

Enhancing employability through enterprise education: Examples of good practice in higher education



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I. Introduction

Graduates need the skills, capabilities and attributes to enable them to be successful in an ever changing global economic environment. Increasingly, employers expect graduates to be innovative, adaptable, resilient, and flexible and have an enterprising mind-set. Enterprise education supports employability by enabling students to develop the characteristics, attributes and skills that will enable them to make effective contributions to the economy and society. Enterprise education clearly links to employability and as such, should be at the core of employability strategies.

The Wilson review (2012)¹ acknowledged the importance of enterprise education for students in higher education and the Quality Assurance Agency for Higher Education (QAA) produced guidance to help those seeking to embed enterprise and entrepreneurship across the curriculum. It defined enterprise education² as “*the process of equipping students (or graduates) with an enhanced capacity to generate ideas and the skills to make them happen*”. This equips students with the attributes, capabilities and skills that enhance their employability and enable them to be entrepreneurial in a range of settings including employment.

The value of enterprise education is clear. However, the BIS impact study (2013) of enterprise and entrepreneurship education in HE³ suggested that the majority of enterprise education provision tends to traditionally be based in business subjects. This was also commented on by the all-party parliamentary group for micro-businesses in its report *An Education System fit for an Entrepreneur. (2014)*⁴ This recommended that HEIs should be encouraged and supported to incorporate embedded enterprise education so that all students are encouraged to consider themselves as enterprising individuals. The QAA Scotland report *Creating Entrepreneurial Campuses (2014)*⁵ suggested that entrepreneurship should be taught in an interdisciplinary and holistic way and that placing enterprise education outside a business school environment can be more effective in influencing and engaging the entire university with this. In his report *Enterprise for all (2014)*⁶ Lord Young also stresses the importance of enterprise education socially and economically and its relevance to all students in higher education:

“All university students should have access to enterprise and entrepreneurship, including a growing ambition amongst young people to develop their interest in social enterprise. In higher education, enterprise should extend to all areas of faculty and study, and I am encouraging universities to have an elective enterprise module available to all students.”

This HEA resource seeks to share, disseminate and encourage good practice in enterprise education across the disciplines. The case studies provided represent HEIs across the UK and provide diverse and innovative approaches to addressing enterprise education at a discipline and university level. Profiles of organisations that can support HEIs in addressing enterprise education are also included. The case studies are concise to ensure that information is accessible as possible, however, website and contact details have been provided so that further information can be obtained.

Information on HEA support and access to resources can be found at www.heacademy.ac.uk.

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¹ Wilson, T(2012) A Review of Business-University Collaboration. London.

² QAA Enterprise and Entrepreneurship Education: guidance for UK higher education providers (2012). P.2

³ BIS Enterprise Education Impact in Higher and Further Education (2013). London.

⁴ All Party Parliamentary Group for Micro Businesses (2014) An Education System fit for an Entrepreneur

⁵ QAA Scotland. (2014) Creating entrepreneurial campuses: a report for Scotland

⁶ Lord Young Report (2014) Enterprise for all: the relevance of enterprise in education. P6

2. Case studies of good practice: summary

Name	Project	Discipline and/or approach	Page
Universities of Aberdeen, Edinburgh & Stirling	<i>Making the most of Masters</i>	Masters students	6
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University of Exeter	<i>'Think it. Try It. Do It'</i>	University-wide approach	20
Glasgow Caledonian University	<i>Communication Techniques that Enhance and Internationalise Enterprise Projects: The World of Wikis</i>	Management: Innovation, Operations & Strategy	21
University of Huddersfield	<i>The 24-hour challenge: creating a multi-discipline environment for design and entrepreneurship in Engineering and Design</i>	School of Art, Design & Architecture and School of Computing and Engineering	22
University of Leeds	<i>Music With Enterprise</i>	<i>School of Music</i>	23
University of Leeds	<i>'Enterprise & Innovation' and 'Personal & Professional Development'</i>	University-wide approach	24
Liverpool John Moores University	<i>Social Enterprise and Entrepreneurship Module</i>	School of Humanities and Social Science	25
London Met University	<i>Business Development module</i>	Undergraduate Degrees in Sports Science, Sports Therapy, Sport Psychology & Coaching, Sports Science & PE, Sports & Dance Therapy	26
University of Manchester	<i>Life Science Enterprise Project (LSEP)</i>	Faculty of Life Sciences (FLS)	27
Newcastle University	<i>Music Enterprise Module</i>	International Centre for Music Studies	28
Plymouth University Business School	<i>Inspiring Futures - Entrepreneurship in Action</i>	All stage one undergraduates	29
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Sheffield Hallam University	<i>Work-based Project Module - Working the Venture Matrix</i>	Department of Humanities	35
Southampton Solent University	<i>The Solent Capital Compass Model: a unified framework for enterprise and employability</i>	University-wide	36
Staffordshire University	<i>Staffordshire Graduate Employability Project (SGEP)</i>	University-wide approach (undergraduates)	37
Teesside University	<i>The Teesside Student</i>	School of Science and Engineering	38
The University of the Arts London	<i>Developing Enterprise Skills in Art and Design HE</i>	Postgraduate Certificate Fashion & Lifestyle Journalism	39
University of Ulster	<i>Business Launch Pad (BLP)</i>	University-wide approach	40
University of Wales, Trinity St David.(UWTSD)	<i>Enterprise education needs enterprising educators: inspiring new teachers through formal / initial teacher training provision</i>	Postgraduate Certificate in Education (PGCE)/Post Compulsory education & Training (PCET)	41

3. Case Studies of Good Practice

Making the Most of Masters

University of Aberdeen, University of Edinburgh & University of Stirling.

The 'Making the Most of Masters' (MMM) is a partnership between the Universities of Aberdeen, Edinburgh, and Stirling (www.masterprojects.ac.uk) - it enables Masters students to enhance their enterprise education by undertaking dissertation projects in collaboration with industry. MMM assists taught postgraduate programmes by providing a framework of support, based on good practice, for the successful implementation of Work Based Projects (WBPs) as an alternative to a traditional dissertation. This support follows two main strands - operational and educational - considering issues from finding organisations willing to offer projects, through to supporting students and organisations throughout their engagement. Procedures are adaptable across disciplines and key economic sectors in Scotland with projects also being undertaken overseas.

MMM develops projects that are suggested by external organisations/enterprises. It is different from work experience or traditional placements, because it is core to the curriculum and must fulfil Masters dissertation assessment criteria. It uses a fluid definition of WBPs as students can be based full-time in the workplace or university or most commonly a mixture between the two.

MMM Project Co-ordinators develop communication between all stakeholders and have developed a dedicated toolkit of resources that includes curriculum embedded workshops and online resources in addition to a full suite of student support. Sessions are flexible depending on needs and include topics such as employability, confidence building, career development, and networking. All resources were created on behalf of the Scottish HEI sector and are thus free for adoption and adaptation by other HEIs and organisations. All provision is designed for Masters education (SCQF level 11) and adapted to SCQF level 12 - it may also be suited to level 10.

Each student takes responsibility for completion of a project agreement that includes: an outline of all stakeholders' roles and responsibilities, required outcomes, a detailed project proposal and formal aspects such as health and safety, and non-disclosure.

Contribution to student employability:

The MMM process instils personal responsibility in learning and encourages self-reflection thus equipping students with the tools required to undertake continual self-development as they progress through their career. Working directly with an organisation students gain confidence in their skills and readiness for work and allows them the opportunity to experience an industry or work area first hand. Furthermore, they begin to develop their own professional network. WBP's are 'real' allowing the student to apply their knowledge to, and gain practical experience from a project which has real impact on the host organisation. The skills and experience they can gain from this are invaluable to students. The WBP is of course a valuable addition to a student's CV and will provide an advantageous experience to draw upon during any recruitment process.

Outcomes and impact:

- All three HEIs have seen an annual increase in numbers of WBPs, with more than 500 WBPs being undertaken to date (excluding 2013/14) and involving more than 300 organisations.
- The partnership has resulted in further benefits to students through greater sharing of knowledge and ideas, the sharing of projects and the pooling of resources.
- A 'toolkit' has been developed which includes advice, guidance and template documents to support and facilitate the process of embedding WBPs in the PGT curriculum.

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Culturing Enterprise Skills in Life Science Students

BSc Bioscience

University of Aberdeen

The [Scottish Institute for Enterprise \(SIE\)](#) in partnership with the School of Medical Sciences and the University of Aberdeen's Careers Service deliver an on-campus workshop for approximately 350 first year bioscience students during the second-half session course, 'The Cell'. The session is delivered within the framework of the [Aberdeen Graduate Attributes](#) and is designed to give students an opportunity to experience and reflect upon a range of enterprising behaviours, attitudes and skills within the academic curriculum.

The workshop is based around the 'SIE Ideas Lab'[™] in which students are set a real-life challenge rooted in a real social and community problem. In this case, the challenge is to explore how society can deal with the growing number of dementia sufferers and how they can play a more active part in everyday life.

Using some of the key processes of design thinking, students are asked to identify the true extent of the problems faced by dementia sufferers, and to put themselves in their shoes and in the shoes of their carers. Working in small groups, students develop a solution to one of the problems they have identified within this scenario and develop their idea into a possible pitch. The workshop finishes with a period of reflection which encourages students to think about how they approached the problem and how they communicated and worked within their small groups. It aims to support students at an early stage in their degree programme to start developing core behaviours for enterprise through bespoke learning activities.

Contribution to student employability:

It is evident from the session that students are beginning to reflect upon, review and evaluate their ideas. This approach enhances students' employability as it helps them to understand how they are learning and improves their general skills for study and career management.

After an Ideas Lab[™], some students have also approached staff for assistance with the development of a business idea. In those instances, the SIE Business & Innovation Advisory Team provides support in areas such as rapid prototyping and early market testing.

Outcomes and impact:

Evaluation conducted at the end of the sessions provides data to demonstrate impact and also evidence-based feedback to improve future enterprise teaching sessions. Students are encouraged to complete questions which focus on their enterprise learning from the workshop and their future enterprise behaviour. In particular, students provide written feedback on what they plan to do as a result of participating in the enterprise workshop session. Key themes highlighted by the students include: seeking careers guidance from the University's careers service and planning on how to develop their employability skills. It is also encouraging to note from the feedback that students recognise their development as a result of engaging in the enterprise session. In particular, students are more enterprise aware and are able to identify a range of skills underpinning their enterprise thinking. These include problem solving, communicating ideas and information, and team working skills.

The Ideas Lab[™] supports students with the development of, and reflection on, their employability skills throughout their time at University. Evaluation data suggest that student feedback is positive and our strategy to actively engage a large number of students in enterprise education at an early stage in their degree programme is both practical and valued.

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Enterprise by Design (EbD). Cross-discipline programme

Bangor University

Enterprise by Design (EbD) is a 10-week programme of three-hour workshops, presentations and a review, which brings students together from different disciplines to collaborate, design and propose a range of innovative solutions to a challenge set by a commercial partner. Teaching was delivered by academic and commercial specialists. The student cohort comprised 12 postgraduate facilitators and 48 undergraduates: 12 from each academic school. Two types of teams were formed, each with a distinctive role and focus:

- **Specialist teams:** five teams of 12 students from the same discipline with two postgraduate facilitators per team. Students discussed the relevance of their discipline to the brief, decided where they could add value and defined and communicated specialist criteria to apply to the products developed in their team.
- **Multi-disciplinary teams:** 20 teams of five students from different disciplines, with each postgraduate facilitator supporting two teams. Students created product concepts and developed them from a rough concept through to pitching a well-formed proposition to a panel.

Alternating between multi-disciplinary teams and specialist teams, students collaborated on a sequence of creative tasks: for example, to produce a functional prototype of their product, and shoot a promotional video that identified the problem experienced by the intended user. Students translated knowledge from within their academic domain to students from other domains - this prepares them to work with and understand students from other specialisms. The programme was comprised of 10 sessions:

01: b. Inspired (Introduction and expectations). Understand what we will do and why. Understand the company, the market, the design brief.

02: b. Informed (User and product perspective). Understand the users and existing products. Identify user pain points through scenario creation

03. b. Creative (generative algorithms). Create physical prototypes using card and paper folding techniques. Demonstrate how designs can emerge from simple rules and interactions.

04. b. Sustainable (Material focus + triple helix). Understand what it means to be a sustainable business. Select sustainable materials for use and scale up of prototype, where appropriate.

05. b. Marketable (Market and competition). Understand the market and customer/ user. Create a video that conveys the pain point and USP of concept created.

06. b. Critical (Advert and presentations). Present initial product concepts using videos and prototype for critique. Present discuss and clarify the specialist criteria.

07. b. Solvent (Financial modelling). Understand essentials of financial forecasting. Create outline plan for business development.

08. b. Productive (Develop prototype and presentation). Prioritise work by identifying strengths and weaknesses. Trade tokens to buy time with specialists, depending on priorities

09. b. Convincing (Pitch to expert panel). Students pitch ideas to Expert Panel.

10. b. Reflective (Review and feedback). Facilitated review of programme and learning.

Contribution to student employability:

Enterprise by Design is recognised within the Bangor Employability Award.

Outcomes and impact:

The programme provides a focus for embedding enterprise and design activities within the curriculum; provides students with an opportunity to experience the challenge of working within a multi-disciplinary team; develops a flexible framework for delivering credit-bearing multi-disciplinary modules; develops a competence in delivering inter-disciplinary, experiential learning activities; and engenders a more collaborative and commercial outlook among participating academics.

