



Employability in Programme Development: Establishing a labour market to higher education feedback loop drawing on local labour market intelligence

ERASMUS+: Employability in Programme Development (EPD) Project

Erasmus+ Programme, Key Action 2: Strategic Partnerships (agreement number 2020-1-UK01-KA203-079171)

Intellectual Output: IO4

Intellectual Output title: Best practice toolkit for HE employability

Document title: Guidance framework (in English) for HEIs covering approaches to embedding labour market intelligence-led employability course and programme content

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Co-funded by the
Erasmus+ Programme
of the European Union

Guidance framework (in English) for HEIs covering approaches to embedding labour market intelligence-led employability course and programme content

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Type of employability intervention

1. Labour market informed curriculum design

Whilst almost every case study in this collection has been informed to some extent by labour market information, the three case studies in this category stand out for their explicit and systematic use of labour market intelligence as the impetus for curriculum change and review. Perhaps unsurprisingly, all three case studies centre around vocationally focused higher education programmes and yet all three yield important lessons for the sector as a whole.

For example, Conestoga College has long established structures and processes in place to guarantee true industry collaboration and alignment at every part of the curriculum design and review process. Crucially, this process of industry collaboration and curriculum review is led by a specific department – the Conestoga Degree Quality and Accreditation Department. This department coordinates regular committees of key industry and academic stakeholders, who oversee the workplace alignment and professional accreditation of their degree programme portfolio.

Likewise, Spain's Interuniversity Council of Catalonia have overseen a region-wide project to review and renew nursing education and to identify gaps in nurses' professional skills. This process was supported by the Catalan University Quality Assurance Agency (AQU), who like Conestoga's internal Institutional Research team, play a key role in collating and interpreting labour market information inform curriculum review and workplace alignment.

This interpretation of labour market data into a language of skills that higher education institutions can use to inform their curriculum review processes, is central to our third case study, at the University of Huddersfield. Working across six universities, this project showcases a paradigm-shifting approach to skills profiling. This involved the deconstruction of computer science course content into 21st Century Skills categories. These skills were then mapped against Lightcast labour market information and conclusions could be drawn as to the workplace relevance of current computing science teaching. This more technical skills auditing and mapping methodology relies less on employer relationships than our first two case studies and offers a model that can be applied across disciplines.

Category	Title [and contact details]	Institution	Summary	Key learning	Keywords/tags	Points for consideration if implementing
1. Labour market informed curriculum design	<p>Improving Nursing employability through curricula change</p> <p>Find out more: Dolors Juvinyà-Canal, Professor in the Department of Nursing at University of Girona (dolors.juvinya@u dg.edu) José Luis Mateos González, Project manager at AQU Catalunya (jlmateos@aqu.ca t)</p>	Interuniversity Council of Catalonia	The working group established by the Interuniversity Council of Catalonia is one of the few examples within this collection of region-wide curriculum change. The role of the regional Interuniversity Council in convening this group and the Catalan University Quality Assurance Agency (AQU) in compiling and interpreting the labour market information required for their work was key. In this example, the use of participatory methods enabled the inclusion of a wide range of stakeholders in the assessment and review of the nursing curriculum. Informed by robust labour market information, this approach appears to support a collaborative HE/employer partnership and a more	<ul style="list-style-type: none"> LMI and employer insight can be a catalyst for curriculum change LMI can be made more useful for HEIs through the mediation of experts (eg. AQU) Working with employers can expose significant professional skills gaps in graduates Close partnership working between HEIs and employers is key, particularly 	action plan; curriculum change; employability skills; employer engagement; employer survey; government; industry alignment; industry engagement; labour market information (LMI); professional accreditation; professional bodies; programme development and review; regional;	<ul style="list-style-type: none"> Regional initiatives require coordinating body with relevant remit and regional network of employers and HEIs Early-stage intervention at mapping and auditing stage so no evidence or evaluation of successful interventions yet Collation and interpretation of LMI requires

		<p>comprehensive and objective review of curriculum relevance and graduate preparedness. It also promotes employer engagement in the education of graduates and higher education, in general. This case study provides a model for identifying workplace relevant skills gaps and the types of intervention required fill these gaps. The project's impact on actual curriculum transformation within individual institutions is still to be ascertained.</p>	<p>where programmes are vocationally aligned and professional accreditation is required</p> <ul style="list-style-type: none"> • Development of clear operational action plans is key to systematic employability enhancement • Curriculum change can be led through establishment of multi stakeholder committees and working groups at an institutional, cross-institutional or even regional level 	<p>skills gaps; strategic; vocational; workplace readiness;</p>	<p>expertise and employer networks</p>
<p>Labour market informed degree creation and continuous improvement</p> <p><i>Find out more:</i> Janina Robinson, Manager Degree Quality & Accreditation (jbrobinson@conestoga.on.ca) Cody Boomer, Degree Projects Coordinator (Cboomer@Conestoga.on.ca)</p>	<p>Conestoga College Canada</p>	<p>Conestoga College provides an excellent example of employability and industry alignment being structurally integrated into the heart of programme review and development. The Degree Quality and Accreditation department ensures key stakeholders (including employers, professional bodies, students and graduates) are included at all the key stages of course and programme development and review and have places on all key committees. These stakeholders are integrated, meet regularly (eg. biannually) and play a key role in the design and review process. The processes themselves are compulsory and embedded. In addition, detailed LMI is sourced and translated by experts (ie. the Institutional Research team) ensuring that it is used throughout the review and development process and interpreted effectively. This structural, institution-led approach to employability appears to be more common in applied, more vocationally-focused HEIs like Conestoga. Work-based learning is a key feature of all degree programmes and perceived as essential for workplace preparedness.</p>	<ul style="list-style-type: none"> • Consistent employability enhancement (including industry engagement) requires a named team/department to lead the quality assurance (QA) and curriculum review process • LMI and job readiness/industry alignment data must be embedded in all QA, programme development and review processes • LMI needs to be interpreted by dedicated experts before being fed to course and programme teams. These experts should also have Teaching and Learning (T&L) expertise • HEIs with a strong focus on applied, vocationally led T&L often have more robust and well-established processes to embed employability, engage with industry and harness LMI in courses and programme development and review • Work-based learning is key to workplace preparedness and industry engagement and alignment 	<p>applied learning; embedded employability; employability framework; employer advisory boards; employer engagement; employer-university partnership; government; industry alignment; industry engagement; Institution-wide; Key performance indicators (KPIs); labour market information (LMI); mission statement; placements; professional accreditation; professional bodies; programme development and review; strategist; student feedback; work-based learning; work-related learning;</p>	<ul style="list-style-type: none"> • Requires significant investment in T&L-focused professional services support • Requires significant investment in regular programme development and review committees • Vocationally-focused HEI maybe working to different imperatives than research intensive HEIs? • Takes time to develop these institution-wide support services and development and review processes • Close government involvement may not be relevant to all HE jurisdictions?

