Technology for employability: HE case studies

Study into the role of technology in developing student employability

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Case studies
Title
Two illustrations of the University’s Greenwich Connect team supporting faculties in technology-enhanced implementation of the institutional employability goals.

Summary
Developing student employability is a key strategic goal of the university due largely to the nature and characteristics of its student population (see below). The Greenwich Connect team work in partnership with Faculties to help plan, implement and evaluate learning innovation aligned to strategic goals, leading to specific projects that the Greenwich Connect team support. This case study describes the work of the team through the lens of two such Faculty projects. Firstly, they run a Virtual Law Clinic that builds capacity for law students to engage with professional lawyers and the community on real-world problems. Secondly, the Professional Development Portfolio in engineering and science seeks to develop student professional practices, skills and confidence.

Organisation
University of Greenwich: Greenwich Connect
Greenwich Connect is a university-wide initiative to develop and implement a vision for learning innovation in a digital world. The Greenwich Connect team, part of the University’s Educational Development Unit, supports faculties in enhancing curricula. They do this through joined-up approaches to implementing the university’s strategic goals and quality processes (e.g. for teaching, learning and assessment, employability, graduate attributes and digital literacy). This is all with a strong emphasis on digitally-supported social, professional and academic practice and collaboration between students, staff, alumni and employers.

Context and challenge
According to HESA statistics, the University has the highest percentage of students from working class backgrounds in the UK. It is also amongst the highest percentages of students from black and ethnic minority backgrounds and there is a belief that this results in students not always having the same level of confidence, aspiration and social capital as in other institutions. As a consequence, the University’s 2012-17 strategic plan seeks to improve both the academic and employment outcomes of graduates with a strong focus on student employability skills, work experience and transition to work.

Making it happen
The Greenwich Connect team works in partnership with faculty staff on a range of activities including development of social media policy and guidelines and working on projects such as mobile and distance learning development, all within an agreed governance model. Two such faculty projects are described both of which have a strong emphasis on implementing the University’s strategic goals on student employability.

Virtual Law Clinic
The Law department in the Faculty of Architecture, Computing and Humanities, runs a national award winning drop in service where members of the public who cannot afford legal services can seek advice on certain aspects of the law such as employment and family law, disability benefits and intellectual property. Over 200 clients have so far been helped and students get involved in tasks such as interviewing, legal research and drafting advice under the close supervision of qualified solicitors. These activities help them develop a range of employability skills, such as collaboration and team working, communication, professional practice, self-management, working with the wider community, using digital tools and knowledge construction.

The Law Centre identified the need to expand the drop-in service to allow greater numbers of students to engage with the public and professional lawyers, driven largely by student demand and the need to overcome difficulties in finding internships for all students. However it did not have the physical space to allow this and it was therefore decided to develop the Virtual Law Clinic.

The Greenwich Connect team worked in partnership with the Department of Law and the Department of Computing and Information Systems to develop a bespoke Virtual
The University of Greenwich, with a member of the Greenwich Connect team acting as project leader. A decision was taken to develop and host an in-house system, as commercial systems were deemed too expensive and open source alternatives do not have adequate educational features.

The system can now be accessed by both desktop and mobile devices and provides secure communications, a dedicated forum to allow sharing of documents, research and ideas (highlighting the chronology of how decisions are reached) and support for formative and summative feedback from academic and professional staff. The system was developed by students working via the University’s GWizards initiative that is designed to engage students from the Department of Computing and Information Systems in work experiences, who were mentored by a member of the Greenwich Connect team. The project has therefore additionally helped to develop the employability skills of these computing students.

The Virtual Law Clinic allows a member of the public to submit a web-based query, which is then assigned by a supervisor to a team of students supported by academic staff and legal professionals (working pro bono to provide advice and mentoring to students). They work synchronously and asynchronously to develop draft legal advice, with students being given feedback until a draft reaches an acceptable standard, which is then signed off by the supervisor and e-mailed to the client. On completion of a case, the records are tagged and anonymised to provide a knowledge base of case histories (complete with student comments and feedback), which provide an invaluable resource for future teaching, learning and research.

Those students undertaking the 30 credit Level 6 Pro Bono option, write an assessed reflective journal which includes reflecting on and articulating their employability skills.

Professional Development Portfolio in engineering and science

The Faculty of Engineering and Science has identified the importance of developing student employability skills and confidence. They had found that significant numbers of students are not gaining employment as they are not able to present themselves well to employers. The Engineering and Science PDP (Professional Development Portfolio) has therefore been developed in partnership with the Greenwich Connect team. This involves students using an e-portfolio (PebblePad3) to reflect on their professional and academic development, uploading supporting evidence such as documents, images, audio recordings and external links and receiving feedback from staff – all supported via personal tutoring.

The School of Science originally pioneered this development, using a series of PebblePad templates and video resources (embedded in the templates) to structure student participation, which requires students to be self-reflective in both professional and academic skills. The PDP is structured around eight themes including self-management, managing information, SWOT analysis, forward planning. It is an assessed activity for undergraduates in levels 4, 5 and 6 and complements teaching sessions on employability skills and student access to online resources such as the Myers Briggs personality index. Final year students also take a core 15-credit course in planning and professional development where the PDP accounts for 60% of the assessment.

The PDP is a process and not just a repository, which encourages ongoing student reflection and dialogue with staff as well as students articulating their strengths, weaknesses and their level of confidence in their skills. The system also allows students to use their portfolios to showcase themselves to employers.

In addition, the Faculty has an Employability Passport initiative. This rewards students for their willingness to record and validate work, volunteering and other experiences. These experiences can contribute powerfully to increased confidence, more convincing CVs and better job applications.
Impact
The Greenwich Connect initiative, which was set up in 2014, has established new governance structures and four working groups. These implement its goals in respect of learning innovation in a digital world and, specifically, in supporting Faculty and Department projects to improve the institutions’ strategic goals in respect of employability.

In the Department of Law, it is too early to assess the impact of the new Virtual Law Clinic, but it is anticipated that it will meet the objectives of building the capacity of an established legal advice centre for students to engage in real-world legal advice supported by professional lawyers.

In the Faculty of Engineering and Science, over 800 students now use an e-portfolio to underpin their Professional Development Portfolio, via a core PDP assessed course.

Sustainability
A key aspect of sustainability for the Virtual Law Clinic is ongoing support, maintenance and development of the technology. This is particularly important as students were involved in its development who are with the university for a relatively short time period. The Department of Computing and Information Systems has committed to supporting it and has developed processes for new students to support, maintain and develop the system including recording of full system documentation. Other sustainability options being considered include opening up the Virtual Law Clinic to other institutional law departments as well as adapting and contextualising the system to other subject areas, which have a professional element.

The Faculty of Engineering and Science is planning a range of further developments to the Professional Development Portfolio. These include

» a higher level of employer engagement (including engaging with SMEs)

» securing a greater number of placements for students

» engaging employers as mentors

» staff development on employability skills and personal tutoring

The Greenwich Connect team are also working with other Faculties to explore how the approaches and technology can be contextualised to their needs in development of professional practices.

Lessons learnt
A number of lessons have been learnt:

» There is a need to continually engage and build relationships with employers (including SMEs) to support opportunities for students to engage with them via e.g. placements, employer mentoring

» Development of employability skills and digital literacy needs to be a key part of staff professional development

» Technology can make engagement between students and employers more cost-effective

» Development of student employability needs to be integrated into programme design and align with assessment for learning and personal tutoring processes

» Use of e-portfolios must be considered as a process, not just a repository

» Students can be used to support learning innovation and creative uses of technology

» Personal tutoring needs to be appropriately organised, supported and quality assured to provide more consistent practices e.g. developing personal tutoring skills, ensuring it is recognised in academic workload and developing quality assurance processes

» The need to overcome perceptions in some academics that it is not the responsibility of universities to teach employability
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Title
Development of student employability skills through a self-directed, blended approach and engagement with social innovation and enterprise.

Organisation
University of Northampton: University Centre for Employability and Engagement (UCEE) and Institute of Learning and Teaching
The University Centre for Employability and Engagement (UCEE) works with the public and third sectors to develop strategic partnerships with organisations in local, national and international communities that provide ‘win win’ relationships for the organisation, its community and stakeholders, the student and the University of Northampton by developing innovative paid and unpaid opportunities for students to gain employability skills and enhance their experience.

Summary
The university developed a policy for student employability which encourages self-directed evaluation, planning and development of employability skills via engagement with social innovation and enterprise. Ten employability skills and associated learning outcomes have been identified and a non-linear course developed to support students in assessing these skills and engaging with appropriate activities to address their specific needs. The course includes a blend of “e” and face-to-face activities (including peer review) and uses technology to maximise efficient use of student and advisor time.

The course has already been integrated into the curricula of the BA in Social and Community Development programme and similar integration plans are in place. There has been a large increase in student engagement activities with the employability agenda and an independent evaluation is currently in progress. The course primarily uses the VLE Blackboard as well as online skills assessment and communications technologies such as Skype; the use of online badges is in being planned.

Context and challenge
The university has a strategic goal to be Britain’s leading university for social enterprise and has been awarded the international accolade of ‘Changemaker Campus’ by Ashoka U, the world’s leading network of social entrepreneurs. Changemaker Campuses are colleges and universities collectively striving to ensure that the educational experience is a world-changing experience. As part of this strategy, the university has developed a set of principles which include “every student has a responsibility to effect positive social change” and “every student already has the power and resources to effect that change”. These principles shape its policy for student employability which can be summarised as one which encourages self-directed evaluation, planning and development of student employability skills and which aims to enhance employability through student engagement with social innovation and social enterprise.

Making it happen
The Centre for Employability and Engagement set about implementing the policy on student employability and started with a consultation exercise with employers, students, graduates and other universities.

Development of employability skills framework
The consultation exercise identified ten key employability skills e.g. communication, leadership, teamwork, persuasion, negotiation, influencing skills. The ability for students to clearly articulate their skills and show passion are also considered to be key attributes that employers are looking for in students.