For further Information contact:

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Creative Enterprise Module

BA Commercial Music

Bath Spa University

Commercial Music at Bath Spa University has been engaging students in entrepreneurial activities within the curriculum since 2005. The work undertaken is a rich resource of entrepreneurial stories, including runaway successes, middle ground achievement and the occasional fiasco.

Currently more than 400 students across the subject area have been involved in various entrepreneurial projects. The only stipulation is that the business idea has to have some connection with music. Projects have ranged from a bicycle-powered festival (**Penny Farthing Festival**) to an app of accapella insults in three-part harmony (**Barbershock**).

One key fact: the students manage the risk and create the IP themselves. The most successful project to date generated £10,000. The least successful financially, lost £3,000.

Students organise themselves into small teams, write a business plan for their chosen music-related project and then work on creating this project throughout the year: this involves them in raising and making money, and engaging in new and existing markets. Students are encouraged to think imaginatively about potential commercial ideas, manage risk and reward, and develop future business ideas. Their journey is often illustrative.

They learn the advantages of networking as well as delivering and managing their material. They are subject to peer group review as well as tutor and business support.

All students can apply for seed funding, but this is a competitive and real world process which is judged independently of the course leader. The funding pot totals £1,500 and, should the student bid be successful, the average seed funding per project is around £150.00. It is important to note that not all projects are successful in their applications for funding and, generally speaking, the students understand this environment.

Contribution to student employability:

Several projects started at university have led to successful businesses for the graduates, and many have also used their projects to enhance their CV and aiding their performance at job interviews.

Outcomes and impact:

All projects must develop and deliver a business plan, as an assignment, to the University Business Plan competition. This is usually held in February, and the competition winner receives £1,000. The Business Plan competition has been running for six years, and two past winners have been commercial music students. There were 63 entrants this year, from across the University, and a commercial music project won the second prize of £500.

For further information contact:

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Praxis & Co-Lab Modules: School of Architecture

Birmingham City University (BCU)

The Praxis and Co-Lab Modules encourage students to engage and generate innovative ideas thereby developing skills and concepts relevant to enterprise, live projects, and employability.

Praxis aims to bridge the gap between education and practice. It starts with a 25-point plan designed to further improve undergraduates' enterprise and employability skills via a range of professional, personal, and subject specific skills across the three years of the course. Students keep a record, providing a summary of their professional knowledge to show potential employers - this acts as a "passport to practice", allowing employers to see what professional skills a graduate has attained before they enter the workplace.

The Co-Lab module allows students to engage with real clients on a range of live projects with (typically) community groups and organisations. The projects, their quality, and the influence that Co-Lab has had on students have resulted in local, national, and international recognition.

These modules shift students from the hypothetical world of architectural education to the realities of clients, budgets, timescales, and conflicting interests thereby enabling them to experience these new challenges in a controlled environment, and develop their enterprise skills before entering the workplace. One example of the enterprising Co-Lab project, and its collaborative/interdisciplinary nature, is the partnership developed with Dudley Zoological Gardens whereby Architecture and Art & Design students created a collection of designs for preserving the zoo's 1930s listed structures. Working in teams, students were challenged with designing new on-site structures to support an exhibition of work generated over the year. They were also tasked with coming up with proposals to preserve and illuminate the existing 1930s structures, originally designed by Tecton – the architectural practice of Berthold Lubetkin – which form the world's largest single collection of Tecton buildings.

Students also worked individually, presenting their understanding of the zoo's sites through the production of jewellery, film and video work, clothing lines and short stories which form part of the exhibition displays.

Contribution to student employability:

The Destination of Leavers from Higher Education (DLHE) statistics for the Birmingham School of Architecture show that 90% of graduates are in employment, indicating that they are equipped for the profession. A large number of practices in Birmingham and the West Midlands employ graduates from the School of Architecture, many at senior levels and even business founders.

Outcomes and impact:

The development of Co-Lab within the School of Architecture has since been adopted more widely by the university as part of the OpportUNITY scheme led by the Centre for Enhancement of Learning and Teaching (CELT) and run in partnership with BCU's Students' Union. The work has gained sector-wide recognition including a Times Higher Award for Outstanding Support for Students in 2010. CELT offers a range of opportunities for students to be employed by the University including the Student Academic Mentoring Partnership (StAMP), Student Academic Partners (SAPs), and as assistants with Collaborative Projects. The latter was directly inspired by the live project work done within Co-Lab.

For further information contact:

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The Creative Enterprise Bureau. Scope: The Media School

Bournemouth University

The Creative Enterprise Bureau (CEB) is a commercial-services unit operated from the Corporate and Marketing Communications (CMC) academic group within Bournemouth University's Media School. The four-year-old unit acts as an external-facing marketing agency offering business-critical work for clients that is carried out by students and staff working together. The CEB primarily engages final year students who are paid for their work (between £10-15 per hour). Each year approximately 60 students, representing almost one-third of final year students, sign up to participate in CEB projects.

The CEB has conducted a number of market research reports and consumer insights reports for national clients such as Channel 4, ITV, The Mirror Group, JC Decaux, Samsung, Bluerubicon and Toyota. Alongside this, many clients are regional small or medium-sized enterprises (SMEs) - this work tends to have a marketing consultancy focus, rather than research. The CEB has one full-time manager, whose job is to bring in business, secure clients for live briefs, and provide liaison between clients, academics and students. Alongside this, approximately 15 of CMC's academic staff members are engaged with the CEB and have time allocated for enterprise within their workload.

Most of the projects operate outside of the formal curriculum, and are thus extra-curricular for the students. However, the CEB is integrated into a number of modules within Advertising, Marketing and PR degrees where it operates as a more traditional form of 'live brief': where a client is integrated into the assessment and students pitch their work to the client as the project culmination. The difference here might be that, through the CEB model, clients can 'buy' the implementation of the ideas those students present by turning it into a paid piece of CEB consultancy. Hence the knowledge exchange does not end once the assessment has been completed.

Contribution to student employability:

Ninety-five per cent go on to work or study within six months of graduation.

Students say that CEB work enhances their academic experience, enabling them to put learning into practice. They find project work and 'live briefs' both valuable and interesting as they relate to 'real' industry problems.

Outcomes and impact:

Alongside the obvious benefits of CV building, experience and payment, students benefit greatly from working collaboratively with academic staff. For the CEB there is a 'mentoring' role where students work alongside academics. The benefit here is that as a paid consultancy, clients rather than the HEI meet much of the cost of this mentoring. Further, with the CEB, students report that they 'see academics in new light', recognising their skills and expertise outside the lecture room. Such projects also therefore enhance the credibility of tutors with students and build respect. Instead of students feeling that research and consultancy are remote, taking tutors away from time with students, students see the activities as important and integrated.

For research-active staff, enterprise allows engagement with consultancy that demonstrates research 'impact'. It has the added benefit of building the research culture in departments and expanding staff research interests. Staff find practical applications for their research work, and students get experience in consultancy and get paid to do it. In many respects this might be seen as an extension of the idea behind KTP projects into the routine work of both staff and current students.

The CEB's revenues have grown year-on-year, and it is a profitable part of the university's business services. As part of its evaluation of entrepreneurial education, members of the CEB were awarded a BU research grant in 2012 to conduct a study of enterprise education across all UK HEIs. The study, entitled '*Students and knowledge exchange in university business services*' was published in 2014.

For further information contact:

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BSc Business Enterprise – A Venture Creation Programme

University of Buckingham

Launched in January 2006, it is believed that the BSc Business Enterprise Programme at the University of Buckingham was the first, and is still one of only three, undergraduate Venture Creation Programmes offered by universities anywhere in the world (see <http://www.vcplist.com>)

The degree aims to attract people who want to:

- start and develop their own new business at the same time as studying for an honours degree;
- establish a social enterprise during their studies or on graduation;
- make a positive contribution to the strategic development of a family business or other small or medium-sized enterprise;
- develop an entrepreneurial or “can-do” approach to business to enhance their future career in any size of company.

In the first semester, BSc Business Enterprise students learn how to create an effective business plan which forms the basis of their ‘pitch’ for up to £5,000 of seed-corn capital from an investment panel: ‘Buckingham Angels’. Students **must** start and run a business as an integral part of their honours degree, and pitch for funding within four months of starting the programme. During the following 18 months, they establish and ‘grow’ the business, at the same time as developing their academic knowledge across the range of business subjects needed to obtain an honours degree in Business Enterprise. The modules are grouped under the headings of ‘Starting a Business’, ‘Business Launch’, ‘Business Operation’ and ‘Business Transition’.

During the second, third and fourth stages of the programme, students submit Quarterly Business Review Reports and, in the final term, a Final Business Review Report. These are all assessed as part of the honours degree. External entrepreneurs are invited to make presentations to BSc Business Enterprise students in the Winter and Summer terms.

The inter-disciplinary programme offers a combination of current theory and a practical approach to help students succeed in business, constantly linking the classroom to the marketplace. On graduation, if the business is successful, participating students can buy it from the university for a nominal sum.

Contribution to student employability:

See below.

Outcomes and impact:

Of the 31 graduates from the first six cohorts (December 2007 - December 2012), four started their own business, seven returned to a family business, 18 gained employment, two continued into HE. None have been unemployed within six months of graduation.

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The School of Bioscience, along with Cardiff University Enterprise, developed and delivered a 10-credit module entitled 'Biotechnology and Business'. The module is in its second year; it was delivered to a cohort of 13 students in 2013 and to 19 students in 2014. It is situated in year two of the four-year Biotechnology degree and aims to develop commercial awareness prior to students' third year placement in industry.

The Biotechnology and Business module was developed with two core aims in mind:

- to introduce and develop core enterprise skills, as defined by the Quality Assurance Agency for Higher Education (QAA; 2012) and the QAA benchmarks document (2007). Produce graduates with the following skills; professional development, enterprise, knowledge transfer, self-management, intellectual, practical, communication, interpersonal and team work. Graduates need to be informed and responsive to the issues and challenges posed by new Bioscience developments; many driven by commercially significant scientific advances;
- to enable students to *begin* the on-going process of constructing notions of professional identity, interests and ambitions prior to a work placement. South East Wales is an important UK biotechnology hub and funding inputs in the region are generating commercial opportunities which benefit from commercially savvy biotechnology graduates.

Students undertook a Belbin audit and were ranked for their suitability for each role; from this, module leaders chose 'company leaders'. Each company leader selected their team via the selection of 'skills' to form a well-rounded team. Company teams collaboratively generated a (fictional) biotechnology technology or product that answered real-world biotechnology problems or market needs and tested its business feasibility.

Participants received three hours contact time per week, over 12 weeks; learning was further supported by directed and self-directed research and reading. Content was delivered by module leaders, external speakers, peer-to-peer learning and class-based discussions. This was consolidated via directed and self-directed class based activities, providing opportunities to discuss and apply relevant learning within the context of the commercialisation scenarios.

Formative feedback was provided throughout and students were summatively assessed via group work (feasibility reports, peer-to-peer group presentations and end of module "Dragons' Den" presentations) and individual work (reflective logs and module portfolio). Group-assessed projects sought to approximate the types of teamwork and collaboration required in professional project settings, requiring students to take responsibility for the sharing, delegation and undertaking of work. Learning was also developed through teams' engagement with each other, module leaders (who all have commercial experience) and external speakers from relevant industries.

Contribution to student employability:

Students developed an understanding of their own potential professional identities and key enterprise/employability skills. Peer-to-peer teaching tasks carried out through short weekly research and presentation exercises were exceptionally valuable for all participants both in terms of progressing/ assessing subject relevant knowledge and in terms of developing research, presentation and teamwork skills. The standard of company feasibility reports was high, demonstrating students had developed an understanding of commercial awareness related to the biotechnology industry.

Outcomes and impact:

End of module evaluative feedback from students quantitatively rated the module very highly in all areas, whilst qualitative feedback communicated a clear appreciation of the relevance of course content and the innovative approach to learning.

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Applying pharmaceutical science within 'near world' contexts for final year pharmacists.

Undergraduate MPharm programme

Cardiff University

'Pharmaceutical Sciences, Pharmacy Practice and the Population' is a new 40-credit module delivered for the first time in 2013 as part of the fourth year syllabus on the undergraduate MPharm programme at Cardiff University. In its first year, it has been delivered to 126 students with content input and delivery provided by a range of School of Pharmacy staff. Key enterprise learning content and approaches contained within the module have been carried over from a previous "industry oriented" module.

Module content focuses on four themes that are integral to contemporary pharmacy practice: legal, ethical, professional and regulatory aspects of pharmacy and pharmaceutical sciences; critical care and end of life; evaluating and monitoring medicines; developing new therapies.

Active learning is used to develop commercial awareness as it applies to the pharmaceutical industry. Engaging a range of experiential and active learning pedagogies, a key element of the module is centred around a simulated drug development and commercialisation process. The content focuses on the application of pharmaceutical science through the practice of pharmacy and the students' relationships with the general populace, in effect guiding the learner's thinking from the lab bench towards the pharmaceutical marketplace and consumer.

Focussing on the understanding of disease and the development of new therapies, student teams are given a specific pathology and a lead medicinal chemical compound and asked to develop a new drug and to consider various key aspects of the lab to market process as they might apply to a novel medicine, the disease and target consumer markets. Considerations include chemical synthesis and metabolism, pharmacology and toxicology, target consumer market, mode(s) of formulation and drug delivery, commercial viability and ethics.

Formative feedback is given via discursive workshops and team-based seminar sessions during which students have access to experienced staff members who are able to discuss and advise with regards to decisions taken as part of the simulated lab to market processes. It is within this context that Cardiff University Enterprise support and contributes to module delivery, advising student teams regarding commercial considerations relevant to their particular compound and pathology.