<p>Preparing Graduates for the 21st Century Job Market</p> <p><i>Find out more:</i> Rupert Ward, Professor of Learning Innovation (rupert.ward@huddersfield.ac.uk)</p>	<p>University of Huddersfield</p>	<p>This project involved computer science courses from six universities. The primary aim of this work was to connect the capabilities developed within higher education with the competencies sought by employers. This was done by mapping learning outcomes and assessment weightings to '21st Century skills' categories and 'skills hours'. The results were then compared against Lighcast labour market information on current job skills requirements. The project was significant on a number of levels. Firstly, it proposes a skills mapping methodology that can be replicated in any institution and for any discipline area. Secondly, it provides a relatively quick and low-cost process for identifying curriculum areas ripe for potential employability enhancement. Additionally, it requires little input from external organisations and employers making it suitable in disciplines and institutions with less well-established employer partnerships. Finally, in translating learning outcomes into skills components it exposes the workplace relevant building blocks of our curriculum and raises the potential for the design and development of short, stackable courses suitable for CPD and Microcredentials. These courses are capable of being more responsive to contemporary learner needs and requirements.</p>	<ul style="list-style-type: none"> • Student (and graduate) and employer feedback and evaluation is key to inform effective employability interventions • Quantitative measures (KPIs) are essential for effective evaluation of impact • Graduate preparedness must remain at the centre of the institution's core mission • Course curricula and learning outcomes can be translated into skills and skills hours • Understanding course content in terms of its skills content and focus makes it more readily comparable to job market requirements • Provides an off-the-shelf skills auditing and mapping methodology transferable to a range of disciplines and learning contexts • Signals a potential transformation of degree programme learning into shorter, more responsive and flexible learning packages • Highlights the value and role of big-data analysis of labour market information for HEIs 	<p>applied learning; big data; curriculum change; employability skills; industry alignment; job requirements; labour market information (LMI); microcredentials; personalised learning; programme development and review; regional; skills gaps; skills mapping; vocational; workplace readiness;</p>	<ul style="list-style-type: none"> • Requires an openness to the explicit mapping of academic curricula against labour market information • Transferability of methodology designed for technical and vocational computing science discipline to non-vocational subject areas such as Arts and Social Sciences • Requires access to appropriate big data labour market information (typically via external provider)
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2. Institution-wide initiatives

The attempts by the universities within this section of our collection to completely redesign and embed employability provision at an institution-wide level are by their very nature ambitious. These transformation projects all require significant levels of senior management buy-in, substantial investment of time and staffing, and the development of a framework to assess existing course and programme curricula. Unsurprisingly, they are all closely aligned with their institutional strategies and teaching and learning plans. Finally, their frameworks and plans all draw upon a solid research base of evidence and staff, student and employer consultation.

The processes undergone these institutions highlight some easy to follow, step-by-step guidelines for other HEIs to follow for their own employability and curriculum redesign projects. These guidelines could be applied at an

institutional or discipline-level. The development process that each of our case study institutions follow is broadly as follows:

- Senior management buy-in secured for a more applied, vocationally relevant and labour market aligned curriculum redesign.
 - Sheffield Hallam provides an interesting example of securing this buy-in and associated investment through an 8-stage process of institutional self-assessment.
- Research commissioned (internal or external) to audit existing employability activity and horizon scan/benchmark against peers. At this stage, a literature review is designed to inform an institutional definition of employability and identify the highest impact employability activities. Finally, during this research stage, consultations with staff and students take place to identify the skills being developed through the curriculum and the skills they might need in the future. These consultations and surveys extend to some kind of labour market assessment and employer consultation to assess their changing skills needs for future graduates.
 - UCL provides one of most extensive internal research studies on which to base their development of an employability framework. Another interesting example is the work of the social enterprise Gradcore which provides HEIs with an external, evidence-based ‘Employability Healthcheck’ to assess their employability provision and map out future improvements.
- The development of an employability strategy or framework typically follows the research stage. This provides a common language of employability for the institution and allows the process of curriculum mapping and skills auditing to begin.
 - The RGU+ Framework with its cross-cutting themes of entrepreneurship, innovation and sustainability provides an excellent example of how this new type of framework can succeed, supported by the solid foundations of employer advisory boards and dedicated business and employability departments. UCL’s 6 pillars provide a similar thematic framework that can be used to reassess and redesign current and new courses and programmes. Our examples from Edge Hill and Leeds operate in a similar way but with a stronger emphasis on skills and graduate attributes matrices to focus curriculum redesign.
- Secure investment and identify a dedicated team to drive forward the implementation of the framework.
 - Sheffield Hallam’s substantial investment in a new Directorate of Business Engagement, Skills and Employability was key to the implementation of their ‘academic integrated employability’ model. Similarly, Gradcore’s work with Kingston University led to substantial new investment in their Careers Service and Employability Service, including the establishment of a brand-new Placements and Partnerships team.
- The final stage of implementation is typically followed by a process of reflection and evaluation. A variety of indicators are used from graduate destinations to students’ self-assessment of confidence in skills and career focus. Interestingly, very few of our case study institutions are at a stage to implement a robust evaluation or long-term measurement of impact on students’ workplace preparedness. This is in part due to the early stage of development of many of these projects but also points to the complexity of the evaluation process and the lack of a sector-wide agreement on the most useful performance indicators.
 - London City are an interesting exception, in this respect. Their focus on mandatory ‘career focus’ modules and professional experience through their institution-wide employability programme, CAP, has enabled them to provide some useful insights into the reduction of the educational attainment gap amongst their diverse group of learners and on a positive impact on graduate destinations and earning power.

Category	Title [and contact details]	Institution	Summary	Key learning	Keywords/tags	Points for consideration if implementing
2. Institution-wide initiatives	Aspire: A cross-institutional approach to embedding	University of the West of Scotland	This institution-wide approach to embedding employability and skills content is extremely ambitious and significant. It	<ul style="list-style-type: none"> • Alignment with University Strategy, Learning and 	communicating skills; embedded employability; employer	<ul style="list-style-type: none"> • Early-stage implementation, so limited

<p>employability skills at University of the West of Scotland</p>	<p>Find out more: Ruth Whitney, Senior Lecturer and ASPIRE module coordinator (Ruth.Whitney@uws.ac.uk) Stephen Watt, Careers and Employability Manager (Stephen.Watt@uws.ac.uk)</p>	<p>represents a model that can be rolled out at scale and that could be mirrored in a wide range of HEIs. The basic premise is to add in additional modules reflecting on the students' broader HE experience and their development of skills and attributes within their existing curricular and extra-curricular activities. The capstone assessment of an ePortfolio (supported by an ePortfolio platform) allows an individualised, personal learning journey for each student and ensures their ability to communicate the value of their HE experience to an external audience.</p>	<p>Teaching plan, and (new) Curriculum Framework is essential</p> <ul style="list-style-type: none"> • Ensure theory and knowledge-based elements of curriculum supported by development of skills and attributes • Embedding employability and skills can be significantly enhanced through the development of new cross-disciplinary courses • Key importance of student reflection on connection between degree and personal/professional life and skills • Key role of student advisors in supporting reflection on and development of skills • Importance of personal and professional development planning • Alignment with University graduate attributes • Value of reflective ePortfolios (using PebblePad) • Key role of labour market information to assess employer skills needs 	<p>engagement; evaluation; extra-curricular; skills framework; graduate attributes; graduate outcomes; institution-wide; labour market information (LMI); labour market skills; learning and teaching; personal and professional development; personal tutors; portfolio; reflection; skills confidence; staff training; strategic; student feedback; transitions; workplace readiness;</p>	<p>comprehensive feedback on impact and evaluation</p> <ul style="list-style-type: none"> • Draws on diverse range of LMI sources on skills needs which may make more complex to track and target impact • Requires institution-wide buy-in • Requires institution-wide system of student advisers to support • Need to develop strong messaging to students to ensure this as perceived as core learning and not add-on skills content • At this early stage of the project the precise role of employers as collaborative partners is less clear
<p>Boosting employability at Edgehill University: Embedding Graduate Attributes across the university using PebblePad</p>	<p>Find out more: Becka Colley-Foster, Head of Careers and Graduate Employability (colleyb@edgehill.ac.uk)</p>	<p>Edgehill university</p> <p>This institution-wide approach to embedded employability has been developed on the back of two key initiatives. Firstly, the development in 2022 of a set of 20 x institutional graduate attributes and associated definitions grouped within four categories (ie. core, conceptual, people, and personal categories). Secondly, the rollout of an institution-wide approach to supporting student reflection and action planning. This reflective activity (ie. SaPRA) was rolled out across the institution using the PebblePad portfolio platform in 2022. It supports students to reflect on their skills and graduate attributes, and their confidence levels in these areas. It also supports them to create action plans for further skills development, and to write evidence statements evidencing these skills. Whilst it is now</p>	<ul style="list-style-type: none"> • Use of platform such as PebblePad which is intuitive and largely self-taught by students facilitates relatively easy institution-wide adoption • Established and accepted institution-wide process of student reflection, action planning and communication (ie. SaPRA) helps adoption and rollout • Personal tutor system supports student discussion of skills development and reflection 	<p>embedded employability; employer-university partnership; graduate attributes; graduate outcomes; institution-wide; personal tutors; portfolio; reflection; skills confidence; staff training;</p>	<ul style="list-style-type: none"> • Technical (and staff training?) challenges associated with adoption and integration of platform such as PebblePad and integration with existing systems. • Early-stage intervention (although building on established SaPRA reflection process) so deeper evaluation and assessment of impact on Graduate Outcomes still to be established