For each of these employability skills, a set of five learning outcomes were defined. For communication, they included effectively communicating verbally with audiences of different backgrounds and similarly for written communications as well as getting across complex ideas to achieve buy-in. In this way, the university was shifting staff/student thinking from a careers mindset (with its narrow focus on getting a job) to a broader mind-set of skillsets, values, behaviours and attitudes which employers are looking for. Students also need to evidence these through working on social innovation projects.

B. University of Northampton
Development of a student self-directed blended employability course

This employability skills framework led to the development of a blended and non-linear course based on the identified learning outcomes and predicated on student ownership i.e. the student self-directs the course based on their needs.

The university developed an online skills assessment based around the learning outcomes. For each question there are just three multi-choice response options. For example, “What experience do you have in giving presentations to a wide range of audiences?”, the options are none, some and lots, which result in traffic light feedback: red, amber and green. For green responses, students are then asked to prove it, either by booking an appointment (online) or they can undertake an e-activity on self-reflection. For red and amber responses, a list of e-activities would be presented to help them improve that specific learning outcome.

Students can also opt to attend workshops and can book these online and they also have to complete an e-activity before attending the workshop emulating the flipped classroom approach. An example of an e-activity is CV-building. Students watch three videos and address the question “what makes a good CV and a bad CV?” They then prepare their own CV using a supplied template. When they attend the workshop (with their completed CV), a peer-review session is facilitated. They can also book-in to see an advisor. A further e-activity following the workshop requires them to re-write their CV based on the feedback, which goes to an Advisor who will either provide e-feedback or book an appointment for a Skype call or face-to-face meeting with the student. Another e-activity focuses on building student networking skills and activities centre on networking via LinkedIn.

Incentive for students

An incentive system (for employability) has also been developed through the use of nectar points gained for example through completing an e-activity or undertaking voluntary work and recorded in Grade Centre. The university intends to implement online badges in the future.

Integrating employability into the curriculum

The Centre is also working with schools to integrate the course into curricula using a co-curricular approach. For example, it is working with the BA in Social and Community Development programme, focusing on the volunteering module where students are required to undertake an assignment and assessment in respect of their volunteering work. The employability angle was then built in to the module to include the online skills assessment, action plan and continuous self-reflection related to their development within their action plan. From this they could gain an award over and above the normal module credit.

Alignment with HEAR

Plans are in progress to align the employability skills framework to HEAR records, through re-articulation of the employability learning outcomes.

Technology used

The IT platform chosen was Blackboard and this is used to underpin many of the activities e.g. e-activities, recording of e-activities in Grade Centre, appointments, scheduling.

The online skills assessment is currently a separate application and has not yet been integrated with Blackboard, although its integration is planned.

There is no institutional common approach to using e-portfolios, though some schools use them.

In the School of Arts, students are using mobile devices to capture multimedia data and adding these to their e-portfolio (helping them to showcase to potential employers). Health and Education are using PebblePad as a tool to support engagement with their professional standards frameworks.

It is recognised that online student networking outside of the university’s systems is prevalent and helps to provide peer support.
Impact
Since implementing the course, the number of students engaging with the service has risen from 450 to 8,496 and the university is now planning an analytics project to fully research how students are progressing through the course. The University’s Institute of Social Innovation and Impact is undertaking an independent evaluation of impact and the Student Union are undertaking “mystery shopper” exercises to provide feedback. To date 97% of students have obtained employment or have gone on to further study.

The DHLE survey (2013/14) confirms the University’s continuing positive performance with the maintenance of 96% employability across the past four years, retaining a top 20 UK HEI ranking (HESA report). The graduate employment performance also shows a three year improving trend though first degrees is below HE average. The NSS (2014) optional category on careers places the University above the HEI sector top quartile for student satisfaction and the igrad-NSB places the University well above the HEI benchmark.

Sustainability
Sustainability plans include:

» Better integration of technologies - for example, within Blackboard
» Further work with Schools with integration of the employability course into curricula
» The introduction of virtual Internships has had a limited pilot in 2014-15, with further developments planned 2015-16
» Addition of online badges
» Development of a new platform outside of Blackboard to cope with the demands of the on-line platform and integration with HEAR

Lessons learnt
A number of lessons have been learnt:

» There have been 2,500 completions of the online skills assessment and all students subsequently clicked through to engage with at least two e-activities. However, it is recognised that this means that some students are not using the course therefore a safety net has also been put in place for those students who do not embrace the self-directed approach. It is called Fast-track and is open to final year students only who have access to a dedicated (remote) advisor who supports them (via Skype, e-mail, texting) using techniques such as Skype-based mock-interviews

» Although 97% of students obtain employment, only 64% of these jobs are graduate level jobs. The challenge is therefore to drive up the quality of jobs that students obtain

» In the online skills assessment process, it was found that students generally overestimate their experience and this would be teased out in the meeting with an advisor

» The approach to student employability skills development has required a mindset change for careers advisors who have moved from a directing approach to supporting students in taking charge their career plans and developing the appropriate skills

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C. University of Edinburgh

Title

Organisation
Edinburgh College of Art and the University of Edinburgh
The history of Edinburgh College of Art (ECA) dates back to the 1770s. ECA was an independent specialist higher education institution until it formally merged with the University of Edinburgh in 2011. The merger of ECA with the University enabled the creation of a new and enlarged college of art by incorporating the University's School of Arts, Culture and Environment. As a result, the new Edinburgh College of Art comprises not only Art, Design, Architecture and Landscape Architecture, but also History of Art and Music.

Summary
This case study follows the development of various initiatives at the College of Art pre-merger and the subsequent cross-University developments post-merger.

The College of Art was an early adopter in addressing the employability agenda for its students and had evolved and embedded an integrative approach to curriculum design for all programmes. Developing career ready skills and graduate attributes is integrated into assessed learning outcomes, learning activities and formative “assessment for learning” approaches. Networked online tools and resources are an essential component in providing the necessary supportive learning environment.

These various initiatives have better prepared students for employment and helped them to more fully understand and articulate their employability skills. ECA has also seen a significant increase in student satisfaction with assessment and feedback and, post-merger, its National Student Survey (NSS) rating for assessment and feedback was amongst the highest NSS scores both in the University and across the UK sector for art and design related subjects. In the 2016 Guardian University guide the Edinburgh College of Art portfolio of subjects in Art and Design are all ranked in the top five, with two of them ranked first overall.

Context and challenge
Edinburgh College of Art was focusing on career development and student employability back in 2004 and had restructured the curriculum to include a 20-credit module based around professional practice and personal development. Key in the approach was to ensure that the content of the module was taught and experienced primarily through integration with the studio projects and themes of study.

As most creative industries disciplines require working in portfolio-based careers (film makers, for example, will work in project-based teams which will form and re-form with different members for each commissioned project) students need to understand the operational and commercial ways in which they will need to operate and be able to bring problem solving, independent thinking, lateral thinking and project management capabilities to balance their discipline expertise.

At the time, some academics did not see the development of employability skills in their students as their personal concern or responsibility, given that it appeared not to relate directly to the teaching of the academic study, but despite this, a need was identified to build the development of such transferable skills into programmes together with supporting students in being able to understand and articulate what these skills meant for them individually.

At the same time as addressing the employability agenda, ECA identified the need to overhaul their approach to assessment and feedback. When the National Student Survey (NSS) was first introduced in England the whole of the Art and Design sector was somewhat shocked at the low ratings given by students specifically for assessment and feedback. This was a particular surprise given the pedagogy used in art and design where students highly-value the personalised and small group-work nature of the teaching. Research subsequently identified that a recurring and specific issue was that tutors failed to explain to students what was actually being assessed, sought and valued; students therefore assumed that if the tutors appeared to like their work and they got on well with them, this somehow translated into being given a good mark. This
couldn’t have been further from the reality and the assessment models used in art and design are very well understood, highly-collegiate and very robust, but simply that they were also opaque to students.

Making it happen
To address the need to develop student employability capabilities and engage with the wider context of work, the ECA curriculum was restructured with two 40-credit and two 20-credit modules spanning two semesters, one of which focused on professional and personal development. All of the modules are co-requisite, meaning that they had to be taken at the same time in parallel, enabling their integration through a series of sequential projects. Students work iteratively through numerous projects and revisit the same or similar challenges but with increasing complexity as they move forward; the first two years of the professional practice module focus on the development of wider studentship skills and graduate attributes such as independent learning, taking responsibility, managing projects, autonomous learning, digital literacy, working in teams, working and taking responsibility for the work of others. These are all expected characteristics of learning as described in the Scottish Credit and Qualifications Framework and as promoted by the Scottish Government’s employability agenda. By the third year (of a four-year honours degree programme), students are required to define and lead their own thematic project within an external real-world context; for some, this would mean a placement or study-abroad experience. And in the final year students propose and direct their whole year of study with supervision; more akin to research post-graduate pedagogic models.

At the same time as focusing on employability, the College began addressing the challenges and student frustrations around assessment and feedback as highlighted in the poor sector-wide performance in the NSS. As a result, learning outcomes were made more explicit and assessment was constructively aligned to the learning outcomes. Students now receive a profile of grades directly aligned to the learning outcomes – i.e. one grade per learning outcome.

Furthermore, “assessment for learning” approaches were adopted that placed significant emphasis on formative assessment and feedback together with dialogue, self-critical reflection and action on feedback. It is an important principle that giving feedback should require students to demonstrate their understanding of and do something with the feedback given. The approach also includes student self-assessment, requiring them to grade themselves formatively and to write up their own feedback notes. All this means that students do not see their education as a series of separate modules but as a linear, iterative and holistic progression through defined periods of learning, where the development of the types of graduate attributes needed to succeed or which is sought after by employers is invisible and seamless and built into the learning experience. By years three-four, students should then be able to articulate explicitly the skills they have developed and reflect on them and on how they could be applied more widely in different situations and contexts.

The Agency Project: School of Design, ECA
In 2008 the Scottish three year enhancement theme of 21st Century Graduates was introduced to focus specifically on and to raise the profile of embedding the development of career readiness skills and attributes into the curriculum. Building on previous work, ECAs disciplines further enhanced their approaches to addressing the employability agenda. Of particular note was the approach taken by Graphic Design.