The module assessment comprises several components, the largest being a problem-solving-based examination on module-wide themes. There is a test on legal and ethical issues relating to Pharmacy practice. Students are also required to author and present their team's solution to the lab to market simulated process as well as submit a simulation-related coursework document in the form of a summary report. Finally, students are required to consider how science is reported in the media and present a short article in the medium of their choice (e.g. video, radio, podcast, blog, etc.).

Contribution to student employability:

For graduates soon to enter pre-registration training and then the workplace as practising pharmacists, an understanding of commercial drivers, processes and ethics as they apply within the pharmaceutical sector is a valuable asset. The development of this module reflects the need from within practice and industry for graduates with knowledge and experience of good practice and strong business acumen.

Outcomes and impact:

The involvement of Cardiff University Enterprise to the workshops was valued by the students. Their feedback indicated that they enjoyed the problem-solving challenges in the module, being able to apply their knowledge and different ways of learning.

For further information contact:

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Module Assessment and Development Plan.

Faculty of Health and Social Care

University of Chester

The University of Chester is committed to the promotion of enterprise education for its students;

- a specialised innovation centre;
- a range of provision to develop enterprise skills through the careers and employability department;
- a work-based learning or experiential learning module which all HEFCE-funded undergraduate programmes include at level five;
- faculty-based curriculum development activities;
- a clear reference made to the development of entrepreneurship and enterprise in University strategies.

The purpose of this commitment is to ensure that the University provides “value added” for its students and the organisations and communities in which they work both during their studies and post-graduation. The University was shortlisted for the THES award for the Entrepreneurial University of the Year in 2013.

This case study focuses upon work undertaken within the Faculty of Health and Social Care, the largest Faculty in the University. It is committed to developing an entrepreneurial approach to learning, business and research activities and ensuring that the Faculty and its students have the skills and acumen to be successful in an increasingly competitive marketplace.

In 2012, the Faculty developed a Strategy for Innovation and Enterprise accompanied by an Operational Plan: one of the Plan's five aims is “to maximise the opportunity for Innovation and Enterprise to be embedded in the student experience”. To enable this to be achieved, a tool has been developed to systematically assess the Innovation and Enterprise student experience content in each module taught within the Faculty.

The application of this Module assessment and development plan has resulted in enhanced content for each module closely related to its academic and/or practice focus, to enable students to develop their ability to generate new ideas and explore material in relation to, for example, service development and business management contexts. This planning tool was informed by the QAA document “Enterprise and Entrepreneurship education: guidance for UK higher education providers” (QAA, 2012).

Contribution to student employability:

Enterprise education throughout the programmes/modules in the Faculty has been strengthened as result of the Module Assessment and Development Plan. Students are equipped to approach their career with an understanding of enterprise and the skills to act enterprisingly.

Curriculum documentation and delivery has a clear focus on developing students to be fit for purpose, graduating with expert contemporary knowledge and skills in their specific field in line with a constantly changing health and social care workforce. This attention to enterprise means that students conduct placements and address the search for the next stage in their careers with skills that engage the communities with which they work and those who are gatekeepers to further work or studies.

Outcomes and impact:

There is significant evidence across programmes that students are being prepared to deal with the inherent expression of innovation and enterprise in the provision of health and social care – such as development in care provision from multiple sources such as social enterprises, voluntary and third sectors. Students are equipped to innovate in this area and to interact innovatively with the complexities of modern care delivery. This contributes significantly to students' employability and the Faculty continues to achieve excellent employability rates across all programmes with most students gaining employment or moving on to further study.

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'Creative Blue Sky Thinking' Module and GreenSTEM

BA Advertising & Media and BA Media & Communications

Coventry University

As part of a module called Creative Blue Sky Thinking, students are given a live brief to work on and pitch for. This provides an innovative and purposeful way for students to gain experience and confidence in the fields of advertising and marketing. This case study focuses upon one of these live briefs provided by GreenSTEM, a company funded by EU Skills. GreenSTEM, current undergraduate students and past graduates now working in industry formed a mentoring scheme linking industry with university students.

The project timeline was as follows:

- September 2013: GreenSTEM approached the university with an offer of live industry work. They wanted the students to publicise a scheme designed to get pupils and students to sign up to a website (<https://www.greenstem.org.uk>) which links young people to jobs in technology industries with a particular focus on those that prioritise environmental sustainability.
- October 2013: two third year BA Advertising & Media students were engaged with the company as part of their final year project module.
- November 2013: these students engaged second year BA Media & Communications students on the project as part of their professional practice module.
- January 2014: Creative Blue Sky Thinking Module launched offering live brief to all third year BA Advertising & Media students.
- March 2014: former students, now working in the marketing and advertising industry, returned to assist current students over three days through support and the teaching of industry skills. They also delivered a one-hour session to over 70 students across the university explaining their jobs and how they obtained them.
- March 2014: professional pitches made by students to GreenSTEM representative and industry figures with ideas to publicise the GreenSTEM scheme.
- May 2014: pitches were made to a further panel of academic and industry professionals. Videos were created by second year BA Media & Communications students analysing their experiences of working on the scheme.

The module involves different industry links every year - in 2013 students were linked to ZTE, a multi-national phone company.

Contribution to student employability:

- two BA Advertising & Media students have worked for industry and produced professional material;
- two BA Advertising & Media students have the offer of further work with the scheme-holder;
- five BA Media & Communications students have professional experience and the opportunity, next year, to undertake further work for the company;
- thirty-one BA Advertising & Media students gained industry experience, were taught by media professionals and many were successful with their pitches so have professional portfolio work to show to future employers;
- seventy students from across the university attended a talk by former students on how they gained and retained their placements in a competitive environment. Ten of these students subsequently attended a networking opportunity.

Outcomes and impact:

The Creative Blue Module has contributed to students finding employment as a result of contacts made with former students and through enhancements to their job applications.

For further information:

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ReFreshed Social Enterprise Project.

University-wide project

Coventry University

ReFreshed is a collaborative social enterprise project between, Coventry University (CU), Coventry Cyrenians (CC) - a charity for the homeless - and Coventry Trading Standards (CTS). The aim of the project is to raise awareness of the CC Charity & provide an opportunity for students from CU to gain an understanding of social enterprise. The project offers CC's clients, mainly young people with limited skills and confidence, a chance to change their personal circumstances, supporting them to positively progress their lives and creating opportunities for them to thrive.

Since 2010, CU staff and students have been upcycling counterfeit goods donated by CTS into one-off 'designer' garments for CC. This involves removal of all branding, which is returned to CTS, and upcycling the items into new fashion products; e.g. UGG boots turned into bags. This supports recycling as counterfeit clothing would be destroyed and may end up as landfill.

In November 2012, the charity opened Windsors & ReFreshed, a concept coffee and clothing store with the aim of it being a charity shop with a difference. CU staff and students have been involved with the retail initiative since the outset. CU Graphic Design students designed the Windsors & Refreshed branding and all funds from the sale of goods go to CC.

HECFE UnLtd funding has enabled CU staff to develop a specialist training unit in premises owned by CC at the Far Go Creative Incubator Village in Coventry. CU staff applied for social enterprise funding from HEFCE UnLtd and were awarded £5000.00, this enabled them to buy equipment to set up the training school at FarGo, Further funding is currently being sought.

Contribution to student employability:

Through newly developed Add+Vantage modules - CU elective modules with a career focus - CU students will have an opportunity to be involved in a live experience working for ReFreshed UnLtd, the HEFCE UnLtd Award winning social enterprise based in the FarGo creative incubator village in Coventry. This will offer the students both work and teaching experience.

In addition to student employability, Mike Fowler (CC chief executive) says that for many of his clients, volunteer work is the first time they have ever felt a sense of achievement: "It raises their self-esteem".... in the first year we plan to take at least 40 young unemployed people through the project, providing them with access to employability skills, retail and customer service experience and qualifications."

Outcomes and impact:

An event, which included selling products designed and made by CU students and CC clients, raised £150. A catwalk show of garments designed and made by CU students, and modelled by CU students and CC clients, was a huge success and featured in an article by James Mellik for the BBC World Service. <http://www.bbc.co.uk/news/business-20028803>. The project has been featured at the Clothes Show Live. CU students designed and made garments for the event, which were shown on the College Forum Catwalk. They also sold products on the CU stand and raised £100 for CC. The project was then featured on BBC Midlands Today.

The case study contacts took the project to Liege to work with students at HELMo Haute Ecole Libre Mosanne. The garments were subsequently selected and exhibited at Made in Liege, a celebration of Belgian fashion.

For further information contact:

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How embedding entrepreneurship within Occupational Therapy curriculum supports transformation of practice opportunities within Health and Social Care provision.

MSc in Occupational Therapy (pre-registration)

University of Derby

The development of the MSc in Occupational Therapy (pre-registration) programme in 2009 was a proactive response to external drivers within the health and social care arena. In particular, reflecting a UK government initiative to maximise the professional contribution of the Occupational Therapy workforce in transforming health and social care services, an intention outlined in the document 'Modernising Allied Health Professions (AHP) Careers: A Competence-based Career Framework'.

The MSc in Occupational Therapy (pre-registration) offers students an opportunity to develop clinical competencies equal to the undergraduate pre-registration award, whilst also demonstrating advanced academic skills of inquiry supporting innovation within practice. The programme enables graduates to develop a strong professional identity and an understanding of the unique contribution that Occupational Therapy makes; it also prepares graduates for employment in diverse practice arenas. Whilst this ethos is embedded within the programme's aims, and also within programme delivery, it features significantly within the Independent Scholarship 60-credit Dissertation Module. As part of this Module, students investigate an area of practice they are passionate about, identifying opportunities for future developments within the field of occupational therapy.

Students identify, organise and attend a volunteering opportunity of their choice from which they develop a theoretical case of need for Occupational Therapy in that arena. This involves conducting a thorough review of evidence and an occupational analysis related to the needs of individuals, communities or organisations they encounter during their volunteering experience. Through undertaking this module they demonstrate skills in literature searching, occupational analysis, critical evaluation, commissioning, marketing and business planning along with an understanding of the process of service evaluation.

Contribution to student employability:

Some students have been offered employment based upon their proposals which are now being rolled out and realised in their work settings. However the skills gained within the Module are more widely essential for promoting students ability to lead, develop and evaluate service within both traditional and non-traditional areas of practice, particularly where the contribution of Occupational Therapy has yet to be realised. The confidence gained from developing such real-life entrepreneurial skills, with support from the University setting, is invaluable preparation for students entering employment settings and enhances their employability.

Outcomes and impact:

Graduates are also evidencing how the skills gained are enabling them to influence health care provision within both traditional and third sector organisations as they are taking up posts in which they are involved in the design, delivery and evaluation of service provision. For some graduates, this may be either enhancing existing provision, or for others contributing to the development and growth of new services. As such, graduates are contributing to the transformation of practice both in terms of the contribution Occupational Therapy brings to health and social care provision, but also at a professional level as they increase the range, scope and opportunities for Occupational Therapists to practice.

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Bright Red Triangle

Business School based but provides services cross-faculty and university-wide

Edinburgh Napier University

Bright Red Triangle is based in the Business School at Edinburgh Napier University and has been running for just under two years. It recruits undergraduate, postgraduate and doctoral students to complete paid consultancy projects for external organisations - it equips students with practical real life experience which enhances their capacity to generate ideas and gives them the confidence to apply their skills in a range of situations.

Bright Red Triangle provides students with:

- an opportunity to undertake paid work;
- practical consultancy experience which can enrich their CV;
- a chance to develop relationships and enhance their networks for future employment;
- an opportunity to develop transferable skills.

There are 50 undergraduates and 15 postgraduates on the Bright Red Triangle database - they have been trained and are available for consultancy projects. Their academic disciplines include Web Technologies, Sports Science, Marketing, Entrepreneurship and Finance.

As well as external projects, students have also undertaken internal paid projects for Edinburgh Napier University including market research, web design, data visualisation and flyer creation.

The University wants to engage fully with the business community and is identifying guest speakers who can deliver master classes as well as opportunities for work-based learning projects and internships.

Contribution to student employability:

- Nine past consultants have taken up full-time employment, with companies worked with through Bright Red Triangle.
- Six students have continued onto a repeat or second phase project with the initial company.
- Students have also been invited to networking events and conferences run by businesses engaged with Bright Red Triangle.

Outcomes and impact:

In addition to impact upon student employability, over 100 businesses have engaged with Bright Red Triangle in its two years of operation with over 35 external projects completed and approximately 10 internal projects.

Types of work completed: market intelligence, web design, event management, film, photography, graphic design and financial modelling.

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'Think it. Try It. Do It'.

University-wide approach

University of Exeter

The University of Exeter has raised the profile of Enterprise and Entrepreneurship amongst its students through the Student Entrepreneurship Support Group (SESG), established in October 2011. SESG aims to raise students' awareness of i) enterprise and entrepreneurship; ii) entrepreneurship and self-employment as alternative career paths; iii) the pervasiveness of enterprise skill requirements across all career paths.

SESG coordinates enterprise and entrepreneurship provision across the three campuses by planning, mapping, connecting and signposting all enterprise support for students. It has designed and implemented a three-fold entrepreneurial journey model based around a 'Think it. Try it. Do it' approach:

- helping them to develop their initial idea ('Think it');
- providing opportunities for testing their idea's viability ('Try it');
- helping them to grow their idea once they are confident it will work ('Do it').

The specific support available under each branch is outlined at www.exeter.ac.uk/careers/enterprise.