	<p>Career Activation Programme: embedding professional experience and career focus to boost graduate outcomes and close the employability gap</p> <p>Find out more: Wendy Browne, Employer Engagement Manager-Integrated Experience wendy.browne@city.ac.uk Gemma Kenyon, Director of Careers & Employability gemma.kenyon.2@city.ac.uk</p>	<p>City, University of London</p>	<p>mandatory to embed the graduate attributes within all areas of the curriculum, how this is done differs between subject areas. For example, in some disciplines the reflection on graduate attributes via PebblePad is introduced incrementally over the course of the whole programme, whereas in others, it sits within a standalone course or module.</p> <p>This institution-wide employability initiative - the Careers Activation Programme (CAP) – was implemented in 2022 and makes professional experience and career-focused modules mandatory and credit-bearing in every undergraduate course. This strategy was driven in part by the diversity of their student population and the need to ensure that all students have access to opportunities within their timetabled class time. All undergraduate courses at City are now guaranteed to have embedded credit bearing 'career focus' modules and also access to professional experience. Professional experience is categorised into Micro-Placements, industry projects or social action projects. of some type. This expansion of professional experience opportunities has required significant engagement with their local and national employer partners. To oversee this institution-wide curriculum change a new project group has been created and reports on progress to City's Education and Student Committee. As a direct result of this new employability strategy, the institution appears to be making real strides at reducing the attainment gap.</p>	<ul style="list-style-type: none"> Established skills framework - such as the University's Graduate Attributes framework - is extremely useful Staff training and awareness raising workshops, and regular discussion at committee-level are important to secure buy-in and consistency Embedding of employability initiatives and institution-wide rollout is essential to guarantee equality of opportunity to employability initiatives and reduce attainment gap Work experience must encompass a broader range of activities than just work placements to be accessible to all students and disciplines and to different types of employer Work experience, when suitably defined, can be delivered at scale to students from across the institution Careers registration surveys are key to understanding students' experience and confidence levels around employability Close employer partnerships are key to provide work experience opportunities at scale Career focus and clarity of career aspiration is key to graduate success and must be supported within the curriculum Significant investment is required to succeed with this level of institution-wide change The support of dedicated 	<p>attainment gap; career focus; careers education; curriculum change; diversity; embedded employability; employability strategy; employability strategy; employer engagement; employer-university partnership; evaluation; graduate outcomes; industry alignment; institution-wide; investment; learning and teaching; placements; strategic; vocational; widening participation; work experience; work-based learning; workplace readiness;</p>	<ul style="list-style-type: none"> Requires significant investment Capacity to deliver work experience and careers education at scale (ie. careers staffing, employer relationships etc...) Institution-wide curriculum change required Requires career registration to establish baseline and assess impact Requires dedicated careers and employability professional capable of providing support to academics on curriculum change
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			<p>employability professionals (eg. Employer Engagement team based in the Careers and Employability Department) is key to supporting this level of curriculum change</p>		
<p>Cracking the employability code. -The journey from patchwork initiatives to a fully embedded employability curriculum</p> <p>Find out more: Connor Moss, Dean of College of Business, Technology and Engineering, (c.moss@shu.ac.uk) Esther Kent, Director of Employability & Student Futures (E.L.Kent@shu.ac.uk)</p>	<p>Sheffield Hallam University</p>	<p>This case study explores the institution's transition from a patchwork of isolated employability initiatives and a largely centralised careers service offering to a fully embedded, consistent, institution-wide employability experience. The success of this transition draws on the institution's strength in work-based learning and their strong partnerships with employers in the South Yorkshire area. The case study explores the 8 stage process the institution followed to achieve their goals. This included recognising the local specificities and needs of their location, securing senior buy-in, investment and strategic alignment, developing a robust employability framework (which defines and promotes a diverse range of work experience options), drawing on employer relationships (formalised through active Departmental Employer Advisory Boards), and a comprehensive student consultation. The establishment of a new 'Directorate of Business Engagement, Skills and Employability' was key to supporting this model of 'academic integrated employability'. Core to the strategy was the expansion and development of new forms of credit-bearing 'work experience'. This broad definition included work placements, enterprise residencies, applied projects, research and innovation projects, study abroad and traditional sandwich placements. There was a clear institutional commitment for all students to have access to these types of work experience opportunities and to do so at all levels.</p>	<ul style="list-style-type: none"> • Senior management buy-in and investment is key • Institution-wide employability framework is essential to guide discipline-level change • Recognition of place, civic role, and local market needs of institution is essential • Requires strong employer relationships and a functioning mechanism to proactively manage and harness these relationships (ie. Departmental Employer Advisory Boards) • Work experience remains a key focus of employability activity but can be interpreted much more broadly than 'work placements' • Careers Service requires a shift from a focus on the extra-curricular to employability embedded in the curriculum 	<p>applied learning; applied learning; curriculum change; embedded employability; employability framework; employability skills; employability strategy; employer-university partnership; evaluation; extra-curricular; institution-wide; investment; learning and teaching; placements; strategic; student feedback; work experience; work-based learning;</p>	<ul style="list-style-type: none"> • Evaluation currently focused on measuring the success of the rollout of the initiative. Longer term impact on graduate outcomes and students' confidence still to be measured • Broad institutional approach so less clear how being implemented at discipline level • Requires senior management buy-in and investment in dedicated employability teams (ie. DBESE) to oversee progress and provide academic support
<p>Pillars of Employability: Implementing an employability framework at UCL</p> <p>Find out more: Amy Lourenco, Deputy Head, UCL Careers (Amy.Lourenco@ucl.ac.uk) Karen Barnard, Director of UCL Careers (K.Barnard@ucl.ac.uk)</p>	<p>University College London</p>	<p>The "UCL Pillars of Employability" is a bespoke employability framework designed to help staff and students frame employability within the UCL context. Importantly, this framework builds on extensive research into the employability context of UCL and a literature review. This research led to the development of an institutional definition of employability, an assessment of future labour market skills needs, and a review of best practice employability case studies from across the sector. This work provides UCL staff and students with a common language to discuss employability and to consider how to best embed it within the curriculum. It is</p>	<ul style="list-style-type: none"> • Rigorous research and a robust evidence base is key to developing a viable employability framework • Shared language and definition of employability required to develop and embed institution-wide employability framework • A robust employability framework supports the employability 	<p>curriculum change; embedded employability; employability framework; employability audit; employability strategy; employer engagement; employer-university partnership; investment; learning and teaching; senior buy-in; labour market skills;</p>	<ul style="list-style-type: none"> • Requires Careers professional engagement with credit-bearing teaching and learning at discipline level and to support mapping and development of new curricula • Requires staff to conduct extensive research to underpin any new employability framework (eg. UCL Arena Centre