The graphic design programme developed a further innovation within the Professional Practice module called the Agency project, where all undergraduate students are required to operate in a cross-year level graphic design team, working with industry mentors and undertaking real-world projects, with up to 50% of these being live commercial projects. Final year students take on the role of the Agency creative directors, effectively running a real commercial Design Agency and creating a manifesto for the kind of agency they wish to run. The earlier year students have to apply for a job in the team they wish to be part of and can also lose their job if they do not engage and perform well enough. This approach introduces students to the realities
and pressures of ‘real-world’ working right from the beginning of a programme. Students are assessed on different aspects depending on their year e.g. 4th year students, in addition to their portfolio of design work, are assessed on how well they lead the Agency and how well they line-manage their team inside the Agency. Students are highly motivated by this experience and the scheme won the first UK-wide Guardian Award for best employability project.

The Edinburgh Award

In 2011 the University introduced the Edinburgh Award to support students in their wider learning while at the University. The approach enables students to control and manage their own development and confidently articulate the learning acquired and progress made through drawing on their curricula, co- and extra-curricular activities. A further dimension is to make students of the award aware of the positive impact they can have when engaging with those around them. These qualities align with the Universities three overarching attributes in the Graduate Attributes Framework: Enquiry and Lifelong Learning, Aspiration and Personal Development, and Outlook and Engagement. In 2013 a further dimension was introduced to the award and students now assess and provide peer feedback to each other anonymously online, using an adaptive comparative judgement (ACJ) approach. Both the award and the approach to the online peer assessment and feedback has proven very successful;

“The Edinburgh Award has swiftly exceeded our expectations, achieving student satisfaction, growth, reach and wider impact significantly beyond what we originally imagined and far exceeding the target of 500 students per year two years ahead of schedule”.

“ACJ is like a crowd-sourced/social media style feedback and assessment tool, which is really innovative and very powerful. I can honestly say that it has been one of the greatest learning experiences for me during my academic studies at the University.”

Student Led Individually Created Courses (SLICCs): University-wide

The experience gained from the innovations in the art college and from the University's Edinburgh Award confirmed that not only were students very capable of leading, managing and assessing aspects of their own learning, but that the levels of active engagement, independence, self-direction and acquisition of new skills and attributes are precisely what employers are seeking over and above an academic degree.

A new innovation was introduced in 2015 to further develop career readiness and to introduce self-reflection and assessment for learning approaches. It is a credit-bearing online undergraduate “self-defined learning experience” module called SLICCs (Student Led Individually Created Courses), underpinned by using e-portfolios to evidence the learning. The module is one where students create their own course, critically self-reflect and formatively self-assess their own learning as part of the experience; all supervised by tutors. There are no formal lectures, the learning outcomes are predefined and are the same for all students, who are required to design and write a proposal for their own learning experience. This can be based on a range of activities e.g. a volunteering experience, a community or personal development project, a research project, a placement, work experience or an internship.

The student proposals for a SLICC are required to detail the learning activities, together with how they will evidence the set learning outcomes (which include learning outcomes that relate to graduate attribute development). Tutors are required to sign-off the academic viability of the proposal and whether it is practically achievable. Students also have to re-interpret the learning outcomes in their own words in their proposal and this aids student understanding of what is required of them, what evidence they need to produce and how they will be assessed.

Before commencing the SLICC journey students are required to attend three induction workshops. The first workshop explains the SLICCs process (i.e. how to design
an individual learning experience and what is required in the student proposal). The second workshop focuses on self-assessment, introducing the rubrics that tutors will use for assessment and how to write a critically reflective report at the end of their project. The final induction workshop focuses on how to create a web portfolio complete with the various types of digital artefacts required to evidence the learning acquired. Following these workshops and by the time the student has submitted their project proposal, they will be working on their own (under supervision) but will not have any further tuition. Students also have access to a range of resource links such as open source web-materials e.g. for audio and video editing (to create their digital artefacts) as well as self-assessment diagnostics tools such as Myers Briggs and Belbin, and resources on organising and managing their time.

For the summative assessment submission, students critically select various parts of all their formative reflections, documentation and digital artefacts, and bring these together as a formal submission in their webfolio along with a critically self-reflective and evaluative report. Students are also required to formatively self-grade the final submission. The summative assessment is then conducted by their tutors.

**Technology used**

ECA designed and developed a bespoke Learning Management System to facilitate both the design of projects, managing the feedback, responses and actions generated by both students and staff and both the formative and summative assessment process and allocation of grades. At the end of each project students can compare ‘side-by-side’ their graded self-evaluation and the staff assessment along with staff feedback, their own reflections on the feedback given and their intended actions as a consequence.

The Edinburgh Award uses Adaptive Comparative Judgement software by DigitalAssess to enable students to anonymously provide peer-feedback at the first draft stage and finally to summatively assess each other for the award itself.

PebblePad is used to provide the framework, digital workspace and e-portfolio tools to support the individual SLICC for each student for writing their proposal, managing their experience, creating their portfolio of evidence, formatively self-assessing and finally submitting for assessment.

An important element of using online tools and networks is for peer groups to interact and support each other, typically in self-forming groups, and for students to use blogging and messaging tools, regularly documenting, date/time-stamping and reflecting on their experiences and progress, as well as adding digital artefacts (e.g. pictures, audio and video).

The SLICC framework enables tutors to access student portfolios at any stage and evaluate student progress and the learning acquired over-time.

**Impact**

Edinburgh College of Art participated for the first time in the NSS after merger and achieved among the highest ratings for the questions around assessment and feedback in the University and in the sector for art and design.

The process of requiring students to formatively self-reflect and self-grade throughout the programme has had a significant impact on improving how they articulate what they have achieved, including their acquisition of employability skills, particularly as in order to achieve some of the learning outcomes, students have to be able to demonstrate and articulate how they have achieved them.

The use of the portfolio is fundamental to evidencing the quality and standards achieved in art and design disciplines. Increasingly this is being supplemented, and in some cases replaced, by online versions or e-portfolios.

The success of student self-critical reflection and graded self-evaluation is also significantly enhanced in the ECA model by a bespoke learning management system.
The approaches and success achieved above simply would neither be logistically feasible nor as effective without the use of networked online tools and digital resources.

**Sustainability**

Sustaining and embedding the approach has been core to the enhancement activities, through restructuring of curricula for all programmes, incorporating employability-related learning outcomes (and their assessment) and introduction of more formative ‘assessment for learning’ approaches.

The principles and practices have been widely shared and transferred across the University via strategic initiatives, student systems development and pilot projects, and colleagues who have been directly involved in these projects are beginning to adopt, adapt and contextualise their use in their own disciplines and programmes.

**Lessons learnt**

The following lessons have been learnt:

» The maximum impact on the student experience has been achieved through a combination of initiatives in respect of curriculum re-structuring, including incorporation of the employability agenda into core learning activities and assessed learning outcomes, together with adoption of more formative assessment for critically self-reflective learning approaches

» Integration of real-world working and learning activities into programmes is highly motivating for students and serves as a powerful mechanism for students to learn, acquire, apply and evidence their employability capabilities

» The SLICCs approach is in its first phase of pilot during 2015 and a robust evidence base will be required to convince staff of the long-term benefits of this model if it is to be fully integrated and embedded within the mainstream curriculum. It is thought that students are therefore likely to lead the way for change and convince their tutors of the benefits they derive from these types of experiences

» The approach demands active learning and engagement of students and it is already quite clear that this is not an easy way of gaining credit, however to-date this does not appear to dissuade students

» Networked online tools and resources are an essential component in providing the necessary supportive learning environment. The logistics of running these types of models in an analogue way would be simply prohibitive

» A critical element of all of the approaches described is for students to gain a greater understanding of assessment and feedback and how to effectively self-assess and evidence the standards they have achieved and the learning they have acquired, and to critically reflect on this

» The capturing of tutor feedback and reflective actions using learning management systems makes feedback more visible, with the potential to engage tutors in enhancing the quality of discourse with their feedback to students

**Find out more**

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Title
An institutional approach to developing self-driven, well-rounded graduates through embedding employability via academic and co-curricula activities, a graduate attributes framework and a programme-wide development strand, underpinned by e-portfolios.

Summary
The case study describes the university’s strategic approach to embedding employability by supporting students to take responsibility for developing themselves into well-rounded graduates. To support this, a wider curriculum is offered via a flexible degree structure that includes co-curricular activities, with options such as part-time work, entrepreneurial schemes or volunteering, many of which are formally recognised on the student’s HEAR (Higher Education Achievement Record). Students develop a reflective e-portfolio to assist their development and showcase evidence of their skills and capabilities to future employers, based around a set of graduate attributes. They can also gain accreditation from the Institute of Leadership and Management (ILM).

Organisation
Keele University: Student learning team
The Student Learning Team provides students with academic, professional and personal skills development, training and guidance and are responsible for the Keele University Skills Portfolio (KUSP), which is accredited by the Institute of Leadership and Management (ILM). This portfolio allows students to document their personal and professional development and achievements at university and to showcase themselves to employers.

Context and challenge
Back in 2010, the senior management at the University evaluated its student programmes, recognising the importance and value of both academic curriculum and co-curricular activities in preparing students for employment and careers, with the appropriate skills and attributes. In particular, it recognised the need for students to take responsibility for developing and shaping their studies and professional activities. The implication was that the University must support their academic, personal and professional development throughout a programme.

Making it happen
The University introduced a new flexible degree structure that allows undergraduate students to customise a programme to suit their needs allowing, for instance, arts students to study science modules. An extensive range of co-curricular activities are available to students, such as part-time work, entrepreneurial schemes, societies and volunteering and students are encouraged to recognise the value of these activities as part of their development. Many of these activities are formally recognised on the student’s HEAR (Higher Education Achievement Record).

The University has also developed a set of ten graduate attributes, relevant to both academic and employability related capabilities and all programmes are required to map these to their academic teaching, assessment, activities, support and so on. They plan to extend this to co-curricular activities, whilst key professional services such as the careers, the library and the student learning teams have already incorporated the attributes in to their practice. In order to support programme teams in developing their practices in graduate attributes, a team of Teaching Fellows has been created to offer support.