Under the 'Think it' phase, students are engaged via: enterprise workshops; entrepreneurship modules delivered by colleges; insight talks into being an entrepreneur with alumni and local entrepreneurs; online profiles of successful alumni and student entrepreneurs; mentoring opportunities with alumni and local entrepreneurs; appointments with the enterprise manager to identify next steps; student membership of the Institute of Directors (IoD)

Under the 'Try it' phase, students are engaged through: the Budding Entrepreneur Series; access to seed funding to try out their business idea; running their own enterprise shop on campus, showcasing their business and trading with fellow students; running their own virtual company using SimVentures; working for entrepreneurs both in the UK and abroad, via the Erasmus for Young Entrepreneurs Programme and the internal Access to Internships Scheme; enterprising student societies' activities; business plan and idea competitions; taking part in SETsquared activities organised in partnership with other Universities.

Under the 'Do it' phase, students are engaged through: the Successful Entrepreneur Series; accessing networking and mentors at the Innovation Centre; developing and realising their business idea at the Innovation Centre; accessing growth funding to develop their business idea; raising finance and accessing funders; accessing incubation facilities.

Contribution to student employability:

Exeter's Destination of Leavers from Higher Education (DLHE) 2011/12 survey revealed that nearly a quarter of students felt that their overall experience of HE had prepared them well or very well for being self-employed/freelance or starting up their own business.

Outcomes and impact:

More than 1,000 student engagements have been recorded every year from all campuses, year groups and disciplines. Strong levels of student engagement may also be attributed to the new Enterprise webpages, which have been re-launched at the end of 2011 with a new look, refreshed content and improved functionality. These pages now occupy the 11th position in the Google Analytics statistics for the University webpages, with more than 10,000 page views and approximately 8,000 unique page views.

Student successes include: winning the 2013 Microsoft Imagine Cup World Innovation Competition. The University won the AGCAS Award for Entrepreneurship at the 2013 Biennial Conference.

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Communication Techniques that Enhance and Internationalise Enterprise Projects: The World of Wikis.

Management: Innovation, Operations & Strategy

Glasgow Caledonian University

Wikis are an online, multi-media rich communication tool that enables engagement and collaboration with multiple stakeholders. The functionality of the tool allows the co-creation of a 'living document' in which images, video and hyperlinks can be embedded, along with text. Technology allows viewers to remotely edit and add comments at any time. This accessibility encourages interaction between stakeholders and enables knowledge transfer to become visible. The practice of embedding wikis as a design feature in enterprise projects enables an array of enterprise activities to become feasible. The wiki facilitates a group of people to share experiences and perspectives in solving an objective.

Academics create the wiki and lead the collaboration. Students are issued with a brief that requires them to undertake an opportunity recognition exercise with a named company. The company is also issued with a brief identifying its role and responsibilities, such as setting key research objectives and agreeing to release relevant information. Projects run for up to six weeks and students collaborate with entrepreneurs and academics to produce a wiki that will benefit each stakeholder.

The students and entrepreneur collaborate through the wiki to practise enterprise. This learning environment wiki enhances the learning experience, because both stakeholders acquire knowledge and skills in creating a product that has academic and commercial benefits. Wikis allow students and universities to engage with companies that would either be unavailable or unreachable: the international-based company, the remote rural business; the entrepreneur at the other side of the world. These exercises begin to globalise entrepreneurial learning for a student.

The nature of wikis means that anyone can write and edit anywhere and at any time. Their problem-solving nature supports a collaborative rather than simply a co-operative effort resulting in a significant difference in terms of both learning and practice. Collaboration is underpinned by a more formal approach than one associated with cooperation - for example, the use of written briefs - but is also evident in the more active participation of the three stakeholders, for example in editing and building upon each other's work.

Contribution to student employability:

Team work, written communication, planning and organisational skills

Outcomes and impact:

The entrepreneurs benefit from focussed and targeted research and receive information from new networks that assist them in searching for (or refining) opportunities. The students bring a perspective that the entrepreneur may not have considered e.g. the opportunities provided by social enterprise; a generational perspective different from/complementary to the entrepreneur's own insights. Academics also bring a different perspective to the entrepreneurs, seeing things from a more analytical view, perhaps.

One wiki project enabled Scottish based students to work with a Canadian company to develop an idea that translated into an international learning experience that saw knowledge transfer across contexts and cultural boundaries.

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The 24-hour challenge: creating a multi-discipline environment for design and entrepreneurship in Engineering and Design.

Schools of Art, Design & Architecture and Computing & Engineering

University of Huddersfield

This Innovation and Creative Exchange (ICE) is an inter-school enterprise opportunity exclusively for second year Engineering and Design students at the University of Huddersfield. Its primary objective is to bring the best of innovative design and industry thinking into the undergraduate curriculum and to embed the latest innovation and design methodologies into the curriculum for engineering and design students – the next generation of employees for UK knowledge-based industries.

The ICE was launched in 2012 with a guest lecture/workshop event from the Visiting Professor of Innovation and was followed by a schedule of seminars, workshops, and guest lectures to promote networking and multi-disciplinary working between the university and industry.

The highlight of the ICE programme is a two-day 24-hour challenge involving a combination of lectures, master classes and workshops involving students from Art, Design and Architecture and Computing and Engineering. The challenge environment involved the creation of multi-disciplinary teams - comprised of four to five students from different undergraduate programmes - that were tasked with developing an innovative concept under the panacea of safety extremes (in 2013) and sustainable solutions for global challenges (in 2014). Seven teams participated in the challenge (35 students) representing five subject areas across the two schools.

The teams initially defined their understanding of the brief, brainstormed ideas and then developed a solution to the challenge. This was followed by a Dragons' Den-style event at which each team presented its idea and were given advice by academics and industry representatives on developing the innovation and taking the product to market. The winners attended a proof-of-concept (POC) boot camp. A POC business support fund enables the student projects to be supported/mentored over the subsequent 12 months while they develop their ideas into a concept or business plan.

Contribution to student employability:

Employability is a combination of knowledge, skills and attitudes. The 24-hour challenge enabled the students to work in multi-discipline teams in a highly demanding environment to combine all these elements of employability, thus demonstrating organisational, negotiation, communication, and problem solving skills in addition to valuing diversity and using combined initiatives to realise a solution. Students valued the opportunity to develop these skills.

“It has shown me what some of my lecturers have been trying to tell us which is that collaboration and working with people from different specialisms is when design can really take off and become exciting.”

“The challenge has made me even more interested in working with people I don't know and also has inspired me to think about business ideas for my future career.”

Outcomes and impact:

The network of exchange developed a legacy of learning that promotes innovation, design thinking, new product development and further opportunities to take products through to market. It has brought industry representatives and students together from a variety of different disciplines to debate, share good practice and foster new methods of collaborating. The ICE environment and culture, fosters enterprising attitudes among all members of its community and delivers significant entrepreneurial impact within the undergraduate curriculum. Further to this, a series of intern opportunities have been initiated. The real impact on learning was demonstrated through the students' comments on skills development, multi-discipline/collaborative working and entrepreneurial development.

For further information contact:

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Music with Enterprise.

School of Music

University of Leeds

The programme, (commences September 2014), will be parented by the School of Music and students will take the majority of their music modules in conjunction with other single and Joint Honours students. However, they will undertake a minimum of 100 credits of Enterprise Modules offered by the Leeds Enterprise Centre (LEC) at the Leeds University Business School (LUBS) and will be taught with other students on similar “with Enterprise” programmes.

Portfolio careers, self-employment, freelance work and entrepreneurial activities are increasingly common for Music graduates; this course will encourage students to develop exciting and innovative ways of developing their career options, exploiting their musical creativity and interests in a commercial setting.

As part of their work with Leeds Enterprise Centre students will pursue Modules in planning, managing innovation in business, development, creativity and social enterprise. The course culminates in an enterprise development project in which students’ model a new enterprise, where they can make music the object of their entrepreneurial venture.

The programme provides students across all years of study with the chance to engage with enterprise activities as part of their degree and to access specialist advice and support through LUBS. It also provides students with the opportunity to study music from a variety of different perspectives, ranging from traditional musical studies of performance, composition, critical/analytical and historical studies to popular music, aesthetics, music psychology and music technology. This combination will appeal to those wanting to develop skills in the areas of creativity, business development and enterprise, with the possibility of pursuing a career within or outside Music when they graduate.

Leeds Enterprise Centre academic staff are highly experienced in supporting students through projects including new business development and will lead academic project discussion and development in the New Enterprise Planning and Enterprise Development Project Modules. Student projects will further benefit from the involvement of external industry advice through the enterprise ambassador programme and support from the University’s official student enterprise support service, Spark.

This three-year option, which includes business-related study, is intended to complement the four-year Year in Industry programme - in addition, the new programme has been approved with Year Abroad, Year in Industry, and Year in Enterprise variants. This means that it could be extended to four years if a student wished to take one of these paths.

Contribution to student employability:

The programme directly supports students in considering opportunities for self-employment and small business creation. In addition, students are supported in developing their interests in music in pursuing new opportunities. Students' learning throughout the course will also be useful in developing innovative and intrapreneurial solutions in established organisations.

Outcomes and impact:

The programme has been designed to directly relate to the wider enterprise support provided throughout the University. This follows the 2013 QAA Guidance for Enterprise and Entrepreneurship Education.

The programme commences in September 2014, so at the time of writing it is too early to comment upon immediate outcomes or impact.

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Enterprise & Innovation and Personal & Professional Development

University-wide approach.

University of Leeds

Over the last three years, the University of Leeds has embarked on a campus-wide project to enhance and re-brand its curriculum (<http://curriculum.leeds.ac.uk/>). As part of this, it has gathered together all of its 'Elective Modules' (Modules students can take outside of their core subject) under ten Discovery Themes. More than 1,000 modules are now gathered under these themes.

The University has defined 'employability' as one of the core threads of its overarching student education strategy – and to evidence this within the curriculum, two of the ten Discovery Themes are dedicated to Personal and Professional Development (PPD) and Enterprise & Innovation, ensuring that enterprise education has a structured and rigorous presence within the taught academic curriculum. An online presentation showcasing the new Discovery Themes can be found at http://prezi.com/huqk1rzxrf_/discovery-themes/

The Personal and Professional Development and Enterprise & Innovation themes will direct students to modules that offer forms of research, training and placement experience in enterprise and employability. This significantly heightens the visibility and coherence of enterprise education at the University.

As leaders of the two enterprise education themes, Dr Raphael Hallett and Professor Alison McKay have ensured that the modules come from departments across the university, giving enterprise education a genuinely interdisciplinary basis. As well as gathering and branding existing modules, they are also overseeing the design of innovative new modules for each theme. For example, Dr Hallett is designing a string of digital literacy modules for his PPD theme, whilst Alison McKay is building new modules based on problem solving and creative innovation in design for her Enterprise & Innovation theme.

Students are being given an entirely new structure of Modules through which to choose teaching beyond their core subject. A confusing and sometimes chaotic 'elective' system has been replaced by a streamlined set of 10 themes and multiple pathways that will engage students in informed and considered Module choice. Enrolment opens in September 2014.

Contribution to student employability:

Students will be researching these themes over the summer of 2014 and choosing the Modules in September 2014. If they choose to, students will be able to take a pathway of enterprise and employability Modules from level one to level three, so that this form of education can be intrinsic to their graduate identity.

Outcomes and impact:

Students will be starting the Modules in September 2014, and the themes will be further developed and designed over the next three years. Their impact on student education will be measured by the uptake of, and satisfaction with, the Modules from September 2014 onwards.

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Social Enterprise and Entrepreneurship Module

School of Humanities and Social Science

Liverpool John Moores University (LJMU)

This level six option module - Social Enterprise and Entrepreneurship - is open to students across the School of Humanities and Social Science at LJMU. The aims are to (i) introduce students to social enterprise concepts (ii) build student (and LJMU) networks with local/regional organisations/ charities/ companies, and (iii) encourage students to apply for funding to actualise their project ideas. The Module enables students - either individually or in small groups - to research, plan and develop a social enterprise project. Students can select any form of a social enterprise project but are encouraged to consider their local/regional environment when seeking inspiration. Many students choose to "fix a problem" they have recognised in their community or have identified through personal experience. Examples include: gardening projects, fair trade events, University-based initiatives, parent-child coffee mornings, and sports coaching.

This is a 24-credit independent study module supported by taught sessions and workshops, which run across the academic year. Formal classes do not run every week to allow students sufficient time to design and develop their project ideas. The students do not necessarily have to complete the project within the academic year - planning a project is sufficient to complete the Module.

The LJMU Centre for Entrepreneurship provides students with expertise in relation to the generation of social enterprise project ideas, and with grant/ funding applications. In addition, sector professionals external to LJMU are encouraged to forge links with the Module (and LJMU) by acting as guest speakers and student pitch panel members (Assessment One).

Assessment One consists of a Dragons' Den-style pitch (presentation) delivered to LJMU academic staff, the University's centre for entrepreneurship and member/s of industry as relevant to the chosen project theme/sector. Assessment Two is a reflective portfolio based upon the project, which allows students to reflect upon their social enterprise ideas, the enterprise process and the skills needed to achieve this. In essence, the portfolio requires students to make reference to their own employability, their enterprise skills and the process of 'making projects happen'.

Contribution to student employability:

The Module draws links between employability/professional development and the degree subject through a focus on social enterprise and entrepreneurship. It encourages students to identify the skills and abilities they have developed throughout their degree course and relate these to the requirements of the world of work, in relation to social enterprise and entrepreneurship. Students explore their enterprising and entrepreneurial creativity with the aim of generating skills, knowledge and ideas as relevant to humanities and social science graduates.