	<p>RGU+ - An institutional approach to ensure consistency of employability support across Robert Gordon University</p> <p>Find out more: Lynn Kilbride, Vice Principal for Academic Development and Student Experience (l.kilbride@rgu.ac.uk) Laura Chalmers, Head of the Centre for Employability and Community Engagement (l.r.j.chalmers@rgu.ac.uk)</p>	<p>Robert Gordon University</p>	<p>accompanied by a curriculum mapping and audit tool to aid programme design and review through the lens of employability. The UCL framework is built on 6 pillars; namely, Skills, Knowledge, Global Citizenship, Career Guidance and Decision-Making Values/Attributes, Experience, and Networks. Whilst the staff version of the framework supports course and programme design and review, the student version supports reflection on skills development, on the skills students will require in their careers, and on the actions they will need to take to develop these skills. The student version is typically used in consultation with careers staff. In its initial implementation phase, the framework has been targeted at UCL's new East campus and the development of new programmes there. The implementation process is being led by the senior career's consultant for the new campus and their new East Careers Team. Employer and alumni consultation has been key to the process. The framework now also aligns with the new UCL Strategic Plan, 2022-27 and the new UCL education plan.</p> <p>The new RGU+ Framework the institution is attempting to provide all its students with access to 'credit bearing additionality'. This additionality encompasses a whole array of traditionally extra-curricular activities – such as volunteering, community engagement, placements, student mobility, and public service opportunities – which are being made accessible to all students through incorporation into the curriculum. The RGU+ Framework also promotes the embedding of the cross-cutting themes of sustainability, and entrepreneurship and innovation. The Framework builds upon the strong structural employability foundations that RGU has had in place for many years. These include a dedicated Business and Enterprise department, and a Centre for Employability and Community that fosters strong partnerships with employers and industry, coordinates active industry advisory boards, manages a broad array of work placements, and delivers and collates a local graduate leavers survey. This survey is run by the newly formed employer liaison team and enables RGU to harvest much earlier data than that provided by the UK- wide Graduate Outcomes survey.</p>	<p>audit process and the review of existing curricula</p> <ul style="list-style-type: none"> • New programmes can be a useful initial focus for the embedding of new employability initiatives and testing of employability frameworks • Alignment with institutional strategy is essential • Strong relationships between careers professionals and academic staff are key to securing buy-in at discipline level <ul style="list-style-type: none"> • Institution-wide approach with institutional buy-in is key • Strong employability structures and foundations are essential and are built up over periods of years. For example, strong industry boards that meet regularly, exist within all disciplines and have real input into course and programme design • Clear assignment of employability responsibilities and expertise to specific departments is key (eg. Business and Enterprise department, and the Centre for Employability and Community) • Work-based learning can be delivered at scale across whole institutions and has a big impact on employability • Local graduate tracking is still useful despite access to national data 	<p>research; strategic; programme development and review; reflection;</p> <p>community engagement; curriculum change; embedded employability; employer advisory boards; employer engagement; employer-university partnership; enterprise and entrepreneurship; extra-curricular; graduate attributes; graduate outcomes; institution-wide; key performance indicators (KPIs); placements; professional bodies; skills awards; strategic; work experience; work-based learning;</p>	<p>for Research-Based Education)</p> <ul style="list-style-type: none"> • Current implementation focused on one part of institution only • Requires senior management buy-in and investment to lead this scale of research and change <ul style="list-style-type: none"> • Early-stage initiative so limited evaluation of results • Significant investment of time and resources required to develop structural employability foundations that RGU enjoys (eg. dedicated departments; industry advisory boards etc..) • Embedding of high-level cross-cutting themes may lead to variation across disciplines
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<p>Surfacing Skills at the university of Leeds- An institutional approach</p>	<p>University of Leeds</p>	<p>This case study explores the University's institution-wide approach to 'surfacing skills' whereby students are supported to 'recognise, understand and apply the skills that their curricular experiences afford them'. This approach builds on the work of Kings College London on 'extracted employability'. This process is supported at Leeds by their new teaching and learning plan – the Curriculum Redefined programme - which they are using to review, reimagine and redesign their course and programme offering. It also aligns closely with the University's Student Opportunities and Futures Strategy (its equivalent of an Employability Strategy) which supports students to develop and articulate the attributes, skills and behaviours required to achieve their goals and aspirations. To support the curriculum review process the Leeds Capabilities Framework and Leeds Skills Matrix have been developed to identify the core academic, digital and professional skills required and to outline the 5 stage 'surfacing skills' process for curriculum review.</p>	<ul style="list-style-type: none"> • Alignment with institution-wide strategies and teaching and learning plans is essential to drive change • Combination of institution-specific skills frameworks, QAA subject benchmarks, and professional body requirements can be used to provide a robust skills framework for programme teams when reviewing their curricula • Research into students' understanding of and satisfaction with the skills developed through their studies was key (eg. new Graduate Voice questions) to drive curriculum change • Value of 'extracted employability' approach when reviewing existing curricula • Dedicated team, including Careers professionals, is essential to supporting programme teams through the review process (ie. Leeds Surfacing Skills team) • Employer and alumni consultation must be embedded throughout the process • A range of support packages, workshops and opportunities are required to raise awareness and understanding of the new approach to curriculum review across the institution • Space needs to be built into any strategic approach or framework to allow for discipline-level interpretation and specificity 	<p>careers education; curriculum change; curriculum change; diversity; embedded employability; employability framework; employability skills; employability strategy; evaluation; extracted employability; extra-curricular; graduate attributes; institution-wide; investment; learning and teaching; reflection; research; skills framework; staff training; strategic; surfacing skills;</p>	<ul style="list-style-type: none"> • Early stages of project implementation so limited quantitative evaluation of project's impact • Unclear to what extent process is informed by labour market information and local labour market need • Still to develop case studies evaluating success • Programme-level implementation is left to disciplines, so inconsistency of approach and delivery is likely; this may also lead to additional difficulties in evaluating impact at an institutional level
<p>Find out more: Sarah Wenham, Faculty Employability Manager [Surfacing Skills] (s.wenham@leeds.ac.uk) Karen Burland, Academic Lead – Student Opportunities and Futures (k.burland@leeds.ac.uk)</p>	<p>Gradcore & Kingston University</p>	<p>This is unique within our case study collection as delivered by an external organisation for universities. The Employability Healthcheck Model (EHM) takes</p>	<ul style="list-style-type: none"> • Support from external organisation to conduct the employability audit 	<p>curriculum change; embedded employability;</p>	<ul style="list-style-type: none"> • Cost of external audit

<p>Find out more: Louise Rutherford, Independent Researcher (louisehrutherford@gmail.com) Martin Edmondson, Managing Director, Gradcore (martin.edmondson@gradcore.co.uk)</p>	<p>3-6 months and is delivered by Gradcore. This audit enables universities to conduct an institution-wide assessment of current practice and data around employability performance and to establish an action plan for improvement (with a particular focus on Graduate Outcomes performance). Being externally driven removes some of the burden of staff capacity that often holds up this type of institution-wide planning and improvement whilst also providing a more objective external review of the institution's performance. Gradcore manage the entire process including providing the EHM framework, collecting and analysing data, engaging internal and external stakeholders, and even benchmarking against peers. Their EHM follows 3 stages: 1. 'Look in' covering curriculum mapping, focus groups, Graduate Outcomes data etc...; 2. 'Look out' covering horizon scanning, benchmarking, future labour market skills needs etc; 3. 'Look forward' covering strategic alignment, KPI setting, and recommendations for the institution. This particular case study focuses on their work with Kingston University where the EHM helped to secure significant new investment growing the Careers Service and Employability Service from 14 to 34 members over a period of 3-4 months. This growth including the creation of a brand-new central Placements and Partnerships team. The EHM places strong emphasis on contextualised Labour Market Information and aligns their recommendations with this.</p>	<p>alleviates problems around staffing capacity and objectivity; it also harnesses a well-established audit model and provides access to benchmarking against peers</p> <ul style="list-style-type: none"> • Provides robust, HE-specific methodology tried and tested across the HE sector • Lays out clear process for development of employability strategy drawing on a combination of stakeholder engagement and consultation, an assessment of institution performance against defined set of data points, and comparison with peer institutions • Value of detailed, data-driven employability audit in securing institutional investment • Understanding student satisfaction, graduate performance and labour market context is essential • Provides evidence-base for cross-institutional action, senior buy-in, investment and curriculum change 	<p>employability audit; employability framework; employability healthcheck;</p> <p>employability strategy; employer engagement;</p> <p>employer survey;</p> <p>employer-university partnership; evaluation; graduate outcomes; institution-wide;</p> <p>investment; key performance indicators (KPIs);</p> <p>labour market information (LMI);</p> <p>labour market skills; research; senior buy-in;</p> <p>stakeholder consultation;</p>	<ul style="list-style-type: none"> • Institutional openness to outside critique • Institutional buy-in to operationalise audit recommendations • Currently developing expansion of EHM to include greater emphasis on theories of change 	
<p>Working holistically to ensure excellence in graduate employability at Esade Law School Find out more: Eduardo Berché Moreno, Esade Law School Dean (eduardo.berche@esade.edu) Jorge Castineira, Appointed Esade Law School Dean and Associate Professor (jorge.castineira@esade.edu) Miriam Clota, Project Manager Esade Law School (miriam.clota@esade.edu)</p>	<p>Esade Business and Law School, Barcelona</p>	<p>This case study focuses on the key role of the Professional Careers Service (SCP) and Quality Unit at ESADE Law School in providing opportunities for careers education and placements and ensuring the workplace relevance of the Law curriculum. The case study outlines how these 2 careers and quality assurance departments have had a major impact on the embedding of employability into the curriculum at ESADE Law School. This employability activity and the institution-wide focus on experiential learning and practical experience has, in turn, impacted the salary and employment rates of ESADE graduates. The incorporation of work-related learning and placements, as well as close collaboration with industry</p>	<ul style="list-style-type: none"> • Regular and consistent use of experiential work-related learning, such as live clients and cases, is essential to student employability • Work-based learning, in the form of internships, has high impact and, in this instance, is mandatory for all students. It is managed by the Careers Service • Industry collaboration is key through employer panels and 	<p>career focus; careers education; embedded employability skills;</p> <p>employer advisory boards; employer-university partnership; experiential learning; graduate outcomes; industry challenges;</p> <p>institution-wide; placements; professional accreditation; professional bodies; work-based learning;</p>	<ul style="list-style-type: none"> • Unclear if careers education is optional, add-on or core embedded • Relatively small institution so is this model scalable? (eg. mandatory internships for all) • Yet to provide a more detailed evaluation of causal link between careers education/ placements and strong labour market