In addition, a student development strand was introduced to all curricula which starts at the beginning of a programme and runs throughout it, focusing on academic, personal, professional and career development of students and aiming to create independent, self-driven students. The development strand includes activities such as thematic practical workshops and online seminars and these are both embedded within academic programmes and run as stand-alone events. For example, BeMore is a two-week programme of activities, designed to develop graduate attributes, offering options such as collaborative creative writing, local community volunteering, creative filming and bubble football, which is designed to develop team-work, problem-solving and leaderships skills.
A specific example of a student-driven initiative working in partnership with employers and the local community is the CLOCK project – Community Outreach Collaboration Keele. Law students provide vital help and support to disadvantaged communities through legal research, policy work and community legal education, and are supported by major legal employer, enabling the students to strengthen their key employability skills.

A key element of the development strand is for students to develop a reflective portfolio (the Keele University Skill Portfolio – KUSP). This aims to:

- assist their development
- help them reflect on and articulate their learning
- engage in dialogue with their personal tutors
- provide evidence of their learning
- allow showcasing of evidence of their skills and capabilities to employers

These benefits are all based around students assessing themselves against the graduate attributes. The reflections are like mini-essays and are based on a critical reflective model (Ryan and Ryan’s 4Rs model of reflective thinking) – (1) reporting and responding (2) relating, (3) reasoning and (4) reconstructing. Once completed, their portfolio can gain accreditation from the Institute of Leadership and Management (ILM) – though the graduate attributes are actually wider than the ILM accreditation framework.

The University’s personal tutoring system relates to the student development strand (life-long and life-wide learning) with students having the same personal tutor for the three years of their programme. The tutors support and mentor the students in developing their portfolio, and sign off their evidence.

The 2015 undergraduate cohort will be the first to graduate and the free version of PebblePad will allow students to showcase the evidence and reflections to employers.

**Technology**

The technology used in the Keele University Skill Portfolio (KUSP) is the e-portfolio system, PebblePad, which was chosen for its ease of use and structuring, in preference to the e-portfolio that comes as part of the institutional VLE which is Blackboard. PebblePad is integrated with the VLE using Learning Tools Interoperability (LTI), which allows users to sign-on using a single username/ password.

As part of the development strand, students use the e-portfolio both for reflective activities and accessing content, all framed around six themed workbooks (developing learning practice; techniques for getting organised; making effective presentations; people skills, team working, dealing with stress). This provides a structure whilst allowing students and staff to use the e-portfolio in a non-linear manner.

Programme teams are supported in using the e-portfolios by the members of the student learning team.

**Impact**

The University is currently undertaking an independent evaluation.

Approximately 9% of all graduating students completed the optional programme during the pilot cycle. It is expected that this number will grow considerably in the coming years.

Academic staff have commented that [the central team of teaching fellows are] “brilliant, and willing to work with us to tailor things and design us the activities we need rather than them feeling ‘off the shelf’”.

Students commented, “It seemed a superficial task at first - but the questions that guide me to reflect really did take me to a deeper level of understanding of what had happened and why”.
Sustainability
Sustainability and embedding have been built-in to the Keele approach as it has adopted a top-down strategy that requires all programmes to embrace the Keele graduate attributes and work inclusively with professional services on the development strand linked to the Keele University Skills Portfolio.

Lessons learnt
A number of lessons have been learnt:

» Use of e-portfolios needs to be totally integrated with learning, assessment activities and personal tutoring, using some form of structure and aligning with graduate attributes

» Early on, some academic staff were wary of the approach taken with the new degree structure, though this has now largely passed

» A reflective framework supports and helps direct students in reflecting on and articulating their learning e.g. using the 4Rs model

» Not all students see the value of showcasing their portfolios to employers

» There is not much evidence of students uploading multimedia evidence to their portfolios

» Not all academics possess employability skills

» Support needs to be in place for personal tutors to guide students’ development of graduate qualities

» Clear and considered thought needs to be given to the use of labels, tags and names and whether these are used internally and/or externally to the project team

» The balance of benefits and drawbacks of accreditation should be given appropriate consideration

An approach in keeping with the culture of the organisation is beneficial; in this case a flexible, organic approach to collaboration with academic programmes worked best

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E. University of Southampton

Title
A Faculty-based employability initiative, branded ‘Mission Employable’, with students driving strategy and change in pursuit of enhancing student employability, underpinned using a range of social media and multimedia.

Summary
Dr Eleanor Quince, Faculty Director of Employability in Humanities at the University of Southampton, identified a challenge of students not being engaged sufficiently early with the employability agenda. To overcome this, Dr Quince decided to empower the student body to drive change. This was done through a range of interconnected employability activities with an emphasis on using social media and multimedia to engage students with peers, alumni, staff and employers, all facilitated by four student interns. The activities included:

» setting up an alumni network
» an interactive multimedia compulsory undergraduate first year employability module
» peer mentoring scheme
» a formative research and evaluation exercise to drive continuous enhancement in the initiative

Organisation
University of Southampton: Faculty of Humanities
The Humanities Faculty offers single or combined degrees across seven disciplines: Archaeology, English, Film, History, Modern Languages, Music and Philosophy and currently has approximately 3,000 students.

Context and challenge
The Director identified a special problem related to employability and humanities disciplines, due to perceptions amongst both students and staff that a humanities degree is less likely to be of interest to employers than more specialised or vocationally driven degrees e.g. in STEM subjects. Furthermore, research undertaken by the institution’s Careers and Employability Service established the need for students to start considering, preparing and applying for jobs much earlier than in the past. Past discussions with colleagues had identified a goal for employability and careers guidance to commence from the very beginning of a degree programme. It also needed a strong focus on highlighting the importance of employability and developing the necessary student skills, knowledge and experience in preparation for employment. However, Faculty initiatives to put this into practice, such as optional careers events and embedding short talks into existing modules, failed to garner student interest in the importance of employability. The Faculty therefore decided that a new approach was needed which would be both engaging and flexible, with tailored options for each of the seven disciplines.

Making it happen
An innovative approach was needed to rise to the challenge of engaging and giving power to students to creatively drive change in the employability agenda. There also needed to be an emphasis on using social and multimedia. Four students were recruited to work as interns on the University’s Excel Placement Programme for twelve weeks over the summer of 2014, working in partnership with Faculty and University partners on the following activities:

» The student interns identified the need for branding to bring together all the new and existing employability activities under one umbrella and the Mission Employable brand was subsequently launched via the team blog. A key focus of the working group was student-led activity to effect change in the faculty

» The interns, in partnership with Dr Quince, identified the need for engaging employers, therefore an external advisory board was formed, led by two of the student interns. Its aim is to increase employer engagement and support identification of potential experience opportunities for students. It is structured as a core board with active members together with a wider network of members who would be invited to
participate in specific events and activities. This is all within agreed terms of reference that define roles and responsibilities and identify benefits for all members.

» The intern team also identified the need for engaging alumni, therefore an alumni network was formed. The interns created, led, developed and launched the VIP Alumni Scheme (now called the Humanities Alumni Network). A key aim is to raise awareness (amongst current students) of the importance of developing employability skills during a degree. It was felt important to create the conditions for alumni and students to engage online, therefore a multi-channel approach was adopted using social media such as the professional network, LinkedIn, Twitter and Facebook.

» The students interns also worked in partnership with the University’s Careers and Employability Service to create content for a pilot compulsory undergraduate first year employability module, with the intention of creating similar modules for second and third year students in future years. Learning resources were created which can be customised to specific disciplines within the faculty and which link with Mission Employable social media feeds, enabling students to research their personal career preferences and alter and plan their professional development.

» A third intern led the development of a Faculty peer mentoring scheme to support new students and to develop employability skills relating to mentoring. The scheme is non-paid and is for all incoming humanities students, with 168 mentors in total. It is structured as a pair of mentors (paired by mixing different levels of study) from each discipline helping no more than fifteen mentees. Meetings are held every two weeks throughout semester one, with extra or one-to-one meetings held at the discretion of the mentors.

» The fourth intern undertook research and evaluation, including researching student-led change activities within the UK higher education sector. This led to the creation of a report, which detailed recommendations including the need for greater creativity in classroom group work and particularly for higher levels of student engagement.

» This activity included development of a reflective tool for use by students to help them reflect on their employability related curricula or extra-curricular activities. The tool takes two forms: a quick online ‘quiz’ for students to record their experience and an end-of-activity ‘case study’. This showcases the employability skills used and developed through each activity and demonstrates their value to potential employers.

» The four interns also worked in partnership with fourteen other student interns from the institution’s eight faculties on a university wide initiative - Southampton Opportunity Project - to showcase student curricula, co-curricular and extra-curricular activities and demonstrate student employability skills (see www.soton.ac.uk/opus).

Technology
A range of social media and multi-media underpin the initiative and engage students, staff, alumni and employers:

» Communications and engagement between the team, Faculty, students and alumni are through a team blog (WordPress), regular digital Faculty newsletters (PDF), a Twitter account, a Panopto video and Facebook.

» Students used Facebook engage with their peers for example using polls to identify event ideas, calls for volunteers, event topics, event notification/promotion and feedback.