Outcomes and impact:

Students build connections with external businesses, networks and/or organisations, with the aim of maintaining these relationships after graduation. Outcomes for students: industry mentorship; enterprise experience and insight; potential pathways to self-employment. A broader impact relates to linking local and regional enterprise groups with university initiatives, to enhance shared experience and to foster mutually benefitting connections. A wider outcome relates to student recognition of how their own academic learning relates to employment contexts, thus building student professionalism, world-of-work confidence and an understanding of their employability.

For further information contact:

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Business Development module

Undergraduate Degrees in Sports Science, Sports Therapy, Sport Psychology & Coaching, Sports Science & PE, Sports & Dance Therapy

London Metropolitan University

One of the sports professional bodies - The Society of Sports Therapists - identified that up to 80% of its members are self-employed. It is therefore crucial that sports graduates possess the basic business acumen to either engage as self-employed practitioners within a competitive sports market or stand out from other graduates when competing for employed work.

The Business Development Module was developed, and is run by, sports staff with business experience. In addition, guest lecturers offer a connection with those who have been through similar degrees and who now have industry connections. There are also 'field trips' to London Metropolitan University's Accelerator hub in Shoreditch and interactive lectures, utilising live online feedback polls, provide feedback on students' understanding and their opinions on module material. Tutorial sessions engage students with a different weekly theme - such as The Voice, pub quiz and speed dating interviews - which are designed to engage students' different learning attributes whilst also developing their business ideas. Students are placed in randomised teams and a league table is reviewed each week via a post-match analysis.

London Metropolitan University runs an Accelerator student business competition and Business Development Module participants are encouraged to apply.

The Business Development Module for third year sports students can also be run as a standalone CPD course for past students, both undergraduate and postgraduate.

Contribution to student employability:

Students from the 2012/13 and 2013/14 module have applied the skills they have developed and have taken steps to start their own businesses. Examples include:

Faye Triggs, BSc (Hons) Sports Therapy graduate: <http://www.enavanttherapy.co.uk/index.php>

Aneesha Pancha, a third year Sports Science student:

“The tutorials required us to present in some way or another within our groups. I have always had a massive fear of standing in front of people and talking, as I stutter quite a lot and when I get nervous I tend to mess up my sentences which then makes me feel embarrassed, which then makes me want to cry. I spoke to the lecturers about this fear especially when other group members were absent as the presentation relied on me. The lecturers told me that I should use it to my advantage, as I would gain plenty of practice with more feedback on my business idea. That’s what I did; I eventually got our group from the bottom of the league to the top middle, and was able to hold us there. Whilst being able to gain more confidence with each tutorial to the point that I felt much more comfortable presenting to others and received excellent feedback.

From learning how to pitch better and by doing the work I was able to understand so much more of what my business could become and how it can be a realistic goal and not just an idea, I was able to adjust the original idea of a fitness boot camp and turn it into a karate fitness club, where I can use my skills in the business but still stick to my original idea which is making people fitter and healthier with the right exercise and health including diet.”

Outcomes and impact:

One student submitted his coaching App business plan to the Accelerator competition during 2012/13 - he was selected as a finalist and won an award. Several students from the 2013/14 cohort have submitted their business plans for consideration. Four students were selected to present at the 2014 inaugural London Metropolitan University Student Horizon conference. Key presentation skills learned on the Module were integrated into their talks. The Dean of Faculty has suggested that the business Module be considered more widely across the Faculty of Life Sciences and Computing.

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Life Science Enterprise Project (LSEP)

Faculty of Life Sciences (FLS)

University of Manchester

In 2006, the Faculty of Life Sciences (FLS), in partnership with the Manchester Enterprise Centre (MEC), launched the Life Science Enterprise Project (LSEP) as a final year project option. LSEP was aimed at FLS students who wanted to explore a career in the field of life sciences applications, technology transfer, business, sales, or wanted to gain transferable skills and commercial awareness.

LSEP is a 40-credit project which runs over two semesters - teams of six students develop and explore six distinct commercial avenues on a given theme, choose the most promising one, and develop it into a business plan for a spin off biotech company. The idea is based on a course at Durham University and on existing MEC units. Bespoke introductory classes were then developed: six business seminars to provide commercial awareness and 12 soft skills workshops to support students with enquiry-based learning (EBL), reflection, employability, and the skills required to run team projects.

The competencies enhanced throughout the project are integral to idea generation and development. For several weeks, students develop scenarios and hypotheses which they evaluate and validate; they explore possibilities and select a credible end-point meaning they have to solve a variety of problems and learn how to make rational decisions. "Reflecting on" what they have done and how they performed as well as "reflecting for" future actions helps them to focus even more on the key areas they need to develop.

Forty-two students are enrolled on the course and they work with seven academics (FLS supervisors) who each propose a life sciences theme within their expertise. There are six distinct commercial avenues (e.g. theme: antibodies; avenue one: antibodies as diagnostic tools; avenue two: antibodies in cancer immunotherapy; etc.). At the onset, students are asked for their three preferred themes, and teams of six are generated based on their preferences. Two weeks later, after preliminary research, each student chooses a commercial avenue. Each team has a FLS supervisor and a business supervisor.

Semester One: introductory classes are delivered, and project work is carried out individually as students produce a scientific literature review on their chosen avenue, identify a commercial opportunity based on the scientific and business literature, and explore its technical and commercial feasibility. The feasibility study is presented during a poster session to FLS supervisors, academic entrepreneurs and staff from the University's commercialisation office.

Semester Two: teamwork. For each theme, students evaluate their six commercial opportunities, and choose the most promising to develop as a business plan. They complete the course with a business pitch.

The reflective portfolio to support the project has evolved over the years. There are now formative assignments in Semester One to aid skills development and a summative assignment at the end of the course, in the form of a job application and interview based on the experience and skills gained through LSEP.

Contribution to student employability:

Over the years, we have demonstrated the validity of running research projects in team, using EBL for discovering a new discipline, and using assessed reflective practice to support skills development and employability. Year-on-year, the mean mark obtained for this project is comparable to our other research project options and our students have gained employment in many high profile companies within or outside the life sciences based on the experience gained via LSEP.

Outcomes and impact:

In 2008, the LSEP model was expanded to create a Master of Biotechnology and Enterprise. In 2011, a new project option was launched and includes two workshops on personal development and a summative reflective assignment. In 2012, employability was embedded at all levels of the curriculum and an ex-LSEP student is the current employability intern.

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Music Enterprise Module

International Centre for Music Studies

Newcastle University

Music Enterprise is a 20-credit Module, running across two semesters, which embeds enterprise in the undergraduate curriculum to help prepare students, from their second year onwards, for life after graduation. It engages students with enterprise and entrepreneurship through real-life event management projects. Engagement with activities such as the creation, management and delivery of a musical event is mixed with more traditional approaches such as lectures, guest speakers and activities which provide the underpinning knowledge and skills.

During the first semester, lectures and activities provide students with theoretical and practical knowledge; some of these sessions are delivered by visiting speakers who can provide realistic and inspiring information drawn from their first hand professional experience. The content includes:

- theoretical and critical perspectives on music entrepreneurship;
- the portfolio career;
- how the music industry and arts/music organisations of various sizes operate;
- marketing, branding, market research;
- PR, press releases and managing the media;
- royalty collection systems, contracts, invoice systems, accounts, cash flow and taxation;
- event and project management;
- creative thinking, problem solving, generating ideas and evaluating opportunities;
- using Business Model Canvas as a dynamic modelling and planning tool;
- teams and team roles.

Allocated event management teams come up with ideas, then research, plan and run an event using a minimum of money and a maximum of ingenuity. Small loans of up to £250 are available but students are encouraged to request one only where absolutely necessary. The teams are supported by lectures on practical aspects such as marketing, finance and risk assessment. They cannot perform in their own event and have to secure artists through negotiation. Venues must be arranged, operational aspects must be organised, brands must be developed and the events must be marketed. The aim is to create a viable and sustainable event. Students often opt to raise money for charities.

Event examples include a tea dance, a ceilidh, a DJ night, a hip-hop café, a 1920s jazz night, school workshops, open mike and showcase nights in a variety of venues across Newcastle and Gateshead. Innovative ideas, accomplished networking and negotiation, and detailed operational planning result in some highly professional events, often leading to further opportunities.

Contribution to student employability:

The Music Enterprise Module develops skills and attributes which support self-employment and enhance employability, helping to shape individual career, enterprise and employability narratives. The skills developed include: team working; presentation skills; finance and budgeting; negotiation skills; networking skills; marketing and social networking. Whatever their starting point, students are encouraged to reflect upon and further develop their skills with a view to a future self-managed or freelance career in music. In addition, students build their professional networks and use the experience they have gained to enrich their CVs.

Outcomes and impact:

The Module makes an impact because it develops enterprise and employability skills and puts them into practice in an authentic and demanding situation. In addition, significant sums have been raised for charity, including more than £600 from one event.

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Inspiring Futures - Entrepreneurship in Action

All stage one undergraduates

Plymouth Business School

Inspiring Futures is a Plymouth Business School curriculum project which engages all stage one students in a six-week live consultancy project which utilises their entrepreneurial skills. It originated from an initial pilot as part of an HEA funded discipline-focused Learning Technology Enhancement Academy project in 2010. As a result the first year curriculum was redesigned to incorporate a greater emphasis on entrepreneurship, 'big issues' (environmental, social, political and technological change); action-based learning; applied digital technology along with literacy and numeracy. Given the University's central role in a city with communities requiring significant renewal, a key element of the project focused around students 'making a difference' and 'adding value' within the immediate locality.

The learning setting comprises carefully scaffolded active and problem-based learning. The School utilises strong business and community relationships with public, private and social enterprises, community groups and other third sector agencies to develop consultancy projects (briefs). Acting as consultants, and using group based action learning, students respond to the brief applying their entrepreneurial business and management skills and knowledge.

Inspiring Futures gives students the experience of interacting with a 'real' client through which they develop a shared understanding of expected behaviour. Students develop an appreciation of the multitude of competing and sometimes conflicting perspectives and methodologies and recognise the value of researching a problem. They are also exposed to entrepreneurship in action. It builds their confidence and provides them with valuable work-based learning experience. The project ensures that theoretical learning is set in the context for real business and organisational issues. It has extended the volume of business and third sector relationships for the School and has added significant value to the region.

Contribution to student employability:

Inspiring Futures is a virtuous circle - students demonstrate entrepreneurship which impacts positively on their graduate employability whilst simultaneously creating value through community based projects. Students have gained references and testimonials from the organisations involved, helping them to secure placement and internship opportunities.

Outcomes and impact:

Since 2011, more than 1,300 students have undertaken more than 200 consultancy projects for over 100 organisations, with an estimated value to the local economy of £250,000 (measured in terms of consultancy hours). The project has involved more than 32 social enterprises and numerous business start-ups at various stages of development.

Students have undertaken primary and secondary research and completed a range of projects in marketing and general business fields e.g. competitor analysis, customer analysis, website review and strategy, social media strategy, communication strategy, pricing strategy, identify distribution channels, brand analysis, business planning, funding opportunities, document procedures and measuring social impact.

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Embedding Employability & Enterprise within the Marine Sport Science Curriculum.

Plymouth University

Marine Sport Science students in general differ from other higher education students. In short, Marine Sport Science students (in particular, surfers) are viewed as being nonconformist (Marcus, 2005; Stewart et al, 2008) and this goes some way to explain Marine Sport students' lack of engagement with traditional methods of employability and enterprise education as evidenced in Destinations of Leavers from Higher Education (DLHE) survey results.

Embedding employability and enterprise education within a Marine Sport Science programme, through authentic experience competitions, was seen as a means of enabling them to conform and engage. A strategy was developed where three competitive employability and enterprise events - FLUX, Hot Seat, and the Business Ideas Challenge - were embedded within three modules across all Marine Sports Science programmes. Many of the competitions, such as FLUX, are run in a business "Apprentice" style and although one would think this would not suit the non-conformist it was found that the Marine Sports Science students' non-conformity actually gave them an edge, helping them to stand out against their competitors and being viewed as pushing the boundaries in relation to what was acceptable within a business environment.

The case study authors gained funding for a formal impact evaluation and an exploration of students' perceptions of employability. Students were asked to rate their employability on a scale of one to five (one being low and five being high). The results showed an increase in their rating of their own employability as they progressed through their Marine Sport Science degree programme. Students were also asked to rate their confidence in gaining graduate employment. Results showed that Marine Sport Students lost confidence year on year, and significantly in their third and final year. They expressed seven perceived barriers to employment: experience, confidence, economy, competition, location, qualifications, and degree quality which were categorised as either being course specific (location and degree quality) or generic (experience, confidence, economy, competition, and qualifications).

From this study the following conclusions were drawn:

- embedding employability and enterprise within a programme is more effective for students with less confidence and self-expression;
- it gives students a more holistic view of employability, enabling them to think of employability as more than just finding a job;
- time spent in a degree programme can increase a student's rating of their employability although embedding careers education can act as a catalyst increasing this rise still further;
- a general lack of confidence with regard to gaining graduate employment is due to seven barriers: experience, confidence, economy, competition, location, qualifications, and degree quality, with the media in particular playing a significant role in assembling these barriers.

Contribution to student employability:

Time spent in a degree programme can increase a student's rating of their employability although embedding careers education can act as a catalyst by increasing this rise still further and is more effective for students with less confidence and self-expression. Finally, it gives students a more holistic view of employability, enabling them to think of employability as more than just finding a job.