	<p>Maria Obiols, International Career Services and Human Resources Director (maria.obiols@esade.edu)</p>	<p>bodies through a professional council is key to this success.</p>	<p>professional council accreditation</p> <ul style="list-style-type: none"> • Careers education begins at the start of the admissions process and is heavily promoted and used throughout the programmes • Access to job and internships opportunities is available throughout their studies via careers portal 	<p>work-related learning;</p>	<p>performance of graduates</p>
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3. Discipline-led initiatives

As we move from institutional-wide employability projects to discipline-specific initiatives we are given a much more detailed insight into the administrative mechanisms that facilitate curriculum review and change. We also get a closer look at the specific types of credit-bearing employability activity that are being adopted as a result of this curriculum review process. These activity types tend to fall into two categories:

Skills development and reflection

The first category of employability training focuses on skills reflection and development. For example, Economics department at the University of Reading has developed new quantitative skills courses for Year 1 and 2 students to help them develop the key technical skills employers are looking for. These new skills are further enhanced through the addition of new careers education modules that raise awareness of labour market opportunities. This model is mirrored within the School of Natural and Environmental Sciences at Newcastle University where university service staff deliver embedded entrepreneurship and digital literacy skills training.

Providing support for students to reflect on their development of skills and even map these skills against professional standards is a feature of many of our case studies. Support for communicating these skills to employers is equally common.

Work-based learning

This support of university services in delivering employability within the curriculum is just as apparent in our second category of employability support – that of work-based learning. These employability initiatives tend to consist of either work placements or industry challenges provided by employers.

One of the simplest and most detailed examples of effective credit-bearing placements is provided by the Environmental Science and Sustainability programme at the University of Glasgow. This optional 8-week placement runs as an alternative to the traditional dissertation. Students are assessed through their submission of personal learning goals, work-based journals and a placement report. The impact of placements on students development of employability skills and workplace readiness are brought in to sharp focus through our case studies with the Esade Business and Law School in Barcelona and the White Rose Industrial Physics Academy. These case studies also provide a useful example of how placements can be delivered at scale, looking forward to our ‘paradigm shifting’ case study at the University of East Anglia, PEEP.

Our case studies with the White Rose Industrial Physics Academy and the partnership between Manchester Metropolitan University and the University of Manchester, show how multi-institution collaboration can add weight and scale to the process of engaging with employers. At this scale, changes to the curriculum can start to have a significant impact on universities ability to meet changing skills needs within the regional economy.

Our discipline-led case studies tend to reinforce the argument that there are a limited number of largely tried and tested formats for embedded employability. These formats are largely transferable to any higher education discipline. The other key message that comes through the case studies in this section, is that employers play an essential role. of employers in providing the labour market information required for curriculum review and as delivery partners in the

areas of work placements and industry challenges. In our case studies, relationships with employers are typically facilitated through academic networks, professional bodies and subject level working groups.

Category	Title [and contact details]	Institution	Summary	Key learning	Keywords/tags	Points for consideration if implementing
3. Disciplined initiatives – Within single university	<p>Avoiding a bolt-on approach: linking employability and sustainability in the curriculum in the School of Natural and Environmental Sciences</p> <p>Find out more: <i>Lee Higham, School of Natural and Environmental Sciences</i> lee.higham@ncl.ac.uk <i>Helen Atkinson, Julia Robinson, Abby French, and Andrew Beard, Members of the SNES Employability Working Group</i></p>	Newcastle University	<p>This case study explores the establishment of a School-wide Employability and Enterprise Working Group (EEWG) which brings academics, University Services, and careers staff together to enhance employability and enterprise provision across the School. There is a focus on future proofing student skills and “real world” problem solving supported by industry partners in the EEWG. The EEWG ensures that sometimes ad-hoc and disparate employability initiatives are brought together under a single umbrella. There is a focus on work-related learning through enterprise-focused industry challenges and a more proactive promotion of work-based learning, specifically placements and internships. The EEWG draws on labour market information from a range of regional and national graduate destination surveys. It also draws on support from core university services such as Careers, the Library and the International Office to manage and deliver skills and employability initiatives. These services provide both data-driven insights into current skills and employability provision as well as direct support for skills training and delivery.</p>	<ul style="list-style-type: none"> • Collaboration and coordination between academic staff and university services is key and driven by a regular, established, school-level working group • University services are key partners in the auditing of the curriculum for employability provision and skills gaps but also in the delivery of employability and enterprise-focused course content • Labour market information and direct employer collaboration is essential to effectively review course content and to support the delivery of work-related and work-based learning • Providing named staff with specific skills-focused roles (eg. Employability Champion; Digital Literacy Champions) can be an effective driver of leadership • Employability enhancement can be usefully driven by the subject review process • Industry and enterprise challenges can be an effective way to ensure all students have access to industry contact and authentic work-related learning (even where not all students can complete placements) 	<p>embedded employability; employability audit; employer advisory boards; employer-university partnership; enterprise and entrepreneurship; industry alignment; industry challenges; industry engagement; labour market information (LMI); labour market skills; real-world problems; university services; work experience; work-based learning; work-related learning;</p>	<ul style="list-style-type: none"> • Focus of evaluation to date appears to be identification of skills gaps in the curriculum rather than the impact of the initiatives themselves • This project was able to build on a pre-existing external review of subject areas within School and this provided the key impetus for change and enhancement • Lack of established skills framework and unclear precisely how in-demand skills from employers and future skills needs are established
	<p>Developing Graduate Attributes through a credit bearing placement course</p> <p>Find out more:</p>	University of Glasgow	<p>This case study explores the benefits of a credit-bearing placement scheme which takes place in Year 3 of a 4-year undergraduate environmental science degree. The 8-week placement is worth 60 credits and serves as an alternative to the</p>	<ul style="list-style-type: none"> • Traditional work-based learning in the form of placements remains one of the most high-impact employability interventions in terms of vocational 	<p>applied learning; dissertation embedded employability; employability framework; employability skills;</p>	<ul style="list-style-type: none"> • Currently, a limited amount of qualitative or quantitative evaluation data to assess the longer-