» The professional network LinkedIn is used to support the alumni network with LinkedIn groups created for each of the seven humanities departments. Alumni were invited to join the groups by faculty staff and student partners through the Mission Employable student working group. Students can join the groups.
through the virtual learning environment (VLE) in order to engage with former students and request advice and guidance

» Scoop.it was used to build research and profiles on HE group activity and employability, enabling teams to share research findings and contribute to raising the profile of Mission Employable

» Students from humanities’ subject societies and course representatives (members of the Mission Employable Student Working Group) were encouraged to create web spaces to showcase employability events and activities (see example: http://blog.soton.ac.uk/milestoneemployabilityonlineresource/)

» Technology-enhanced learning approaches were used within the compulsory employability module. For example, the first face-to-face session used Kahoot!, an online quiz accessible by smartphones and tablets. Answers were projected onto a screen in the lecture hall and used as a starting point for discussion on employability skills

» Relevant online employability resources were signposted according to students’ needs. These included graduate videos (YouTube) on former students’ ‘Journey to Work’; instructional videos on creating a CV including video versions; developing digital skills to improve professional online presence using social media. These were all illustrated by case studies, together with ideas to engage with new platforms that can allow for even greater engagement with employers for students already on Twitter and Facebook

» Mentors from the second and final year cohorts were recruited using Facebook, Twitter and e-mail and using an online iSurvey application. They engaged with their mentees via Facebook Groups to encourage interaction before arrival at Southampton

» Once the mentors had been trained on campus, an exclusive Facebook group was created where all the mentors from humanities’ seven disciplines could share best practice and resources with guidance and support from the student Peer Mentoring Coordinator. Additionally, mentors used online tools like Doodle Poll to organise meetings with their mentees

Impact
Mission Employable has been highly successful in overcoming the challenges associated with lack of student motivation with the employability agenda. The scheme has validated the thesis that development of student employability needs to commence at the beginning of a programme of academic study.

Students, acting as agents of change and working in partnership with staff, have been highly successful in raising the profile of employability amongst students and staff. They have also successfully facilitated engagement between students, employers, staff and alumni. Use of social and multimedia technologies has been pivotal to facilitating interactive engagement between students, employers, alumni and staff with all of the Mission Employable activities. These include mentoring, promotion of events and the employability module.

A valuable set of multimedia learning resources has been created (for the employability module) where there is significant emphasis on supporting students in using social media and multimedia to engage with employers and alumni and showcase their rounded selves. This set can be used time again and built on.

The use of social media by mentors for mutual support and sharing of resources and best practices has been highly effective, evidenced by the high degree of collaboration between them. The Mission Employable initiative has had a significant impact on developing the employability skills of the interns themselves. For instance, one of the interns used his experience of working on Mission Employable in an interview for a role of Strategy Analyst with a Fortune
1000 multinational company to illustrate and evidence his suitability for the job, which he secured. In particular, the CEO was impressed with his use of digital media to present, justify and explain strategic decisions and how he used such media to engage with and influence others.

**Sustainability**

The Mission Employable initiative is now forming further partnerships with a greater number of students. It will be sustained and embedded in the Faculty of Humanities and enhanced as follows:

- More detailed information, advice and guidance will be provided on using social media such as LinkedIn to communicate, engage and influence stakeholders, especially in using social and multimedia for professional purposes. This is particularly being piloted through the second year Humanities Employability Module, which will use the e-portfolio platform Pathbrite as the driving force behind all student engagement with the module

- Promoting further student collaboration

- New digital support for students working and learning at a distance from Southampton

- Empowering students to become more self-sufficient and self-directed

- Developing more advanced website tools to support student-led events

Furthermore, the Director is now in discussion with the University’s Careers and Employability service to see if Mission Employable can be scaled up to become an institution-wide initiative.

**Lessons learnt**

A number of lessons have been learnt:

- A key lesson learnt is the importance of encouraging students to think about career-planning much earlier than students have done in the past. Simultaneously they gain valuable experience enabling them to lead, shape and run events for themselves and their peers. The initiative has seen humanities students embrace this approach, together with the use of social media and multimedia, to create their own future career opportunities. The adoption of Pathbrite in Year 2 will further encourage students to take control of their own professional development

- Another key lesson learnt is the importance of students reflecting on their experiences, and recording and articulating how they have developed. These activities are supported by an online quiz and students producing a case study to showcase their employability skills

- Attention to detail in the mentoring process was a critical success factor for the initiative. This included student-led training sessions for the mentors, enabling them to understand their role and develop their skills set together with information and guidance on good practices via a Mentor Handbook. Mission Employable will be furthering this detailed approach through the creation of a dedicated Peer Mentoring website for 2015/16

- A formative approach to evaluating the initiative was also crucial for success. For example, mentors would send informal reports to the student Peer Mentoring Coordinator so that the initiative could be regularly monitored for improvement and successes. This has allowed an agile approach to progression with the mentors at the centre of the change process

- The Mission Employable Student Working Group has been highly effective as the means of keeping students at the centre of employability provision. It is the point of review for the Employability Module and Peer Mentoring scheme and leads all complementary activity under the Mission Employable brand
Find out more

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F. Birmingham City University

Title
A range of online simulations, virtual case studies and serious games to support health students in developing and practicing clinical and employability skills in a highly efficient manner and without causing harm or distress to patients.

Organisation
Birmingham City University: Online Simulation and Immersive Education Research and Development Group (OSIME RDG), Faculty of Health, Education and Life Sciences.

Birmingham City University has long had a strong commitment to student employability with embedded institutional structures and processes. Employability is deeply integrated into all courses; professional and student mentors support students, and employers and alumni are engaged in both curriculum design and delivery, with a large number of courses recognised by professional bodies. There is a strong focus on placements, student entrepreneurship and enterprise as well as the personal, academic and professional development of all students. The University also has a strong pedigree in innovation in technology-enhanced learning and employability and this case study focuses on one such innovation Virtual Case Creator; developed by the OSIME RDG and used to create a wide range of online simulations in the Faculty of Health, Education and Life Sciences.

Summary
In response to health sector employer drivers and needs, a range of online simulations and serious games have been developed to augment traditional teaching methods. These provide flexible, context rich, authentic and learner centred skills development opportunities that incorporate a range of employability skills such as communication, time management, observation, analytic, problem-solving and decision-making/prioritisation (in pressurised scenarios) skills. The interactive scenarios have been created using software developed in-house called Virtual Case Creator (VCC) and allow students to develop and practice their skills without causing harm or distress to patients, thereby offering a highly effective and efficient means of training large and small student cohorts.

Context and challenge
Training and patient safety has always held a high profile within the health sector, but has taken on a new priority and urgency since the publication of the Francis report of the Mid Staffordshire NHS Foundation Trust Public Inquiry in 2013, which investigated high patient mortality rates and incidents of appalling care (Francis, 2013). The report called for an increased focus on the “practice” of care; for the establishment of consistent and advancing standards and the recognition of achievement amongst staff. Subsequent reports identified specific skills and systems deficits amongst some of the UK’s worst performing Trusts (Keogh, 2013), and advocated the adoption of a learning culture across the NHS that held patient safety as paramount (Berwick, 2013).

However, it is not always easy or practical for undergraduate students to practice and demonstrate competence in the entire range of skills necessary to ensure patient safety (e.g. undertaking a swallowing assessment, identifying and responding to changes in seriously ill patients in a range of contexts or using different assessment strategies to identify client needs in community settings). As a response, alternative technology-based approaches have been explored to find solutions for students to flexibly practice and demonstrate skills within authentic learning contexts without needlessly distressing or harming patients. Further drivers include the increased emphasis on supporting and enabling students to develop and profile a broader range of transferable (or employability) skills, such as time management, observation, analytic, problem-solving, decision-making/prioritisation (in pressurised scenarios), compliance (with regulations and procedures), information and communications literacy.

Pedagogical drivers include a move towards more structured and situated learning during personal study hours to promote learning gains across and within more formal classroom activities. The increased use in health of higher fidelity simulation activities such as mannequin and actor based simulations, has also led BCU to promote more effective preparation for this type of learning by using online simulation learning activities as pre-requisites.
Making it happen

The Online Simulation and Immersive Education Research and Development Group addressed the problem by creating a range of online simulations, virtual case studies and serious games, using software developed in-house, called Virtual Case Creator – VCC. The software is used to create highly interactive and media-rich simulations. These augment more traditional teaching methods by providing flexible, context rich, authentic and learner centred skills development opportunities.

The software has been in development since 2002 and has been undergoing constant enhancement ever since, with the latest version building on ideas from the games industry e.g. incorporating reward and recognition features.

The Faculty of Health Education and Life Sciences has now produced over 30 interactive online simulations to support preparation for employment and key skills development – within a range of key areas: adult nursing, child nursing, mental health nursing, speech and language therapy and midwifery.

In one example (speech and language therapy), based within a final year largely placement based, undergraduate module, students are asked to engage in a simulation that places them within their first role as newly qualified staff. The simulation presents a range of skills based opportunities that are situated across a number of virtual settings. These include primary school, acute hospital and primary care health centre contexts. Within the simulation students have opportunities to develop their time and case load management skills, explore how to form effective relationships within other interagency staff, practice their clinical skills by undertaking a swallowing assessment and gain experience in managing different types of communications as well as other activities.

As students engage with these online simulations, they can gain awards by achieving performance levels within a number of cognitive skill domains eg the information finding award, reflects whether students have accessed policy documents and other supporting resources; the correct decision-making award rewards the choosing of safe and effective practice actions and the prioritisation award, recognises that a learner is aware that in some contexts decision making needs to be prioritised for most effective practice. The system highlights which awards are achieved and gives detailed feedback as students progress. Reflexive practice is supported by enabling students to review, amend and/or re-order their actions at any point prior to completing a simulation.

Although these simulations utilise a largely open ended narrative, meters are used to provide a sense of progress to students and to give an indication of the difficulty of each scenario.

- Resources meter – indicates the number of resources that are available and have been accessed within a simulation
- All Decisions meter – indicates the total number of decisions, correct, less relevant and incorrect within a simulation
- Correct Decisions meter – indicates the number of correct decisions within a simulation

The system also makes use of leader boards to promote amongst students a greater awareness of their progress relative that of their peers. To make comparisons “safer” for students, they are asked to create a pseudonym when they enrol onto the system and it is this name that appears on the leader board which ranks students by the number of awards achieved and then the total points they have scored.

The system is not like other games based simulations where emphasis is placed on visuals and interactions reduced to a series of multiple choice questions. The VCC system is different in that students have to take a less linear path through each simulation programme, where a narrative, of varying strengths, walks students through clusters of decision-making points requiring the use of cognitive skills to identify the most appropriate decisions and where required, the most appropriate decision sequence.
On gaining the required awards for a particular simulation, students are given a certificate (signed by a module or course leader) that they are required to store in a paper or e-portfolio. On some courses students are asked to incorporate their certificates into their “on-going record of achievement” folders and show these to their practice placement mentors, as evidence of their learning. The certificates highlight the different skills that the students have acquired and demonstrate how these are linked to professional competency frameworks, which is of high importance to employers.