Outcomes and impact:

Beaumont, E., Gedye, S. and Richardson, S. (2014) A crisis of confidence: Seven perceived barriers to graduate employment. Proceedings of the Canada International Conference on Education (CICE-2014) at the Cape Breton University, Nova Scotia, Canada, 16-19th June 2014.

Gedye, S. and Beaumont, E. (2014) "The Ability to Get a Job": Student understandings and definitions of employability. Journal of Education and Work. In Review.

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Project 23,000: Working Towards Entrepreneurial Learning for Every Student.

University of Portsmouth

The University of Portsmouth has taken a strategic view of embedding enterprise activity into its learning programmes through an initiative called Project 23,000 which recognises the importance of creating opportunities for learning for enterprise in courses and in extra-curricular activity. Project 23,000 provides an action-oriented framework for enterprise education, built on the QAA enterprise guidance. Part of Project 23,000 included a qualitative review of a random sample of courses – 15 undergraduate courses from five faculties (three courses in each) – and a series of one-to-one interviews with curriculum leaders. Through this process of reflection and discourse around the guidance, common themes emerged amongst curriculum developers including:

- whilst learning outcomes include aspects of enterprise and entrepreneurship, they are not aligned with assessment criteria that make enterprise explicit;
- there is insufficient reflective practice and action in teaching units evidenced through assessment criteria;
- learning and teaching approaches employed in courses do not use the full range of interactive, 'learning by doing' methods that would encourage enterprising and entrepreneurial mind-sets, capabilities and actions;
- course tutors are lacking in confidence and/or skills in the area of 'creativity and self-expression' and are therefore unable to create such valuable learning opportunities for students;
- problem-based learning opportunities – a critical component of enterprise education – are lacking;
- where enterprise-learning outcomes are embedded in course units, there is no common language or practice among academics leading to contradictions or misunderstanding about what enterprise education actually is. This leads to cautiousness when seeking to embed it in the curriculum.

These emergent themes have led to follow-up discussions with course developers to revisit unit aims, learning outcomes and assessment – for example, in the areas of Biomedical Science, Computing and Interior Design. The guidance has become the centre of a new discourse in the University about what enterprise means to students and to staff, whatever the subject and level of study. Out have gone tired 'business plan competitions' and ad-hoc projects with limited reach and engagement. In has come an institution-wide strategic and practical approach to enterprise education that has become the framework for curriculum development and the creation of learning opportunities.

Contribution to student employability:

Since the beginning of the 2013/14 academic year, there have been 37 consultations with academic staff, resulting in 12 positive changes to the curriculum. Seventy-one academic staff have benefited from enterprise in the curriculum workshops. Over 2,400 students have experienced an enterprise curriculum, with over 150 learners choosing to develop a product, service or business idea. Of these, at least 22 have registered a business and 42 are moving into self-employment/start-up in the coming months. Approximately 25 students are taking a 'self-employment placement year' as an alternative to one with an employer.

Outcomes and impact:

- the creation of self-employment placement units during the sandwich year in subjects including Business, Computing, Creative Industries, Biology and Environmental Studies;
- the piloting of extra-curricular activity in the Faculty of Humanities & Social Sciences (FHSS), at levels five & six, around the creation of social enterprises. This led to the creation of a University-wide extra-curricular development and funding programme, 'Social Startup™', and more embedded activity in the FHSS Level 5 unit 'Learning From Experience';
- development of a year-round extra-curricular programme 'RouteToStartup™' that develops product, service or business ideas towards enterprise effectiveness.

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The University's BSc and MChem programmes in Chemistry offer a second year skills Module that incorporates a team problem-based learning (PBL) task directly linked to employability skills and career development. Students use team work to assimilate information and to develop a viable plan for the future of a chemical company that has recently been taken over. The task is based upon an original case study written by Tina Overton and Simon Beltl. Novel aspects introduced include the preparation of a short video by students summarising their plans, followed by a board room style interview (conducted by staff); career development activities have also been introduced alongside the PBL task.

The scenario involves a UK company which produces chemicals of major industrial and commercial significance at a local chemical plant. The company has been taken over by a huge multi-national conglomerate and the UK Board of Directors is required to put forward a viable plan for the future of the local chemical plant. The Board must review the future of the chemical plant, examining the nature of its industrial processes and the impact the plant has on the community, and advise the multi-national conglomerate of their proposals for future development.

Students are divided into small teams acting as the UK Board of Directors and each team must prepare a five-year plan and five minute video pitch for the future of the site. The teams are given eight suggested job roles for the Management Board (for example, project leader, technical and scientific adviser, director of finance, and health and safety officer) and each team member adopts one of the roles. Team members must consider the attributes required for each role and reflect on their own skills, considering opportunities for further development in the role they elect to undertake.

Students are given relatively short deadlines in which to carry out the research and organise their pitch. The time constraints galvanise them into action and ensure they focus on the tasks. The use of a video format provides additional challenges and opportunities for innovation and creativity over and above the standard PowerPoint presentation format.

Successful teams are invited to an Apprentice-style interview with the managers of the multi-national conglomerate (University staff) who question teams on their recommendations. The successful team is selected to take forward the management of the UK plant.

These novel activities coupled with more traditional elements have produced a PBL task that develops career management skills, team working and communication skills in an engaging fashion.

<http://www.rsc.org/Education/HESTEM/CPBL/titan.asp>

Contribution to student employability:

The PBL task encourages students to get a feel for the workings of industry, the very tight deadlines imposed, the very strong financial drivers, company management and structure and the wider impact of the chemical industry. Alongside the PBL task, students attend presentations and workshops supported by the University's careers department. Within these sessions, students are encouraged to consider their personal career plans, their skills and attributes and begin to construct a CV. The task helps students to clearly identify their own strengths and weaknesses and allows them to consider the type of role they may wish to aspire to.

Outcomes and impact:

Use of team working and role play has been hugely effective in helping students develop professional skills. Video production is a novel approach to oral communication skills' development, and is easily assessed. Students can clearly see the value of this approach to skills' development and have commented on the value of the sessions in interview situations.

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Consultancy projects as an alternative to dissertations.

MA Luxury Brand Management

Regents University London

The MA Luxury Brand Management programme at Regent's University London was validated in 2010 with the inclusion of a dissertation or a consultancy project as the final 60-credit Module. For each option, passing the Research Methods Module is a prerequisite.

As an alternative to a dissertation, the consultancy project is typically undertaken by a small team of two to three students (although it can be undertaken by an individual student) who resolve a real luxury, brand or management issue for a client. The output has three parts, a client report (10,000 words), a reflective report (2,000 words) and a 30-minute presentation.

The main difference when managing a consultancy project compared to a dissertation revolves around its complexity where, with a dissertation, there are only two people involved (one student and one supervisor), whilst a consultancy project generally involves four to five people (two to three students, one supervisor and one client).

The process to source consultancy projects has been managed by the programme director, the module leader and selected lecturers from the programme team who, between them, have sourced consultancy projects via their own personal contacts across the luxury brand management sector. Students have also sourced projects themselves but these require vetting and management to ensure that the work is suitable.

Contribution to student employability:

The students' reflective reports have highlighted employability-related issues as key reasons for their choosing the consultancy project option. When considering feedback from consultancy project participants, of particular note is the enhanced confidence they express. It is also interesting to see that, in addition to the perceived benefits of direct client interactions, many of their comments reflect on team working and how they learnt from each other as well as from the clients and academic supervisors.

Outcomes and impact:

Seventy-five of the 128 students graduates 2011 and 2013, (59%) undertook 33 consultancy projects.

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Diploma for Personal & Professional Skills for the Doctoral Training Centres

Doctoral Training Centre for Advanced Metallics

University of Sheffield

The Diploma for Personal & Professional Skills was developed as part of a recognition that the training of engineers needed to be rethought to ensure that engineers, and more specifically the University's top engineers at doctoral level, are trained to become leaders of industry.

Traditional PhD research, carried out around the world, involves a student working on a specific topic under the supervision of one or more academics with the basic task of making an “original contribution to knowledge” and the underlying philosophical basis of PhD research being “the production of creative scholars” or “preparation of students for a lifetime of intellectual inquiry that manifests itself in creative scholarship and research”. However, not all students undertaking PhD level research find the transition from undergraduate 'course followers' to postgraduate 'producers of knowledge' to be an easy one. In addition, excellent performance at the UG level, although a good indicator of intellectual capability, does not appear to be a guarantee of success in making the transition to independent scholarship.

The Diploma in Personal and Professional Skills aims to change the knowledge, attributes, skills and ultimately the behaviour of students by learning 'about the topic' (knowledge), 'for the topic' (attributes), and 'through the topic' (skills). The pedagogical approach is based on a belief that the teaching of transferable skills can be successfully implemented if it has at least three interconnected strands: activities, training and reflection.

As well as gaining tools to become more effective independent researchers, they work as a cohort during mini-research projects and public engagement projects. In the SME project, students are presented with problems relating to products and/or manufacturing processes and their job is to undertake an investigation of these issues over the two-week period of the project and report their findings in both presentation and report form.

Key to satisfactory performance in this task is their ability to obtain adequate, pertinent information about the problem. Their report should contain an abstract that summarises the entire task. In section one, sketches, drawings, photographs, micrographs, service history, environmental conditions and/or material data could be very useful. The overall report should emphasise the effects of the material structure on the properties/performance; their analysis should be original; however, references should be used to support it. More importantly, however, they should also describe what the business ramifications would be in their process based on their observations and proposed solutions to the problem they are investigating.

At this stage of their career, it is expected that students should be able to conduct their SME project with minimal supervision and make their own decisions regarding the most appropriate content and format of their report and presentation.

Students will be given narrative feedback incorporating comments from academic supervisors and industrial contacts. Feedback highlights where the group performed well, areas for development.

Contribution to student employability:

Towards the latter part of their studies, the transferable skills become more focused on training the students to act with 'professionalism', and are therefore closer to the needs of industry, as well as other skills needed to complete their PhDs and seek employment, such as career skills and the workings of science & engineering and the media.

Outcomes and impact:

The first cohort will be completing their studies in 2014.

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Work-based Project Module - Working the Venture Matrix.

Department of Humanities

Sheffield Hallam University

The Work-based Project Module for second and final year Humanities undergraduates is designed to offer non-vocational students the opportunity to apply their academic skills and develop professional behaviours through real-world and real-time projects. Students enhance their employability and make an active link between their own personal, academic and professional development, and the social and cultural needs of the regional community. Within this framework the opportunity to develop enterprising or entrepreneurial behaviours is apparent.

Students choose to undertake prescribed or self-sourced projects which vary depending on their focus of interest. This is managed through 6 taught workshops and 1:1 tutorials with the module tutor across the two semesters. Students can use their experience to build their CVs, bring evidence to interviews and carry into their future careers. Above all, they gain a greater understanding of themselves and the application of their abilities. They can access support across the university through their academic advisers, employment/career advisers and tutors.

The award-winning Venture Matrix scheme brokers and supports students to work on external real world challenges. The Venture Matrix team work with tutors across the university to imbed real world, experience based employability projects into curriculum and to develop and maintain a diverse network of external businesses, charities, services and schools for our students to work with as part of these projects. Venture Matrix links with the Work-based Project Module to provide Humanities students with easy access to a wide range of projects and clients.

An example of a project brokered by Venture Matrix involves students actively engaging in a long term economic development project with Stoney Middleton, a Derbyshire village. Undergraduates from a range of courses (including English Language, Graphic Design, Politics, Psychology and Sociology) have contributed to the development of a heritage centre. They have researched and written interpretive signage as well as creating interactive trail maps, researching and documenting the village's history, designing an activity play area for children, and creating a comprehensive events plan for the village to hold a beer and food festival. The village is planning to work with the university over the coming years to establish a thriving heritage centre.

Contribution to student employability:

The projects take students beyond the university 'bubble' giving them the opportunity to reach into and interact with the wider Sheffield community to deliver a wide range of projects that give them the chance to creatively apply their subject knowledge to new situations, develop and spread their sense of social responsibility and communicate with people from all walks of life. The students are motivated and engaged by projects that give them the chance to contribute to the community while practising their own skills and gaining academic credits towards their degrees.

Outcomes and impact:

Successful cross-course collaboration has helped to establish relationships between students from different programmes and between the university, local communities and other partners.

As well as contributing to preserving the heritage and developing the future economy of local areas, as mentioned above, our students have organised events for local sports clubs, helped launch magazines, and helped expand businesses into new markets. This benefits the students' education, strengthens links between the university and the community and improves local organisations, creating a symbiotic relationship between everyone involved.

For further information contact:

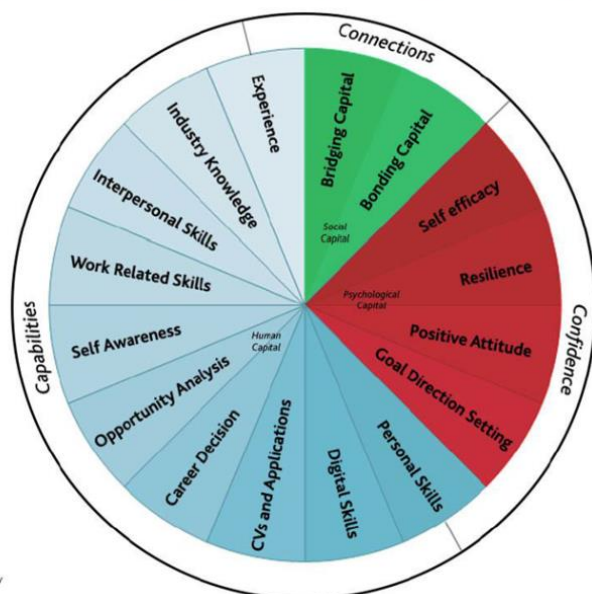
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The Solent Capital Compass Model: a unified framework for enterprise and employability

Southampton Solent University

The *Solent Capital Compass* draws together career development and enterprise theory to provide a comprehensive model for employability for all students. The model is valuable for academics, students, and service staff to help them understand the full range of skills and capabilities that impact upon employability.

