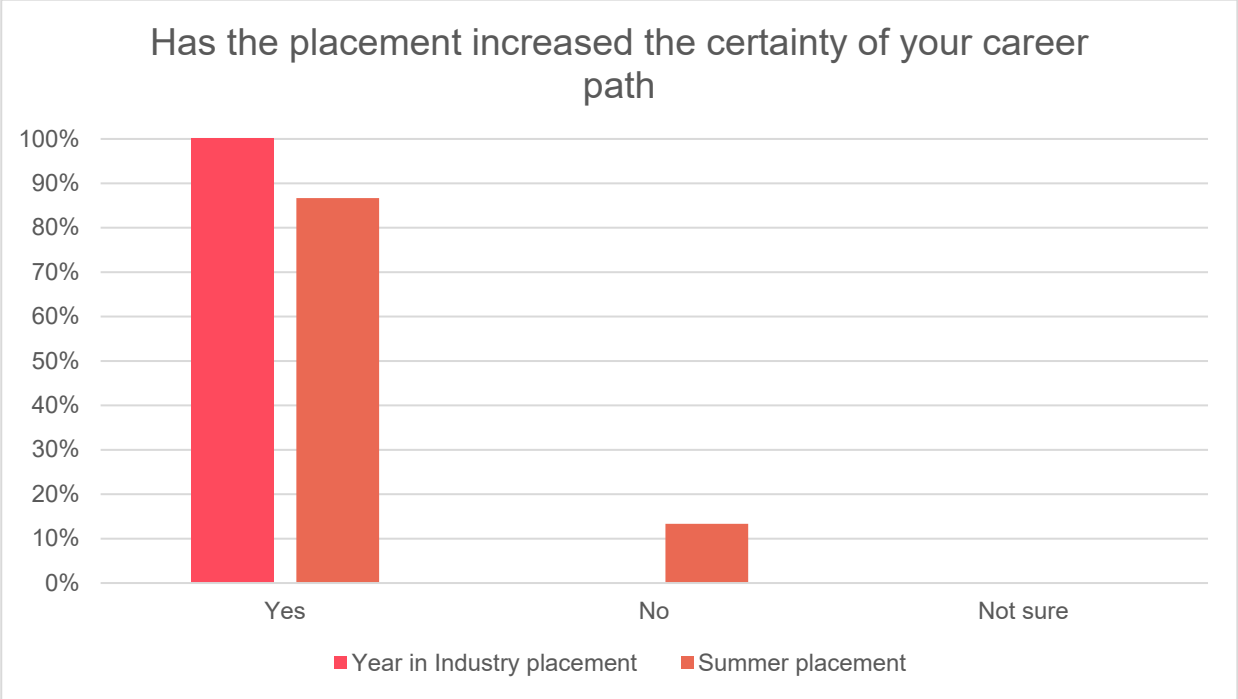

Figure 5: Influence of placements on career path

Many students expressed a strong interest in returning to their placement organisations upon graduation (Figure 6). This suggests a high degree of alignment between academic preparation and industry needs and reflects the effectiveness of placements in facilitating long-term career integration. These findings confirm enhancement in student competencies with respect to career readiness and align with previous studies (Bovea and Gallardo, 2006; Lock et al, 2009; Marinelli et al, 2022).

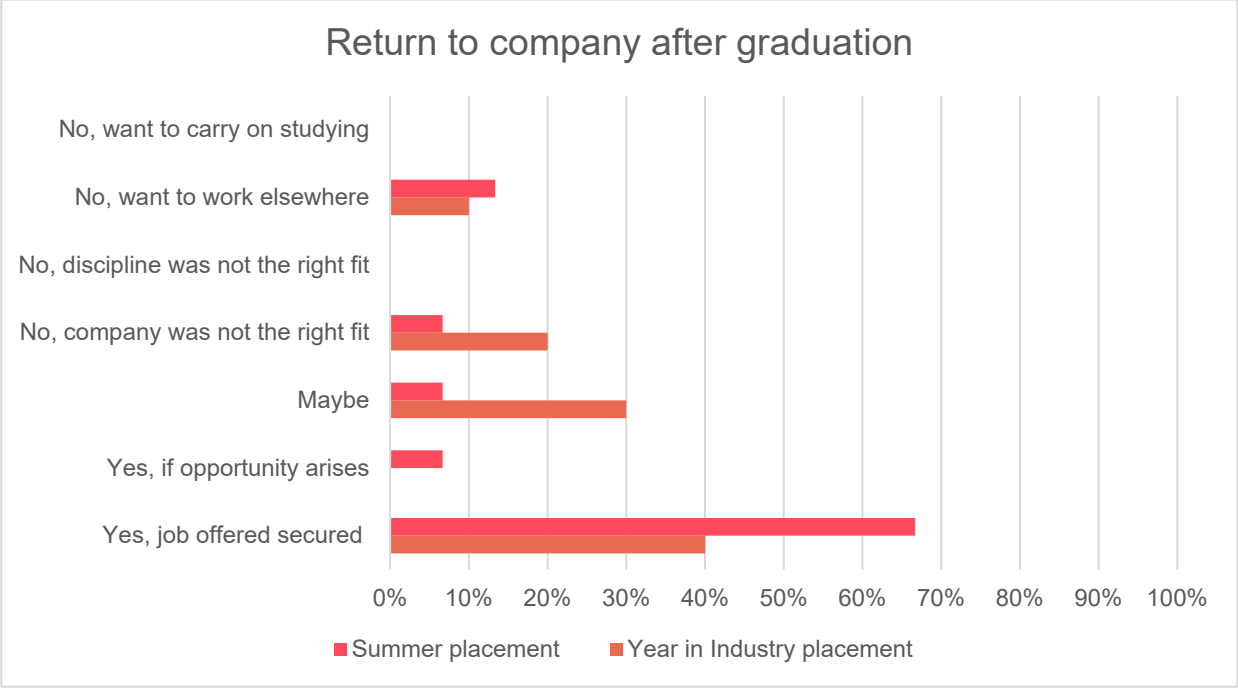

Figure 6: Employment opportunity within placement companies

Many students secure graduate roles as a direct result of their placement experiences, providing a competitive edge in the job market, and a smoother transition from university to full-time employment.

Conclusion and further work

The findings of the study demonstrate that placements are a vital component of engineering education. They offer the opportunity to apply theoretical knowledge in practical settings, develop essential professional competencies and gain a clearer understanding of their future career trajectories. Students consistently reported increased confidence, improved academic performance and enhanced employability as outcomes of their placement experiences.

Building upon this study, further analysis will investigate the impact of placements on academic performance with a particular focus on length of placement. The correlation of placement, job offer and employer perceptions will be evaluated as anecdotal feedback received through this study and other studies is that placements provide early access to emerging talent, reduce onboarding time and improve recruitment outcomes through performance assessment in real-world contexts (Tennant et al, 2018; Beaumont et al, 2024; Blicblau, 2016).

As the sector continues to adapt to technological and societal changes, the integration of meaningful industry engagement within degree programmes will remain essential for preparing students to thrive in a competitive and dynamic job market (Pugh and Allen, 2019; Rolland et al, 2024). For universities and industry partners alike, placements represent a mutually beneficial investment in the future of engineering. As the demands of the profession continue to evolve, structured placement programmes will remain vital in preparing students to meet the challenges of a dynamic and competitive job market. By fostering technical proficiency, professional identity and industry engagement, placements ensure that civil and geospatial engineering graduates are well-equipped to thrive in their careers.

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