Additional features include:

» A “Time” award. This reflects the reality that many activities, such as information finding, questioning, problem-solving, decision-making and prioritisation, need to be made in a time-efficient manner, and within time constraints. Efficiency in thinking and practice are important employability skill in their own right.

» “Save” feature. Currently being tested and scheduled for deployment during 2016, this feature allows students to engage in simulations for short periods of time, saving their progress as they continue. This feature is particularly important for time-poor learners who may be using the simulations in practice settings.

» “Cognitive Schema” support. This feature, currently being tested, allows teachers to group decisions within labels that appear on the simulation interface. Here the labels represent a specific cognitive schema or framework that the simulation learning is trying to support.

Technology used

The technology used to develop the VCC system is based on a SQL database, with Javascript as the middle tier and HTML5 as the interface (this has recently been upgraded from Flash). Media includes interactive panoramas and main scene images, chroma-keyed video, animation and sound. There are many advantages with the new HTML5 interface eg allowing operation on a broad range of desktop and mobile devices.

There is an “administrators” view of the system which allows, for instance, student performance and progress to be monitored and for updates to be made to live simulations where necessary. Students have a “dashboard” which provides an overview of their progress towards achieving their awards, various analytics and provides access to their certificates.

Impact

The simulations and serious games have proved highly successful in supporting cohorts of students to develop and practice skills that include a range of employability skills such as time management, observation, analytic, problem-solving, decision-making/prioritisation (in pressurised scenarios), compliance (with regulations and procedures), information and communications literacy. Evaluation findings thus far indicate high levels of self-efficacy associated with skills development amongst students using these simulations. It is clear that these “simulated authentic” approaches to skills development are effective in helping BCU, and other organisations respond to many of the drivers shaping health and social care education today.
Sustainability
Simulations and serious games are now an established part of the overall teaching and learning environment in the Faculty of Health, Education and Life Sciences and the Virtual Case Creator (VCC) software is continuing to be enhanced to introduce new learning features as well as features that make simulation and game development more efficient.

The VCC software is currently being developed for use at BCU in other discipline areas e.g. education and social care and will also be used to support 3D avatar driven simulations in the future. Many of the simulations and serious games are licensed to other institutions e.g. The University of Greenwich, University of Sheffield and Middlesex University.

Lessons learnt
» The VCC provides deliberately unstructured, non-linear scenarios that aim to facilitate the safe development of a range of cognitive skills.

» Once developed online simulations have very little overhead and support iterative and cost effective learning in contextualised environments.

Find out more
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G. Glasgow Caledonian University

Title
Using wikis to cost-effectively embed work-related learning and employability development into entrepreneurship teaching, learning and assessment at the Glasgow School for Business and Society.

Summary
The case study describes how large cohorts of business students collaborate with an employer such as an overseas entrepreneur. Together they research and problem-solve a real business issue using a wiki to record and share experiences and perspectives. The students are supported by staff and adopt a pre-designed set of formal learning and assessment activities that help develop key employability skills. Team-working (and true collaboration), written communication, planning, organisational skills and international working are among the skills developed. The case study highlights how technology can offer cost-effective solutions for embedding work-related learning, employer engagement and entrepreneurship into teaching and learning.

Organisation
Glasgow Caledonian University: Glasgow School for Business and Society

Glasgow School for Business and Society integrates complementary disciplines and expertise in business, law and social sciences and places emphasis on the social context within which business is undertaken. Its programmes are aligned with the institutional graduate attributes framework which focus on discipline knowledge, communication skills, learning and research, creativity and confidence and citizenship.

Context and challenge
The Glasgow School for Business and Society encourages both staff and students to be creative in their thinking, international in their outlook and innovative and entrepreneurial in their actions. It aims to develop student employability and self-employability skills, including enterprise, leadership, group working and problem-solving. The key challenge faced by the School is how to achieve this cost-effectively, as more traditional approaches, such as student placements, can be time-consuming and costly to set-up and maintain, particularly within an international context. The School therefore setup a project team to explore how web 2.0 technologies, particularly wikis, could be used to support collaborative approaches to students and staff engaging with employers on real-world problems.

Making it happen
The project team started exploring use of wikis back in 2009, initially working with entrepreneurs in Scotland and more recently, with international entrepreneurs e.g. in Canada, on both undergraduate and postgraduate programmes. The process involves learning activities, assessment, knowledge management and collaboration in a tri-partite arrangement (staff, students and entrepreneur) and working at a distance. Students are provided with feedback from all stakeholders.

The process typically works as follows.

1. Staff initially liaise with the entrepreneur to identify two-three business problems which are then adjusted by staff to ensure that they are within the capabilities and time-frames for students to work on. A typical problem would be an investigation of the entrepreneur’s market and competition.

2. Once a clear brief is agreed, students are split into three large groups of 20 students each of which has four-five subgroups comprising four-five students. The research questions are allocated to these sub-groups and wiki groups are set-up on the VLE where the entrepreneur has access.

3. Each week, students have a task to respond to the research questions and a feedback/ feedforward system is used by staff to engage with students and assess their performance, based on the marking criteria. The entrepreneur can also provide feedback, but cannot see the feedback delivered by staff.
1. Students are required to engage with the entrepreneur e.g. by asking questions about the sector and these processes incrementally push the student forward and support initially non-engaged groups.

2. In addition to the wiki work, student groups collaborate face-to-face in seminars where staff use the wiki to facilitate dialogue round the research questions. The history feature of the wiki allows tutors to see who is and is not contributing, allowing them to support non-engaged students. It also allows students to go back and correct items.

The wiki essentially supports the growth of a collaborative and living document in which images, video and hyperlinks can be embedded alongside text.

**Sustainability**

The technology-enhanced learning model is highly sustainable due largely to its cost-effectiveness and support for engaging with employers worldwide and dealing with large student numbers.

**Lessons learnt**

A number of lessons have been learnt:

- Despite generally being tech-savvy, some students are ill at ease with the wiki concept and some international students have had a negative perception of wikis, influenced by their lack of trust in Wikipedia. This highlights the importance of the student wiki induction session.

- Some undergraduate students would initially hesitate to contribute due to worries that they would be disadvantaged compared to late-starters, who preferred to wait and learn from others’ contributions. This re-enforced the need for the regular staff formative feedback/ feedforward processes.

- Some employers have difficulty in engaging with wikis from a technical perspective, therefore they need induction training.

- It is important to hold initial dialogue on the client brief and their problem may need modifying and re-articulating. In some cases, students will take the client brief and produce a counter brief which they feel aligns with logistics and their capabilities.

- The model is particularly suitable for engaging with SMEs, though business pressures can mean that some do not sufficiently monitor and engage with the wiki e.g. in providing feedback to students.

**Impact**

Feedback from entrepreneurs is that the engagement with students and staff helps them to validate their knowledge and thinking as well as helping to find new information, and some clients repeat the experience with new cohorts, with one client putting up a student prize. Academic staff also gain from the experience as they can collaborate with the real world and on real business issues. Students gain from the experience by developing their employability skills, such as communication (with people they do not know), organisation, planning and collaboration skills – they also have to work professionally e.g. in ensuring confidentiality.

The use of the wiki contributes to the cost-effectiveness of the learning model and engagement with employers as well as allowing engagement with international employers which would otherwise not be practical or economic. This has the added benefit of engendering an international perspective and culture for students and staff. The model also offers ‘any time, any place’ learning.

The learning model promotes collaboration rather than co-operation, through the use of agreed briefs and the active participation of the three stakeholder groups e.g. in editing, commenting on and building on each other’s work.

The sustainability of the technology-enhanced learning model is highly sustainable due largely to its cost-effectiveness and support for engaging with employers worldwide and dealing with large student numbers.

**Lessons learnt**

A number of lessons have been learnt:

- Despite generally being tech-savvy, some students are ill at ease with the wiki concept and some international students have had a negative perception of wikis, influenced by their lack of trust in Wikipedia. This highlights the importance of the student wiki induction session.

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- It is important to hold initial dialogue on the client brief and their problem may need modifying and re-articulating. In some cases, students will take the client brief and produce a counter brief which they feel aligns with logistics and their capabilities.

- The model is particularly suitable for engaging with SMEs, though business pressures can mean that some do not sufficiently monitor and engage with the wiki e.g. in providing feedback to students.
The lack of direct face-to-face communication between students and entrepreneur can be a problem leading to lack of empathy and trust between the students and entrepreneur. However, this can be somewhat addressed by staff requiring students to critically review the brief and engage with the entrepreneur early on in the process.

Find out more

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Case study written up by Dr Peter Chatterton
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Title
An Enhance your Careers and Employability Skills MOOC (Massive Open Online Course) delivered via the Coursera platform.

Summary
In 2014, the Careers Group at the University of London developed the world’s first careers and employability skills MOOC on behalf of the University of London International Programmes. It was delivered via the Coursera platform and attracted 89,000 students from 208 countries across the world.

Organisation
University of London: International Programmes and The Careers Group
In 1858, the University of London established the University of London International Programmes to give students around the world access to top British education. This makes the University of London International Programmes the world’s oldest provider of distance and flexible learning.

Founded in 1909, The Careers Group, University of London is a consortium that delivers career development and associated services to education institutions and corporate clients across Europe. These services include producing a range of technology-supported employability services and products. They range from employability webinars, accessed by students whenever and wherever they like, to Careers Tagged, an extensive online careers information library hosted by The Careers Group.

Context and challenge
The University of London International Programmes offers a range of educational MOOCs that have been developed on the Coursera platform and which are offered for free, with a small fee paid at the end of the course to obtain a certificate from Coursera. It identified a ready audience of current students and experienced professionals for such a course on careers and employability.