The Solent Capital Compass model of experience, skills and competencies required for graduate employability



The Compass includes three distinct skill areas: *human capital*; *psychological capital*; and a *social capital*.

Based on Bourdieu's work, it includes 16 separate areas of personal development which are required for students' employability. Human capital includes the development of knowledge, work-related skills and industry knowledge, digital literacy and career development learning as derived from the DOTS model. Psychological capital derives ideas from Positive Psychology and draws from the work by Fugate et al and Luthans et al.

It recognises that self-confidence, resilience, and the ability to set personal goals are key for both employability and enterprise success. The inclusion of social capital recognises the importance for students to understand the networks and social context of their graduate-level skills.

Drawing on work from Halpern, Lim et al and from Van der Gaag and Snijders the development of bridging and bonding capital can be understood in the context of employability.

The compass introduces academics to the gamut of skills required for employability and enterprise development. They are then supported (with tools techniques and materials) to include both employability and enterprise related activities within their teaching. The model is flexible enough to allow academics to choose one or a number of compass points to be addressed by learning activities. Examples of some of the supporting materials could be made available on request.

Contribution to student employability:

The compass model has been promoted through Student Union training. The SU has developed their own range of icons representing skills across the compass to raise awareness to students of the skills they are developing while participating in SU activity and in their societies. <http://www.solentsu.co.uk/support/skills/>.

We continue to develop materials to support the enhancement of employability and enterprise skills and have piloted the employability self-evaluation test (ESE) providing data to evaluate the confidence of our students in each of the Compass points. More information on the ESE test is available from Richard Sant.

Outcomes and impact:

Academics have found the compass extremely useful and it is used as part of the PG Cert to train academics in their understanding of employability. We continue to develop materials against the model in conjunction with academic colleagues, in particular in the areas of both psychological capital and social capital.

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Staffordshire Graduate Employability Project (SGEP)

University-wide (undergraduates)

Staffordshire University

In September 2012, Staffordshire University launched, to its entire on-campus undergraduate cohort of 15,000 students, a fresh approach to delivering a 3Es agenda – Enterprise, Entrepreneurialism and Employability. The 3Es would be embedded in the curriculum and assessed as the Staffordshire Graduate. This would impact upon every institution offering the University's HE awards including overseas campuses. The Staffordshire Graduate attributes were decided upon as the outcome of discussions with business networks, students and intensive research. They are:

1. Discipline Expertise
2. Professionalism and Professional Integrity
3. Global Citizenship & Sustainability
4. Communications and Teamwork
5. Reflective and Critical Learner
6. Life Long Learning

Embedding assessment strategies to move these attributes from implicit to explicit is one of Staffordshire University's innovative practices. It has involved a review and revalidation of every undergraduate module, requiring content and assessment strategy to be mapped against the graduate attributes. As part of the rollout programme, a number of Awards were identified to pilot a further initiative - the Staffordshire Graduate Employability Project (SGEP) - that would concentrate on the introduction of employability skills through customised core module using a new customised e-portfolio. Across all Award areas 1940 students explicitly on the pilot programme. Drama and Theatre Arts formed one of the pilot awards along with Law, Business, Science, Media and Sport.

The University made a pledge, to all its Staffordshire graduates that it would deliver on these graduate attributes as part of the curriculum: "We, the University, must make a difference for our students and graduates through the key graduate attributes that appear in the Staffordshire Graduate with a particular emphasis on the 3E's of employability, enterprise and entrepreneurialism." (Vice Chancellor) This was communicated within the University and through a national advertising campaign (cinema, TV, radio and press coverage) in 2012/13.

Contribution to student employability:

More self-employment/start-up companies, more student clubs and societies; to date five new academic based student clubs have been formed directly related to the Staffordshire Graduates. Increased levels of student volunteering; 2013 saw over 740 students actively engaged in volunteering activities, an increase of over 70% on the previous year (2012). This number has increased to over 1,250 in 2014. In the age group 18-25 this year on year increase was nearly 90%.

Outcomes and impact:

The first cohort will not conclude their programme of studies until June 2015, whereupon a number of evaluation plans are in place, including the establishment of a longitudinal study to follow employability progress beyond graduation. However, a second level four cohort began September 2013 (with some revisions to content and delivery) and a further is planned for September 2014. Immediate impacts have been identified as: six new awards with embedded transferable skills linked to Staffordshire Graduate Attributes; an increased number of students engaging in work-ready/ work experiences; a core requirement at level five (year two) that every student completes at least 25 hours work experience, either paid or voluntary, which is recorded and reflected upon using the e-portfolio; over 1,300 students and 100+ faculty staff directly engaged with the Staffordshire Graduate through this pilot; employability project in the first year of operation; closer links with employers across a variety of subject areas; strong collaboration with the Students Union; platform for developing the Higher Education Achievement Record (HEAR) at the University.

For further information:

Academic Development Unit Rosy Crehan, Email: R.Crehan@staffs.ac.uk; Steve W Williams Email: S.W.Williams@staffs.ac.uk; Mike Clements Email: mike.clements@staffs.ac.uk; Rob Marsden Email: R.J.Marsden@staffs.ac.uk Tel: 01785 353787

Four years ago, the School of Science and Engineering restructured its courses to ensure that employability was a central plank of course delivery. In the new structure, each course suspends the weekly timetable for one week, twice a year, to provide time for group project activities based on real science and engineering industry problems. These are supported by local businesses who introduce a problem - students come up with solutions appropriate to their level.

However, when the first cohort was reaching its final year it was apparent that something was missing: students were failing to recognise that their generic and transferable skills were giving them competencies, alongside discipline learning, that would give them an advantage when competing in the job market. Many were not processing their experiences in this way and were consigning the transferable skills to the “done the module, passed it, forget about it” personal dustbin.

Teesside University then published a new 'Learning, Teaching and Student Experience Strategy' in 2012. Under a heading of “Goals”, an attempt was made to define the type of student Teesside University sought to produce, characterised as “Adaptable”, “Articulate”, “Aspiring”, “Creative”, “Confident” and “Critical” (3 As and 3 Cs). It was hoped that, if these attributes were embedded early in their student experience, there was a better chance of them being realised.

A decision was made to use the first group project week for the first year, (week nine of the academic year), in a radically different way. The whole year cohort was split into two groups of approximately 200 students: each group, with a mixture of disciplines, had five half-day timetabled sessions in the week:

Day 1: external presentation on “enterprise” and two local charities pitched for funding.

Day 2: Student-generated business cards were used to assemble teams of six students. An external speaker talked about the power of LinkedIn and Twitter to present a professional profile and in the wider context of the 3 As and 3 Cs. Their homework was to create Twitter and LinkedIn accounts and complete their profiles.

Day 3: consisted of a talk from a local inspirational entrepreneur who discussed creativity. The groups were then charged with developing an idea for a simple product or service that could be easily acquired, manufactured or delivered to generate two sales at a minimum of 50p per group member with proceeds going to the 2 charities.

Day 4: students were introduced to basic marketing concepts - each team then had to produce a marketing flyer for their “product” or “service”.

Day 5: students submitted a copy of each team member’s business card, LinkedIn and Twitter profile pages, plus the team marketing flyer and an account of money raised (totalling £350.00). The 3As and 3 Cs were revisited in a group discussion/ evaluation and a presentation was made by two recent Teesside University graduate scientists who had set up their own business.

Contribution to student employability:

The importance of the week’s activity was to inculcate a sense of being a professional, at this very early stage of their university journey, that they were responsible for their own destiny and that in order to fulfil their life ambitions, they would need to “market” and “sell” themselves to the outside world.

Outcomes and impact:

It is too early to estimate its impact on Teesside student characteristics. The engineers tended to score more highly in terms of the “Goals” above but engaged less with few being recipients of prizes awarded for the best business cards, products, flyers etc. There has been a notable reduction in the number of students interviewed for poor attendance since the group week activity.

For further information contact:

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Developing Enterprise Skills in Art and Design

HE. Postgraduate Certificate Fashion & Lifestyle Journalism

University of the Arts London

“The very nature of the fashion and lifestyle journalism industry means that many students will work as freelancers and therefore need entrepreneurial skills and from the outset, students are urged to get their work published and engage in placements where possible.” (Nilgin Yusuf, programme director for Media and Communication in the Graduate School)

Students are encouraged to develop an enterprising mindset and use their initiative to engage in the world of journalism and discover new market potential. Industry speakers contribute throughout the course to develop confidence and professionalism. The short boot camp nature of the course invites a range of ages and backgrounds, creating a diverse student body.

The assessment is holistic; a body of well-researched and appropriate editorial material is produced for a specific area of fashion or lifestyle journalism, alongside a 2,000-word research report. Students need to produce an original idea, but one that can add value to an existing market place. Learning outcomes are met through a technical and analytical approach, integration of qualitative and quantitative research and the contextualisation of critical evaluation and successful creation of a final product (blog, website or magazine).

The major project teaches students that to be “employable” is to recognise the need to contribute new and innovative ideas to a market, not to create a new model entirely that may be unrealistic or unachievable upon graduation. Research, analysis and subject knowledge are weighted with four learning outcomes attached to them, and communication/ presentation and Personal Professional Development (PPD) are weighted with two learning outcomes attached.

Peer presentations and individualised industry feedback are integral to the unit, which offer students the opportunity to reflect and analyse diverse markets. Students are offered the choice of creating a supplement based on an event, emerging market or relevant theme, professional or journalistic blog, or creation of a fanzine, culminating into a portfolio.

Contribution to student employability:

Upon graduation, the editorial material and research report can be presented, at interview stage, to potential employers. Communication and confidence are developed through pitching an idea to peers and through sourcing and undertaking industry interviews. Time management is critical as this is a short six-week project, so effective organisation is required. Market awareness and the intuition to spot a gap in the market further entrepreneurialism.

Around half of the cohort tends to have placements lined up, but all students are offered an exit tutorial, as well as sessions on CV writing, marketing, interview techniques and freelancing.

Outcomes and impact:

As an example, one graduate now works for the Glasgow Herald as its fashion & lifestyle editor – a role created following her major project presentation to the editor who was impressed with her foresight and could see that she could bring something to the newspaper. Whilst on the course, students have had work published in India, Sweden, Canada, China, and Denmark.

For further information contact:

Nilgin Yusuf, Programme Director for Media and Communication in the Graduate School

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Cara Lee Roth, Educational Developer Student Enterprise and Employability (SEE) University of the Arts London Email: c.roth@arts.ac.uk

Publication: WORK OF ART: Understanding Enterprise & Employability in Art & Design Higher Education. <http://www.arts.ac.uk/student-jobs-and-careers/about-see/publications/>

Business Launch Pad (BLP)

University-wide approach

University of Ulster

A self-employed placement model was launched to a small pilot of pre-placement students during 2012/13, embedding a new option in the curriculum. Incorporating an extra-curricular Module in Enterprise Development, available on the University's VLE; this supported students from all disciplines in increasing their understanding of entrepreneurship and the development of attitudes, behaviours and competencies in new venture creation. The Module includes the development of creative thinking, problem solving and idea generation, applied in the context of entrepreneurship.

At the end of the 2012/13 academic year a tender was submitted for InvestNI funding to support a pilot student enterprise programme with the aim of creating teams of students interested in entrepreneurship. There was close alignment between these tender requirements and the Self Employed Placement Model. Linkages developed during the self-employed placement model were leveraged and a University-wide team were successfully awarded £47,000 to pilot the Business Launch Pad (BLP) at Ulster.

The BLP pilot was offered to all students, particularly pre-placement students. The BLP represents an institution-wide, multi-disciplinary project managed by the University Office of Innovation in partnership with Employability and Marketing and academic colleagues from the Ulster Business School plus input from an external business consultant.

Business ideas were received from more than 80 students; 50 participants were selected for BLP which was delivered across 16 weeks of semester one during 2013/14, and included:

- a two-day boot camp exploring creativity, innovation and opportunity recognition;
- guest speakers – local entrepreneurs from emerging business sectors sharing their experiences of building business and finance raising;
- weekly on-campus workshops giving practical support to ideation;
- mentors provided expert insights for developing a venture;
- innovation credits allowed students to gain expert help in prototype development and/or other specific assistance (e.g. legal/financial advice);
- making an investment pitch.

All students were encouraged to bring their wildest idea for a new product, service or social enterprise.

Contribution to student employability:

Rapid changes in technology, political structures and lifestyles offer graduates opportunities for new venture creation and to apply entrepreneurial effort within existing business to remain competitive. BLP offers participants a route to increase their understanding of, and attitudes towards, entrepreneurship.

Participants demonstrate proficiency in key employability attributes and exhibit their ability to be proactive, adaptable and committed through group-based business venture work. These outcomes, documented by participants and formally assessed by the University, support graduate transition from professional education into professional life.

Outcomes and impact:

Four new business start-ups exist: a web/ app development company; a games development company; a fashion accessory company; a company that has created a new concept app.

All engagement with BLP provided recognition that could count towards the Ulster EDGE Award: whether a student attended only an information session at launch and/or completed the module. All participation could also appear on the student's HEAR.

For further information contact:

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Enterprise education needs enterprising educators: inspiring new teachers through formal / initial teacher training provision.