	<p>Bethan Wood, School of Interdisciplinary Studies, University of Glasgow (Bethan.Wood@glasgow.ac.uk)</p>		<p>traditional dissertation. The well-established nature of this placement scheme means that employer partnerships are strong and the local labour market for environmental jobs is well-served, with employers actively recruiting former placement students. The positioning of the placement in their penultimate year of study also means the students have a relatively large amount of subject-specific knowledge to bring to the employer. One extremely significant element of the placement is the taught course which accompanies it in Semester 2. The course both prepares students for the placement and supports them to write personal learning goals linked to the University's graduate attributes matrix and to maintain a regular work-based journal to track their achievement of these goals during the placement. Students are also helped to identify and contact placement providers drawing on the School's strong local partnerships.</p>	<p>preparation and skills development</p> <ul style="list-style-type: none"> • Placements when properly structured and reflected upon can provide effective, vocationally aligned alternatives to the traditional dissertation • There is significant value in aligning work-placed learning with existing institutional skills and attributes frameworks and using this as a starting point for student reflection • The development of template emails and more general support for students looking to secure their own placements, significantly increases the scalability and viability of work-based learning 	<p>employer engagement; employer partnership employer-university partnership; experiential learning; graduate attributes industry alignment; industry engagement; labour market needs labour market skills; placements reflection; skills framework; skills gaps; work experience; work-based learning workplace readiness;</p>	<p>term impact of these placements</p> <ul style="list-style-type: none"> • In terms of transferability to non-vocational subject areas, there may be a less clear labour market affiliation to identify potential placements and placement providers • Supporting traditional credit-needing placements remains time and staff intensive • Delivering placements at scale requires extensive employer relationships
<p>Developing professional skills portfolio for Psychology Students</p> <p>Find out more: Maxine Swingler, Psychology and Neuroscience Education Hub (Maxine.Swingler@glasgow.ac.uk)</p>	<p>University of Glasgow</p>	<p>This case study outlines the 10-credit professional skills portfolio course and assessment undertaken by Year 3 undergraduate psychology students and MSc Psychological Studies conversion students. The portfolio requires students to reflect on their development of key transferable skills aligned with British Psychological Society standards, and to align these skills with their future career goals. This case study focuses on 3 of the 5 potential portfolio assessments available to students – namely, 1. Graduate Attributes Reflection and SMART goal; 2. Volunteer/work reflection; and 3. Succeeding as a candidate (CVS and application). These assessments require reflection on the University's own graduate attributes framework. The case study links to a wealth of examples, templates and teaching tools used to support the professional skills portfolio course.</p>	<ul style="list-style-type: none"> • Short, 10-credit professional skills courses can be an effective mechanism to achieve skills awareness and career readiness for large cohorts • Portfolio assessments provide students with the opportunity to personalise their learning, reflect on their own unique personal and professional experiences, and communicate these skills to an external audience • Skills reflection assessments combined with goal setting and action planning support students to align their academic learning with professional standards and requirements • Importance of reflection on a broad range of transferable skills which equip students for a wide- 	<p>career focus; careers education; communicating skills; curriculum change; embedded employability; employability skills; evaluation; graduate attributes; graduate outcomes; industry alignment; job requirements; labour market skills; personal and professional development; personalised learning; portfolio; professional accreditation; professional bodies; reflection; reflective writing; skills confidence; skills framework; student feedback; volunteering; work placements;</p>	<ul style="list-style-type: none"> • Careers focus is relevant to UK rather than international careers, although could be adapted • Whilst rationale for the development of assessment types and approach is provided there is limited evaluation of learning and assessments on students provided in this case study • Self-contained skills reflection course so could be viewed as less holistically embedded employability and may be perceived by students as less discipline-relevant 	

	<p>Embedding employer informed applied research and quantitative skills into the Economics curriculum</p> <p>Find out more: Sarah Jewell, Department of Economics, University of Reading (s.l.jewell@reading.ac.uk) Costanza Biavaschi, Norwegian University of Science and Technology (NTNU) Vicki Wiles, Careers Consultant, University of Reading</p>	<p>University of Reading</p>	<p>This project was initially driven by an Economics subject review and the development of a new University-wide curriculum framework. The aim was to embed practical research and enquiry skills, including quantitative skills, into the economics curriculum through a 'surfacing skills' approach. A key focus was on the skills sought after by economics employers, including the application of economic tools and data skills. This project led to significant curriculum change at levels 1 and 2, with the addition of quantitative focused analysis using Excel and new careers education modules. The project was supported by the University's new institution-wide curriculum framework which contains a set of programme principles setting out the attributes expected from graduates. These attributes include the research and enquiry skills being focused upon in this project. The framework focuses on the incremental development of these skills across the entire programme. Research and enquiry skills are also a key feature in the University's graduate attributes and were a central focus of the review carried out within economics.</p>	<p>range of potential careers</p> <ul style="list-style-type: none"> • Value of institutional skills and graduate attributes frameworks as the basis for reflective activities and to demonstrate the transferability of discipline-specific learning • Professional skills courses supporting student reflection can be delivered online or face-to-face providing significant opportunities for scaling • Portfolio and reflective assessment approach covered in this case study is entirely transferable to other discipline areas • Importance of focus on whole programme and incremental development of skills on a "just in time" basis • Employers are looking for the application of knowledge and skills to a range of different "real world" contexts and problems • Value of embedded careers education in years 1 and 2 to inform students' academic and professional development choices in year 3 • Academic networks, such as the Economics Network, can be useful sources of skills and employer feedback • Value of small-scale focus groups in establishing student, staff and employer views on curriculum mapping and skills coverage • Opportunities to draw on extra-academic eLearning modules and 	<p>applied learning; careers education; curriculum change; Economics embedded employability; employability skills; employer survey; evaluation; programme development and review; real-world problems; research; skills gaps; skills mapping; surfacing skills; university services; workplace readiness;</p>	<ul style="list-style-type: none"> • So far, little evaluation of the impact of this activity on student skills acquisition or labour market performance • Lack of detail on curriculum redesign process • Student, staff and employer feedback largely qualitative and via small-scale focus groups (ie. no recourse to institutional or national surveys, or labour market information)
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	<p>Embedding the development of Graduate Attributes into course design within an undergraduate Medical Curriculum</p> <p>Find out more: Amanda Britten, School of Medicine, Dentistry and Nursing, University of Glasgow (amanda.britten@glasgow.ac.uk)</p>	University of Glasgow	<p>This case study explores the development of a combined employability and Forensic Toxicology 'Student Selected Component (SSC)' module within the undergraduate Medical curriculum. This Year 2 toxicology module requires students to reflect on the alignment between their academic learning, the University's graduate attributes framework, and the broader 'outcomes for graduates' expected of them by the General Medical Council. The module attempts to address the current lack of focus on skills and over-focus on knowledge and content within the Medical degree. The module and its assessment attempts to enhance students' understanding of the relevance of these skills and attributes to their longer-term careers and the medical profession. 20% of the final assessment is weighted to a 1000-word assignment which requires the student to reflect on their development of graduate attributes both in relation to the Forensic Toxicology course and their other experiences through the SSC. They then use these reflections to generate a personal development plan for the remainder of their Year 2 and beyond.</p>	<p>platforms (eg. LinkedIn) to support students' development of applied skills</p> <ul style="list-style-type: none"> • Reflection on skills and attributes can sit well alongside subject-specific learning and can be scaffolded through reflective assignments • Integration of reflection on skills within one particular course can produce high levels of engagement and high-quality assessments but must, ultimately, lead to broader integration and wider programme review • Activities which promote students reflection on skills and attributes can also support student reflection on professional body requirements and standards, and the relationship between their academic learning and the broader profession • Introducing new types of reflective assessment can be challenging for students unfamiliar with these formats and formative feedback is key to successful adoption • Reflection on the alignment between institutional skills and attributes frameworks and external professional requirements is valuable for staff and students • The value of reflection on the development of skills and attributes is not always immediately clear to students but may require a longer time frame 	<p>communicating skills; embedded employability; employability framework; employability skills; graduate attributes; labour market skills; personal and professional development; personalised learning; professional accreditation; professional bodies; programme development and review; reflection; skills framework; surfacing skills; workplace readiness;</p>	<ul style="list-style-type: none"> • Evaluation is limited and short-term, so unclear to what extent students are aware of the longer-term relevance of these attributes and skills • Currently, one-off intervention at Year 2, so unclear as to longer-term impact on students' attitudes to and understanding of skills • Evaluations seem to show a relative ambivalence of students towards the graduate attributes reflection process and their relevance at this point in their degree • Challenge of succeeding with this new type of reflection in one only small course at one point in the medical curriculum
<p>3. Discipline-led initiatives – Across</p>	<p>Cross-institutional collaboration assisting Physics</p>	White Rose Industrial Physics	<p>This case study explores the cross-university physics network, WRIPA, and its significant development of</p>	<ul style="list-style-type: none"> • Regional, cross-institutional collaboration of this 	<p>applied learning; careers education;</p>	<ul style="list-style-type: none"> • Evaluation data is hard to extrapolate across the different