Making it happen
The University of London Careers Group developed the MOOC on behalf of the University of London International Programmes, aiming to support students in effective decisions about their future career and controlling their professional development through honing their critical thinking and employability skills. The MOOC is therefore suitable for anyone undertaking some form of study, regardless of academic discipline, interests or employment background. Six key universal themes were identified:

» Self-awareness (What do you want?)
» Skills awareness (What can you offer?)
» Career readiness (Are you ready to find success?)
» Articulating your experiences (How do you express yourself?)
» Making a good impression in person (What impact do you make?)
» Networking online and in person (How do you build fruitful relationships?)

The six-week course delivered in English was essentially asynchronous, consisting of:

» self-reflective exercises
» questionnaires (e.g. based on three-five specific questions for each theme)
» active reading tasks
» short segmented videos of lecturer-led delivery accompanied by slides, practical assignments (e.g. informational interviewing)
» short segmented videos of related activities (e.g. mock interviews) to provide feedback on
Overall, there are 60 videos of length ranging from 30 seconds to 20 minutes, utilising 14 presenters and six employers.

The course provides regular opportunities for students to reflect on each theme as well as activities to complete and opportunities to contribute. Students were encouraged to give feedback on each other’s reflections either via the peer assessment tool or via the forums. Self-evaluation questionnaires help students to monitor their progress. Technical support for students was provided through Coursera and students were expected to allocate three-six hours per week in participation.

The Careers Group team monitored and moderated the different forums which became highly active, typically attracting 10-12,000 posts, though the system became difficult to navigate with such large numbers of postings. The moderators helped to overcome this by, for example, creating new discussion threads that summarised existing long discussion threads. The moderators were also pro-active in seeding questions in the forums.

The forums generated a rich resource of ideas and links and benefitted from the international spread of the participants: for example, students would provide ideas, support and opportunities for other students to take advantage of in different countries. Many discussions focused on different cultural and working practices across the world and how these impact on employability, careers and international working.

The course was a great success and attracted 89,000 regularly participating students from 208 countries across the world with an age range from 15 – 85 and 44% female, including both undergraduate and postgraduate students. The majority of participants were not in full or part-time education and the majority were full-time employed. As with any MOOC, regardless of subject, the initial registration (126,000) was greater than the number of actively participating students on the course, although this ‘conversion’ rate was higher than is normally experienced on many other MOOCs. 96% of the participants found the course experience ‘excellent’ or ‘good’ (41% Excellent, 40% Very Good, 15% Good).

Furthermore, the overwhelming majority of participants reported that their confidence had increased in each aspect of their career development. Limited evaluation with employers produced positive feedback.

Sustainability
Following the 2014 MOOC, the course has been successfully run again in a very similar format from June-July 2015 with a smaller cohort of 82,000 registrations with 45,000 active students. Once again participants came from over 200 countries across the world. The evaluation survey for this iteration of the course is still being collected but anecdotal participant feedback has yet again been very positive.

Future possibilities include offering the course on an on-demand basis (i.e. available to start at any time) which may also include a range of enhancements such as:

» Introducing synchronous features e.g. via Google Hangouts
» Remodelling materials for a Moodle VLE
» Possible adoption of e-portfolios
» Development of a sophisticated questionnaire to provide a diagnostics tool to help students to navigate the course in an individual way and potentially provide common pathway options e.g. students wanting to improve their CV
» Supporting University of London programme teams in integrating the course into their curricula

» Systems to support student progress monitoring

Materials from the course have already been successfully migrated to a University of London Moodle VLE. These will be used as a basis for developing an internal Small Private Online Course (SPOC) at one of the University of London Colleges.

Lessons learnt
A number of lessons have been learnt:

» Some of the most valuable input to such a course can come from the participants, particularly in an international context. This provides a rich source of data on which to build on in future MOOCs

» There is a global appetite for career learning, networking and peer support, reflecting a survey that showed 41% found their last job via networking

» The platform used (Coursera) was not ideally suited for grading soft topics such as ‘aspiration’ due to the constraints of its peer assessment mechanism

» The MOOC provided the opportunity to survey a large number of global participants: e.g. highlighting that leadership is the skill that they are least confident about demonstrating

» Not all students provided peer feedback, therefore mechanisms need to be developed to encourage this

» The forums became difficult to navigate with large numbers of postings and this can be overcome, to an extent, by moderators starting new discussion threads which summarise prior ones

» There is a possibility that some students may register mistakenly presuming that individual guidance will be provided. This may lead to them disengaging from the material if that is not possible due to the sheer size of the cohort

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» Case study written up by Dr Peter Chatterton
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Title
An international virtual internship scheme supporting cross-institutional collaboration in developing blended and distance learning modules as well as the professional development of students, supported by a broad range of technologies.

Organisation
Bath Spa University: Learning Technology Group
Bath Spa University places considerable emphasis on international partnerships and exchange programmes, aiming to attract international students and developing its graduates as socially engaged global citizens. The learning technology group of the University comprises a small number of learning technologists, one for each of the institution’s five Schools. They aim to raise awareness of opportunities for the use of technology in teaching and learning throughout the institution and support programme teams in developing blended and distance learning.

Summary
The Learning Technology Group pairs postgraduate students in learning design at international universities with course teams at Bath Spa University to enhance curricula with blended and online approaches. At the same time, they mentor the students in developing and evidencing their professional knowledge and skills based around the Association for Educational Communications and Technology (AECT) professional knowledge and skills framework. A formal structure and processes have been put in place for the virtual internship which involves a high degree of virtual collaboration. The internship requires the use of a broad range of technologies to efficiently and cost-effectively support communications, collaboration, development of online resources and student personal learning and professional development management. The scheme provides benefits to all those involved and continues to attract international students as well as academic teams to participate in it.

Context and challenge
Bath Spa University is very much a practitioner-based institution with the teaching and learning model being mostly based on face-to-face delivery. There is demand from the institution’s five Schools to move towards more flexible delivery models however, the Learning Technology Group has limited numbers to support course teams in curriculum redesign (covering over 140 courses - not including combined courses). The Group therefore identified a need to build capacity in its support for academic staff and began to explore low-cost options in the form of international virtual internships which would also embrace the institution’s goals for international partnership working.

Making it happen
The International Virtual Internship scheme was set up by the Learning Technology Group in 2000. It pairs postgraduate students in learning design at international universities with course teams at Bath Spa University and they are each supported and mentored by one of the five learning technologists. Their aim is to collaborate to jointly re-design course modules with the academic team supplying the academic content. The learning design students support the academics in a formal learning design process aiming to reconfigure the modules for blended/online (or distance) delivery. That typically includes production of artefacts such as video, podcasts and web materials. The internships typically last from 8-12 weeks and include 10-15 postgraduate students from a range of institutions, currently all in the USA e.g. Purdue University, Pennsylvania State University, Michigan State University. There are typically 80-90 applications by postgraduate students to join the scheme each time it is run.

There is a formal process for the internship which commences when schools can apply to join the scheme. At this point they have to commit to producing the academic content and to work with the international postgraduate students in a structured learning design process, recognising that the students may not necessarily be subject specialists, though are specialists in learning design. There are a range of virtual client meetings which mentors support
and the first deliverable will be a specification and storyboard for the re-designed module, with an explanation of the relevant learning module. Subsequent activities include usability testing and prototyping.

The students also have weekly virtual meetings with their mentors, with each of the five mentors supporting two-three students. These meetings focus not just on the student work activities but also on their professional development. The meeting discussions are structured around the skills framework of the Association for Educational Communications and Technology (AECT). As well as embracing learning design specifics (e.g. content knowledge and pedagogy), these also cover professional knowledge and skills such as collaborative practice, leadership, reflecting on practice, assessing/evaluating and ethics – all of which come under the employability banner.

Mentors also hold individual virtual meetings with students where they provide feedback and discuss progress and professional development. The mentors will also construct a video of general feedback and issue to the student cohort.

Use is also made of asynchronous discussion groups in order to develop a cohort community of practice, which focus on a variety of topics from technology-specific ones to learning design and delivery. The mentors facilitate these discussions.

Students are also required to maintain an ongoing e-journal in which they record and evidence their progress, document meetings and feedback and reflect on their learning and professional development. Students are also required to provide peer feedback e.g. feedback on storyboards, learning design and usability. Students are also asked to prepare a video and final summative reflection on their overall experience and this is a formal requirement which will enable them to receive a letter of recommendation and gain credit for their internship. By the end of the internship, the students will have produced evidence of their experience. That will include a learning design specification/storyboard, results of usability tests and various learning artefacts such as videos, podcasts and other web-based materials. They will be able to use these to support their future engagement with employers, though their access to the Bath Spa VLE will not continue beyond the internship period.

Mentors also have their own asynchronous discussion group in the form of a community of practice.

**Technology used**

The following technologies are used to support the students:

» Students are provided with access to the institutional VLE, Blackboard, and are given a copy of the module on which they are working on

» Students also have access to a range of learning design support tools, most of which are open source (or free trial software). They can use these for creating videos, podcasts and web materials e.g. Jing, Blender, Audacity. OpenOffice is recommend for creating Storyboards

» Virtual meetings use synchronous technologies: initially, this was Blackboard Collaborate, though the institution no longer subscribes to this, so technologies such as Skype and Google Hangouts are used. Big Blue Button is also being evaluated for this use.

**Impact**

The scheme provides benefits to all those involved. The adoption of international postgraduate students in learning design brings new creative approaches from a young and newly qualified generation together with different cultural perspectives and ways of working. It builds capacity of the small group of institutional learning technologists at Bath Spa University and helps their professional development with new perspectives. Academic staff are introduced to a formal process of learning design to embrace new technologies which they can build on for their own professional development and their courses benefit from new blended/online design and materials. In evaluations, academics report that the process makes them think more about what they are presenting and how they present it.
The Learning Technology Group follow up with students as they progress into their careers and ask them to complete a survey as to how useful their experience has been in obtaining employment and in their work and the feedback is generally that the experience has been highly valuable.

**Sustainability**

The International Virtual Internship programme will be sustained as it provides benefits to all those involved. However, the scheme is not easily scalable as its success is based on a relatively low student/mentor ratio – and this is constrained by time constraints.