Postgraduate Certificate in Education (PGCE) & Post Compulsory education & Training (PCET)

University of Wales Trinity Saint David

A modular / credit bearing enterprising educator component that compliments an existing formal teacher training qualification - the Postgraduate Certificate in Education / Post Compulsory Education and Training (PGCE / PCET). Professional Graduate Certificate in Education and Professional Certificate in Education also awarded to those who successfully complete the first year.

Background research had indicated that management and leadership programmes have been ineffective in developing creative capacity and opportunity recognition skills. In an enterprising education context, teachers without the skills to develop such attributes could be putting their students at a disadvantage. The shortfall is addressed by educating the educators within a teacher-training programme. The programme of study aims to develop the student teacher's creativity, innovation, problem-solving and business acumen, in addition to developing attributes such as the capacity to cope with uncertainty, ambiguity and risk. To facilitate this type of learning, a number of indicative content topics evolved:

- exploring and understanding entrepreneurship, enterprise and its development, in an educational context, including a review of personal contexts;
- the impact on society of entrepreneurs and intrapreneurs;
- examining learners' personal skills and how these may be developed;
- the skills, attributes and behaviours of the entrepreneur - including ethical considerations;
- developing insight and self-efficacy for opportunity/idea generation;
- redefining problems and identifying opportunities;
- convergent and divergent thinking – strategies and enhancement;
- creative thinking and the establishment of creative learning environments;
- exploring and applying entrepreneurial pedagogies including innovative teaching strategies, techniques and skills and their application in the delivery of entrepreneurial education;
- the value of intellectual property rights issues such as copyright, trademarks and patents;
- internal and external resources available to support entrepreneurship for staff and learners;
- engaging entrepreneurial educators.

These themes are delivered experientially, and importantly, theoretical aspects are drawn out following direct experiences (curiosity-based learning). Assessment is made in two stages: through a video pitch of the educator's intention as to how they will use the learning, and a final reflective essay. This permits 'glorious failures', as the reflective essay can also explain why the idea might not work and the trainee teachers learn from their own failures. This is rewarded appropriately in assessment (thus mirroring the entrepreneurial learning journey of learning from failure).

Contribution to student employability:

Educators are more innovative in creating their own opportunities and can demonstrate examples of problem solving, such as innovative ways to work within budgetary constraints by engaging the community. These demonstrable skills impact on their learners' abilities, hence sustainability is built into the process.

Outcomes and impact:

Teachers who have undertaken this course have established many initiatives within their personal teaching contexts: for example, theatres within schools, special assistance programmes for elderly learners, enhanced health care provision, and rehabilitation training in the prison service. In addition, some have prepared courses for young people not in traditional education.

For further information contact:

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4. Profiles of Key Organisations that Inform and Support Enterprise Education in Higher Education

AGCAS Enterprise and Entrepreneurship Task Group

The Association of Graduate Careers Advisory Services (AGCAS) is the professional body for careers and employability professionals working with higher education students and graduates and prospective entrants to higher education. The remit of the AGCAS Enterprise and Entrepreneurship Task Group is to promote and disseminate information and advice to AGCAS members on enterprise and entrepreneurship initiatives and, where appropriate, collaborate with other key stakeholders such as Enterprise Educators UK.

Support provided/activities:

- To facilitate networking for staff in HE careers services who have an interest in supporting this agenda;
- To be a forum for sharing and promoting good practice within the group, with employers and other stakeholders;
- To increase awareness of issues and developments on the enterprise agenda which may impact on HE careers services;
- To encourage the active participation of staff within AGCAS in the Enterprise Agenda.

For further information contact:

Jane McAllister, Chair of the AGCAS Enterprise and Entrepreneurship Task Group
Tel: 0121 331 5588

Websites:

<http://www.agcas.org.uk/>

<http://www.agcas.org.uk/communities/51>

Enterprise Educators UK

Enterprise Educators UK is a national network for enterprise educators. It assists its members to increase the scale, scope and effectiveness of enterprise and entrepreneurship education within their institutions.

Support provided/ activities:

Enterprise Educators UK provides:

- major discounts for all staff attending the International Entrepreneurship Educators Conference (IEEC) - in 2014 the discounts were worth up to £143 per staff member;
- free attendance at [EEUK Best Practice events](#) (£90 for non-members);
- opportunities to host and contribute to events - raising awareness of members' enterprise and entrepreneurship education expertise;
- the [Enterprise Education and Research Project Fund](#) - it has awarded grants totalling £52,000 and more awards will be made in summer 2014;
- membership of a peer network of over 950 educators from 100+ institutions;
- national representation to raise awareness of the importance of enterprise and entrepreneurship education - its Directors are in regular contact with UK government departments such as BIS as well as devolved governments.

For further information contact:

Tom Williamson Email: TWilliamson@cad.coventry.ac.uk

Website:

www.enterprise.ac.uk

The Higher Education Academy

The Higher Education Academy (HEA) is the national body for enhancing learning and teaching in higher education (HE). It is committed to excellent learning and teaching and supporting UK HE organisations with an emphasis on improving the student experience.

Support provided/activities:

The HEA brings together universities, colleges, governments and sector agencies to improve teaching and the student experience.

As an authority on curriculum design, innovative pedagogies and staff and student transitions, it takes a holistic approach to improving teaching and learning and achieving strategic goals. With a robust evidence base to underpin its work, the HEA

- helps individuals realise professional learning and teaching ambitions;
- supports organisations to achieve their strategic ambitions to enhance teaching and learning;
- works across the sector to shape the future of HE;
- manages the UK Professional Standards Framework (UKPSF) a unique professional recognition programme to support the professionalisation of teaching and individuals achieve their career goals;
- provides a wealth of resources, surveys and services to support our subscribing organisations;
- provide s HE support and consultancy at institutional, discipline or school level, whatever the area of focus to help HE providers meet the challenges faced in an increasingly competitive environment.

Support for enterprise and entrepreneurship education:

The HEA supports institutions to enhance the academic, personal and professional development of students in order to meet the changing needs of employers, the economy and society through;

- facilitating dialogues around the conceptual development of employability frameworks;
- commissioning research into the thinking and theory that underpins and informs employability and enterprise education policy and practice;
- encouraging and supporting project activity that enhances practice;
- supporting HE providers to embed effective enterprise education practice into the curriculum;
- influencing policy, practice and debate through events, summits and publications;
- developing resources and providing training to support effective policy and practice;
- disseminating and sharing good practice;
- facilitating networks to support communication, debate and sharing of good practice.

For further information contact:

Enquiries@heacademy.ac.uk

Website:

www.heacademy.ac.uk

The Intellectual Property Office (IPO)

The Intellectual Property Office helps businesses, innovators and entrepreneurs understand how intellectual property can create value from their ideas, turning inspiration into sustainable business success. In addition to granting patents, registering trademarks and designs, the IPO supports innovators to use, manage, and enforce their IP to achieve their fullest potential.

A strong enterprise culture is central to creating a dynamic economy and with over 160 years' experience and expertise, the IPO promotes innovation and growth by offering a vibrant programme of activities, informed advice and support to UK business

Support provided/activities:

The IPO is engaging with university representative bodies and industry as part of ongoing work to influence curriculum development, the goal being to see IP included in a much wider range of university courses, in far more universities across the UK. We are working with partners to increase inclusion of IP in subject benchmarks and course accreditation criteria to achieve this goal.

To support this work the IPO is developing an online IP learning tool for use by students and lecturers. The tool will be freely available online (from March 2015) and aims to:

- improve awareness and understanding of IP amongst students and lecturers;
- provide a benchmark for IP knowledge amongst the student and lecturing community;
- increase the number of graduates entering industry with IP knowledge;
- encourage students to think about IP created during the course of their studies.

Intellectual Asset Management Guide for Universities:

This guide encourages universities to set strategies for IP created by their students and staff; this may, for example, include developing strategies for student ownership of IP or policies to manage IP in teaching materials.

Fast Forward Competition

To support commercialisation of university generated IP the IPO has awarded, over the last four years, £2.7million in funding to 44 innovative projects through its Fast Forward competition. This competition encourages universities to work with businesses and local communities to develop innovative knowledge exchange practices and create new companies and services which have benefited the UK economy and society.

Contact details:

Tel: 0300 300 2000 Email: Information@ipo.gov.uk

The National Association of College and University Entrepreneurs (NACUE)

NACUE is a nationwide network of student societies taking positive action to create an enterprising generation. It was founded in 2009 when the student leaders of 12 enterprise societies came together. They have a close relationship with their network of over 200 FE and HE institutions which enables them to advocate for greater enterprise support to policy makers and to further understand the enterprise needs of students and institutions.

Support provided/activities:

- directly supports the creation of enterprise societies in UK education institutions;
- organises regular events where students can learn from experts and from each other;
- assists institutions that want to establish an enterprising culture amongst their students;
- advises government representatives on policy solutions;
- acts as a national advocate for students in discussions of employment and education.

It works with every type of institution, from the city-centre vocational college to the traditional research-led university, and partners with some of the world's leading businesses to deliver over 20 events and conferences each year.

Support for institutions:

- formal affiliation with a national network;
- institution logo displayed on the NACUE website and printed material;
- priority access to NACUE events and opportunities. . Staff and students from member institutions receive special offers on tickets;
- help with promoting enterprise facilities;
- promotion of institutions' entrepreneurial activities;
- a dedicated NACUE staff lead;
- an opportunity to join the NACUE Student Advisory Board.

Support for students:

A network of student enterprise societies in nearly 200 universities and colleges is a ready-made network of support, and events such as the National Student Enterprise Conference and Start-up Career Launchpad bring together students from around the country. Through the Varsity Pitch, £10,000 is available to support a business start-up.

Support for enterprise societies:

NACUE organises regular events where society members can get together to share ideas and learn from experts. It also distributes funds that support societies and their businesses, and helps to ensure that the voice of enterprising students is represented at the highest levels of government, education and industry.

For further information contact:

membership@nacue.com

Website:

www.nacue.com

The National Centre for Entrepreneurship in Education (NCEE)

Aims:

- to be an international leader in enterprise and entrepreneurship;
- to be the partner of first choice for UK HE institutions in developing the entrepreneurial university concept;
- to seek opportunities to engage more widely within the business and education sectors in support of the NCEE mission.

Support provided/ activities:

NCEE's aims are supported by the following objectives:

- developing and assessing the entrepreneurial university concept;
- delivering innovative learning opportunities across three core areas:
 - Leadership and management
 - Academic entrepreneurship
 - Individual (including graduate) entrepreneurship.

For further information contact:

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Website:

<http://ncee.org.uk/>

The Quality Assurance Agency for Higher Education (QAA)

QAA is the independent body entrusted with monitoring, and advising on, standards and quality in UK higher education. Its mission is to safeguard standards and improve the quality of UK higher education wherever it is delivered around the world.

Support provided/activities:

- supports universities and colleges in providing relevant, high-quality courses;
- involves students in its work, to find out how well their needs are met;
- published national guidance on enterprise and entrepreneurship education;
- consults employers and professional bodies in developing subject benchmark statements. Has launched an initiative to involve employers in quality development and improvement;
- funding research on the impact of employability initiatives in higher education;
- runs regular events for students and employers, to gather their point of view;
- collaborated with the Chartered Management Institute & the Association of Business Schools to produce 21st century leaders: building practice into the curriculum to boost employability.

QAA works with all UK degree-awarding bodies, all other publicly funded providers of UK higher education (such as further education colleges), and all providers that recruit international or publicly funded students to UK higher education courses. QAA reviews each institution to ensure expectations are met. It maintains the Quality Code, which sets out the agreed expectations, and also publishes briefings and guidance.

Support for institutions:

- being able to show that they meet expectations for standards and quality;
- Quality Mark available to institutions with successful outcomes from HE review;
- opportunities for staff to attend special events and relevant consultations;
- access to the Quality Code and guidance on enterprise and entrepreneurship education;
- research-led briefings and topical discussion papers;
- increasing international links through a network of quality assurance agencies and providers;
- opportunities for representation on our advisory groups and Board.

Support for students:

- the confidence that all UK higher education providers must meet agreed expectations;
- opportunity to serve on QAA review teams and submit views to QAA in writing;
- the opportunity to join advisory groups when quality assurance guidance is developed;
- the chance to attend consultation events about standards and quality;
- representation on QAA's Board.

Support for enterprise and entrepreneurship education

QAA publishes guidance for higher education providers on enterprise and entrepreneurship education. The guidance offers a framework for providers to use in supporting students to develop relevant knowledge, understanding and skills. QAA collaborated with the HEA in their commission of case studies that draw upon the guidance, identifying practice across a range of institutions.

For further information contact:

enquiries@qaa.ac.uk

Website:

www.qaa.ac.uk

VITAE

VITAE lead and enhance the professional and career development of researchers internationally, and champion the enterprising researcher as one of its key themes.

Aims:

- build human capital by influencing the development and implementation of effective policy relating to researcher development;
- enhance higher education provision to train and develop researchers;
- empower researchers to make an impact in their careers;
- evidence the impact of professional and career development support for researchers.

Support provided/activities:

- develops and delivers high quality training and professional development for researchers;
- works with institutions to provide high quality, innovative and engaging researcher development;
- provides online information, advice and resources for institutions and researchers on professional development and careers including the international Vitae Researcher Development Framework;
- brings together all those with a stake in realising the potential of researchers;
- establishes partnerships to champion the needs of researchers and demonstrate their impact on economies and society.

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Appendix I: Acknowledgements

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The HEA has knowledge, experience and expertise in higher education. Our service and product range is broader than any other competitor.

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