multiple universities	<p>graduates into technical careers</p> <p>Find out more: White Rose Industrial Physics Academy Andrew Mizumori Hirst (andrew.hirst@york.ac.uk) Sophie Packman (sophie.packman@york.ac.uk) Thomas Krauss (Thomas.Krauss@York.Ac.Uk) Beth Medley (beth.medley@york.ac.uk) David Mowbray (d.mowbray@sheffield.ac.uk) Alastair Buckley (alastair.buckley@sheffield.ac.uk) Anne Booth (anne.booth@sheffield.ac.uk) Samantha Pugh (s.l.pugh@leeds.ac.uk) Alison Voice (a.m.voice@leeds.ac.uk) Siddeequah Azmi (s.m.azmi@leeds.ac.uk) Richard Campion (richard.campion@nottingham.ac.uk) Emanuele Verrelli (e.verrelli@hull.ac.uk) Sergei Zarkov (s.zharkov@hull.ac.uk) Olga Fern Holz (olga.fernholz@nottingham.ac.uk)</p>	Academy (WRIPA)	<p>work-related, skills-focused, industry aligned undergraduate education. The initial impetus for the Academy was a recognition of the significance and size of the Physics-based technical industries, both nationally and regionally, and the lack of qualified, work-ready graduates. There was also a recognition that physics students connect poorly with central careers services and are unaware of the jobs available in the technical sector, particularly with SMEs. The Academy has driven a significant curriculum transformation based on the expansion of year in industry and work placement modules, skills training, industrial projects, and technical employer input into credit-bearing teaching. In addition, they have developed a range of extra-curricular career support tools to introduce students to technical skills sector and jobs, and events such as the WRIPA Physics Industry and Placement Fair, where students can meet employers and secure work opportunities. The Academy measure student and employer engagement with their activities and student progression into graduate-level technical careers. Data from 20/21 suggest that students who undertake year in industry or Physics into work placements are more likely to transition into technical, graduate-level jobs. Generally, WRIPA interventions appear to raise student awareness of physics technical careers and how their degrees align with industry, more generally. Employer testimonials appear to indicate a high-level of satisfaction with engagement with WRIPA activities and students.</p>	<p>type offers the advantages of scale and cross-disciplinary alignment. It can also be more effective in stimulating curricula change and harnessing employer engagement</p>	<p>curriculum change; embedded employability; employability skills; employer engagement; employer-university partnership; evaluation; experiential learning; extra-curricular; government; graduate attributes; graduate outcomes; industry alignment; industry challenges; industry engagement; labour market skills; learning and teaching; placements; real-world problems; reflection; university services; work-based learning; workplace readiness; work-related learning</p>	<p>academy members as they have slightly different ways of measuring impact</p> <ul style="list-style-type: none"> • Tends to focus on the development of skills rather than the communication of skills to employers • Lack of detail on the overall administration and coordination of the Academy, so difficult to assess cost and resource required
	<p>Graduates for a Greater Manchester: enhancing graduate skills and employability in the Tech and Creative Industries</p> <p>Find out more: Adam Hughill, Manchester Metropolitan University (a.hughill@mmu.ac.uk) Cerys Jones, Manchester Metropolitan University (cerys.jones@mmu.ac.uk) Fiona Christie, Manchester</p>	Manchester Metropolitan University and University of Manchester	<p>This case study explores a cross institutional partnership between two university careers services designed to develop and gain recognition for students' tech and creative digital skills. In so doing, the project aimed to enhance employment outcomes for students. These aims were delivered through two sub-projects- 'RISE Digital' (MMU) and the 'Digital Capabilities and Careers Self-Efficacy' (UoM). The projects were initially targeted at local students and placed a strong focus on developing greater connectivity between participating universities, local tech and creative digital companies and industry bodies in the city region. The enhancement of student skills was designed to support</p>	<ul style="list-style-type: none"> • Applying learning from the pandemic, hybrid delivery of employability activity was found to be preferable to fully online – providing scalability but also maintaining face-to-face contact • The projects had measurable impact on the development of closer relationships with sector employers and led to increasing levels of employer input to the curriculum 	<p>applied learning; career focus; careers education; curriculum change; embedded employability; employability skills; employer engagement; employer-university partnership; evaluation; graduate outcomes; industry alignment; industry engagement; labour market information (LMI);</p>	<ul style="list-style-type: none"> • Need to expand the range and type of employer partners • Need to develop more insights into the 'demand side' of the labour market within the tech and creative digital industries • Whilst the projects evidenced a clear impact on increases in confidence and career self-efficacy amongst students, the impact on career intentions and career

	<p>Metropolitan University (f.christie@mmu.ac.uk)</p>	<p>economic growth in the local tech and creative digital sectors whilst also filling a gap in terms of labour force skills. Underpinning the projects' specific focus on digital skills development was a broader focus on the issues of employability, career self-efficacy and confidence. There were marked differences in approach between the two institutions' projects. RISE Digital focused on the award of academic credit for specific traditionally extra-curricular activities such as events, self-directed online skills courses and internships. In contrast, the starting point for UoM's Digital Capabilities and Careers Self-Efficacy project was the development of tailored, credit-bearing skills modules for inclusion in the BSc Psychology programme. With the exception of professional certifications, engagement targets for both projects were vastly exceeded. This may in part have been a result of student desire to engage over the COVID period but was a major success of the project.</p>	<ul style="list-style-type: none"> • Engagement levels with the project highlighted a strong demand from students to participate in digital skills and employability activity • Student engagement with the projects showed a clear impact on student confidence and self-efficacy markers • Highlights the value of compulsory, core careers education modules (eg. short work placement module or the career management unit at UoM) 	<p>labour market skills; placements; professional bodies; reflection; regional; skills confidence; university services; work experience; work-based learning;</p>	<p>destinations was less clear</p>
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4. Paradigm shifting initiatives

This final category of case studies moves our discussions into the future of what embedded employability might look like. Whilst these 'paradigm shifting' may be no harder to achieve or qualitatively better than the institution-wide or disciplinary initiatives outlined above, they signal a shift in the institutional structures which support employability and a response to some of the market forces challenging the HE sector.

For the University of East Anglia, these challenges took the form of scaling the number of placements they could provide and providing those placements against the backdrop of COVID. Whilst virtual internships have become almost commonplace in the post-pandemic world of today, this form of structured, credit-bearing, professionally accredited e-Placement capable of scaling to an ever-increasing student body is extremely significant.

Equally significant, is the co-location of business, technology and university exemplified in the case studies from the Edinburgh Futures Institute and the TecnoCampus. These examples offer a direct response to labour market and governmental demand for technical skills and economic growth, and demonstrate the closest possible partnership between HE and industry we have seen so far in our case studies. Entrepreneurship and real-world challenges are integral to the whole portfolio of programmes delivered by these two university institutes. Whilst the TecnoCampus offers a vocational training with immediate and visible outcomes in the number of start-ups its incubators support, the EFI offers us a new starting point for the focus of academic learning – the cross-disciplinary societal challenge.

All three of these examples, offer us a reimagining of the purpose, value and focus of HE.

Category	Title [and contact details]	Institution	Summary	Key learning	Keywords/tags	Points for consideration if implementing
4. Paradigm shifting initiatives	<p>The Peer enhanced e-placement (PEEP): a case study exemplar for online work-based learning placements</p> <p>Find out more: Lisa Taylor, Faculty of Medicine and Health Sciences,</p>	University of East Anglia	<p>This case study explores the transformation of traditional healthcare work placements into peer-enhanced e-Placements. Responding to challenges of staff capacity and the COVID pandemic, the team developed a new online model of student work-based learning placement called "The Peer Enhanced e-Placement (PEEP)" in 2020. Building on the initial pilot the e-Placement has seen</p>	<ul style="list-style-type: none"> • Traditional work-based placement learning outcomes can be met by online e-Placements • E-Placements offer a range of significant advantages over traditional physical placements, including scalability, use of 	<p>applied learning; careers education; curriculum change; embedded employability; employability skills; employability skills; employer engagement;</p>	<ul style="list-style-type: none"> • The response from staff employing the e-Placement model is extremely positive. Student evaluation of the impact of PEEP is also provided but less extensive

<p>University of East Anglia Lisa.Taylor@uea.ac.uk Gilly Salmon, Professor, CEO and Principal Consultant, Education Alchemists Ltd gillysalmon@educationalchemists.com</p>		<p>further development as a more sophisticated and extensive eLearning experience and has been rolled out to 75 placement teams and 2000 students spanning 20 disciplines. This scalable reimagining of one of the highest impact, tried and tested forms of work-based learning has the potential to radically change the way credit-bearing placements are delivered across the HE sector. This project draws on collaboration between HE providers and employers to design and deliver authentic materials, activities, and learning events in supporting students' development of key employability skills and attributes relevant to current and future workplaces.</p>	<p>existing VLE infrastructure, tailoring to disciplinary and employer needs, development of digital literacy skills, and team-based skills and learning through a peer approach</p>	<p>employer-university partnership; evaluation; experiential learning; graduate attributes; graduate attributes; industry challenges; learning and teaching; online learning; peer learning; placements; professional accreditation; professional bodies; programme development and review; real-world problems; scalability; skills gaps; student feedback; vocational; work-based learning; workplace readiness; work-related learning;</p>	<ul style="list-style-type: none"> • Requires work with employer partners to design and deliver e-Learning activities • Further evaluation of the comparative impact on employability skills and workplace preparedness between online and face-to-face placements would be useful
<p>Edinburgh Futures Institute: equipping Students for complex, unknown futures through radical curriculum design</p> <p>Find out more: Gavin McCabe, Head of Employability Consultancy, University of Edinburgh gavin.mccabe@ed.ac.uk Andy Cross, Senior Lecturer, School of Geosciences, University of Edinburgh Andrew.Cross@ed.ac.uk</p>	<p>University of Edinburgh</p>	<p>This case study explores the development of a series of new postgraduate and undergraduate interdisciplinary degree programmes grouped under the banner of the Edinburgh Futures Institute (EFI). This development is part of the institution's new Curriculum Transformation programme designed to ensure that programmes meet the needs of future students and support the development of future learning, ethical global citizenship, and enhanced employability. The EFI's new programmes are designed to develop key employability skills and provide collaborative experiences, focused on 'global and local challenges, and linked to cutting-edge research and the big future issues facing our planet and societies'. This problem-based, experiential approach to student learning with its strong focus on challenge-based education requires an interdisciplinary curriculum and access to a range of disciplinary tools and</p>	<ul style="list-style-type: none"> • New programmes can be a useful initial focus for the embedding of new employability initiatives and testing of employability frameworks • Employability initiatives should be underpinned by labour market research into future graduate skills and mindsets • The positioning of the EFI within the broader project of organisational change and curriculum transformation is key to securing buy-in and change • Senior management buy-in and 	<p>Research; interdisciplinary; challenge-based; problem-based; skills; graduate attributes; labour market information; future skills; senior buy-in; investment; employability skills; graduate attributes; employer engagement; civic engagement;</p>	<ul style="list-style-type: none"> • Early-stage initiative with postgraduate programmes launched 22/23 and undergraduate programme yet to launch, so no detailed evaluation of student impact or satisfaction to date • Interdisciplinary nature of teaching could provide challenges for institution and staff operating within financial and research disciplinary silos • Student appetite for non-traditional, interdisciplinary

	<p>Tecnocampus: an entrepreneurial university designed to create entrepreneurial students with strong connections to relevant industries</p> <p>Find out more: Anahí Moyano Larrea, Head of Entrepreneurial University, TecnoCampus, University Pompeu Fabra (amoyano@tecnocampus.cat) Rosario Scandurra, Department of Sociology, Universitat Autònoma de Barcelona (rosario.scandurra@uab.cat)</p>	<p>The Campus Emprendor, Barcelona.</p>	<p>The TecnoCampus – a university and technology park - combines a business and startup community with a university. It forms part of the Pompeu Fabra University. Aimed at promoting entrepreneurship and business growth, the TecnoCampus delivers academic programmes and activities that develop entrepreneurial culture and skills whilst supporting startups with social and sustainable impact. The programmes include entrepreneurial courses, entrepreneurship-focused study-abroad programs, and a Master’s Degree in Entrepreneurship and Innovation. The success and impact of TecnoCampus is assessed through the percentage of final degree projects which focus on entrepreneurship, the number of projects and participants in the pre-incubator stage, and the number of successful startups within their incubators. It encompasses three schools - Health, Technology and Business - and all students are required to take a course in entrepreneurship whilst also having access to curricular and non-curricular entrepreneurial education and training. Their courses and programmes focus on skills and competencies drawn from the European Entrepreneurship Competence Framework (EntreComp) and are delivered through bootcamps, challenges, case studies, gamification, outdoor training, peer coaching, digital simulations, co-creation, and even role-playing games. Start-up training and business</p>	<p>methodologies. Student reflection, hands-on practical learning, professional skills training and contact with employers and communities permeates the new curriculum.</p> <p>investment is required to drive forward this level of radical curriculum change</p> <ul style="list-style-type: none"> • The transition to challenge-based, interdisciplinary learning could signal a potential sea-change for the sector • Moving out with traditional research boundaries could signal a big shift for academic staff as well as students • A curriculum transformation project of this scale required substantial investment to gather research into teaching and learning, future teaching trends, and labour market skills needs • Quality assurance is managed by a discrete department - the TecnoCampus Quality Service - responsible for planning, setting objectives, evaluating, measuring, and making proposals for improving quality • The integration of university learning into a business-focused, start-up ecosystem provides one of the most integrated examples of industry-university delivery. It also demonstrates the value of students being embedded within a specific (entrepreneurial) cultural context • The boundaries between university learning and business entrepreneurship and start-up culture appear to be fluid and permeable providing a holistic, real-world, applied experience for students • The Campus draws on an internationally recognised framework of skills 	<p>programmes is untested</p> <p>Start-up; entrepreneurship; industry collaboration; industry-university co-location; economic growth; quality assurance; incubator; skills framework; international; networking;</p>	<ul style="list-style-type: none"> • This is a private university, so arguably working to a different set of imperatives to publicly funded HEIs, including a stronger focus on graduate labour market success • Evaluation data provided to date focuses on quantity of activity delivered rather than impact on skills development, graduate job destinations or student satisfaction • The focus on entrepreneurship and applied learning provides a particular cultural and commercial context not necessarily transferable to other disciplines • The focus on business growth and related opportunities for funding and infrastructure support (in this instance from the local region) do
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	<p>incubator support is accompanied by multiple opportunities for students to network with early-stage start-ups and established businesses. The TecnoCampus also provides careers guidance, internships, and a job board for advertising job vacancies.</p>	<p>and competencies providing structure for their course and programmes and a trans-national transferability</p> <ul style="list-style-type: none"> • Many of the learning formats – from challenges and peer learning, to internships and case studies - are recognisable and relevant employability activities for a broad range of disciplines 	<p>not necessarily exist for other discipline areas</p>
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