**Lessons learnt**

- The internship scheme needs to be formally structured with well identified roles, responsibilities and processes
- The scheme must not just be about design and development of courses – it must also embrace the professional development of the students and key processes must be put in place to require students to continually reflect on their learning and professional development and to support them in this process. Rewards are useful motivators in the form of credit and letters of recommendation
- Virtual internships, by definition, need to be underpinned by asynchronous and synchronous communications and collaboration technologies as well as personal learning spaces to support students in the process of reflecting on their learning, professional development and evidencing of learning

**Find out more**

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- Case study written up by Dr Peter Chatterton
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Technology for employability: HE case studies

J. Staffordshire University

Title
A top-down approach driven by senior management to embed graduate attributes, student employability and work experience/work integrated learning into all curricula, using e-portfolios to support student reflective practices, based around the graduate attributes framework.

Organisation
Staffordshire University
Since 1914 the institution has provided vocationally inspired education. In 1992 the institution, known then as Staffordshire Polytechnic, become Staffordshire University and in 2013, it set out to become a UK Centre of Excellence in STEM (Science, Technology, Engineering and Mathematics) with the launch of a flagship Science Centre. The University has long established educational partnerships both within the UK and overseas and is committed to offering its students access to both academic study and commercial experience.

Summary
Staffordshire University set out to embed more consistent approaches and processes to developing student graduate attributes, employability skills and commercial experience across its entire programmes. To achieve this, it identified the need to embed the attributes in assessed learning outcomes together with developing the Staffordshire Graduate Employability Project (SGEP). The SGEP is a year-long customised core module that develops student reflective practices and employability skills within the context of undertaking work experience/work integrated learning within the curriculum. Assessment is by the student’s e-portfolio (PebblePad) that includes reflections on personal and skills development (badged and tagged against the graduate attributes), incorporating international/global aspects. An evaluation exercise is ongoing (including a longitudinal study to follow employability progress beyond graduation) but early evidence suggests that an increased number of students are engaging in work experiences. Over 1,300 students and 100 faculty staff have directly engaged with the Staffordshire Graduate Programme and developed closer links with employers. Evidence also suggests that the use of e-portfolios to support student reflective practice has been generally successful, though not all students and staff engaged with it to the full planned potential. A Staffordshire Graduate Forum was established as a key group to drive forward and sustain the graduate attributes and student employability developments.

Context and challenge
Back in 2011, the University identified a requirement for change: whilst many programmes offered commercial experience and development of transferable skills, this was not so for all programmes. Furthermore graduate attributes were generally not explicitly or consistently articulated nor incorporated into learning outcomes and assessment. It was recognised that if graduate attributes are not assessed then they will not be taken seriously by students or staff. Alongside this, employers and government were demanding that Universities address the issue of student employability with employers, in particular, increasingly demanding to see achievement and evidence of employability skills in student job applications. Senior managers also saw the focus on employability, enterprise and entrepreneurialism as an important differentiating factor for the University’s offering. Senior managers were addressing a period of unprecedented change, with fierce competition for students, growing student expectations and the need to improve the institution’s standing in NSS/League Tables.

Making it happen
In order to address the employability agenda, senior managers at the University decided to implement three key initiatives more or less simultaneously: the first focusing on defining and embedding an agreed set of graduate attributes across all programmes (with a strong focus on employability, enterprise and entrepreneurialism), the second on restructuring curricula, with an emphasis on larger modules and the third, the development of the Staffordshire Graduate Employability Project (SGEP) aiming to develop employability skills through a customised core module.
Following extensive consultation with staff, students, employers and employer/professional bodies, a set of six graduate attributes were established:

1. discipline expertise
2. professionalism and professional integrity
3. global citizenship and sustainability
4. communications and teamwork
5. reflective and critical learner
6. lifelong learning

These six attributes intend to reflect a key institutional mission: “The Staffordshire Graduate represents a set of qualities that the University passionately believes is necessary for success in the 21st century. The Staffordshire Graduate is a reflective and critical learner with a global perspective, prepared to contribute in the world of work.” All programme teams were required to map their programmes to the graduate attributes. Rather than rolling this out incrementally i.e. when programmes came up for re-validation, the institution decided on a big bang approach. This would require all programmes to undertake this activity for revalidation, demonstrating in detail how the Staffordshire Graduate Attributes would be addressed through the curriculum and defined in module descriptors.

Alongside this, the Staffordshire Graduate Employability Project (SGEP) was established, focusing on awards for employability skills through a customised core module and using e-portfolio technology. Disciplines such as drama, theatre, arts, law, business, science, media and sport piloted this new scheme. Simultaneously, the Academic Board decided that all undergraduate programmes should normally be structured on the basis of modules of 30 credits with normally no more than two 15 credit modules per level. A University Standing Panel considered proposals made by programme teams which were required to include a detailed mapping of where in the curriculum the graduate attributes are located and assessed.

The Staffordshire Graduate Employability programme included the development of a range of online learning materials focusing on employability, enterprise and entrepreneurship which could be contextualised to specific discipline areas. A year-long modular delivery allows students maximum flexibility to develop their reflective practices as well as employability skills within the context of undertaking work experience/work integrated learning within the curriculum.

A further goal of the module is to develop student skills and attitudes enabling a culture of identifying opportunities, creativity, risk taking and innovation. At level four, student activities include co-curricular events, interactive skills workshops, role-playing, teamwork exercises and a personal development statement as part of the reflective e-portfolio. At level five, the focus is on the development of entrepreneurial and innovative mind-sets, behaviours and skills. Students are introduced to the value of innovation, creativity, collaboration and risk-taking skills which are applicable to a wide range of careers and disciplines, from the public sector, charities, universities and social enterprises to corporate organisations large and small and new venture start-ups. The emphasis continues to be upon ‘learning by doing’, where learning takes place through personal experience, social interaction and reflection. Assessment is by the student's reflective portfolio (PebblePad) which includes reflections on personal/skills development (incorporating international/ global aspects relating to work), reflection on learning from all activities, and review areas for further development.

Students each have a personal tutor to support their longitudinal progression.

**Technology used**
The e-portfolio PebblePad has been used to support the Staffordshire Graduate Employability Programme, underpinning student reflective practice, which is a core
learning element of the programme. The e-portfolio requires students to not only record their learning experiences, but also to record their reflections, badged and tagged against the graduate attributes. This innovative badging and tagging is used to promote self-directed personal development whilst providing evidence for seeking employment upon graduation.

Students and staff were provided with comprehensive induction/training in using the e-portfolio for reflective practice and for evidencing skills, learning and achievements. Some (but not all) students collected multimedia artefacts e.g. for evidence and would tag/map these against the graduate attributes. PebblePad templates were created around the graduate attribute framework to make it easier for students to use.

The University has decided to move its use of e-portfolios from PebblePad to the in-built e-portfolio tool within the institution’s VLE (Blackboard), though this move is not necessarily one based on teaching and learning efficacy.

In addition to the use of e-portfolios, the Careers Centre has implemented a strategy to move from a guidance model to one of coaching supported by online resources. It bases this around an employability e-learning package on licence from Abintegro, branded ‘eCoach’, which provides an employer-led and interactive set of employability resources that can be built into curricula and will help direct students into individual coaching support. When students log on to eCoach they are presented with the offer of a coach and can register for one to be allocated to them.

Impact
The SGEP pilot commenced September 2012, with direct involvement from 70 faculty staff and 700 level four students. Every indication suggests both staff and students have engaged in the pilot with commitment and enthusiasm. Development of student employability has been evidenced by a number of activities such as increased numbers of self-employed graduates and start-up companies, student clubs and societies and increased levels of student volunteering. A research and evaluation project is currently underway to establish impact e.g. a longitudinal study to follow employability progress beyond graduation. Early evidence highlights that an increased number of students are engaging in work-ready/work experiences and over 1,300 students and 100+ faculty staff have directly engaged with the Staffordshire Graduate Programme. Furthermore, closer links with employers have been established across a variety of subject areas.

Early evidence also suggests that the use of e-portfolios to support student reflective practices has been generally successful, though not all students and staff engaged with it to the full planned potential.

Sustainability
The Staffordshire Graduate Forum was established as a key group to drive forward and sustain the graduate attributes and student employability developments. This group continues to play a central role in monitoring and evaluating the delivery of the SGEP, which will be implemented with a phased approach. It will ultimately apply to all HE awards delivered on campus, by distance learning and at overseas or UK partners.

There is no HEAR project at the moment, although the institution is preparing for this with the intention for it to align directly with the SGEP activities.

In the light of the emerging success of the initiative, the institution is looking to develop an e-portfolio strategy.

Lessons learnt
Key lessons learned include:

» Initiatives such as the graduate attributes and Staffordshire Graduate Employability Project need to be led top-down, driven by senior management

» Graduate attributes and employability need to be built into assessed learning outcomes together with work-related learning/experiences
Initiatives such as the SGEP need to embrace collaboration and cooperation University-wide. This was achieved via a structured induction programme to launch the pilot, the publishing of a university calendar of events, the appointment of student employability ambassadors-advisers and contributions from the Students Union to the establishment of a multi-media resource bank called the Staffordshire Graduate Experience (StaGE).

Good practices in academic departments draw on the skills and experience of central services such as careers teams and academic skills tutors.

Reflective practices need to be built into programmes at the earliest opportunity.

Events should be created for students both within and outside of the curriculum e.g. employer events and practical opportunities.

Find out more

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Case study written up by Dr Peter Chatterton
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HE case study vignettes
### Birmingham City University

**Title**  
Creative Problem Solving using digital story-telling

**Technologies**  
A range of multimedia tools e.g. MovieMaker or iMovie

**Description**  
Within the Business School, a module “Creative Problem Solving (CPS)” requires students to identify a problem to work on over the 10 weeks delivery of the module and the assessment is a digital story of between 3 and 5 minutes. Most students pick something to do with employability such as public speaking or time management. In all cases they would be asked to define and redefine the problem to generate an improved problem statement, go through a very creative stage of generating ideas, developing options and making choices. They are assessed on how they reflect on their problem, move the problem forward and engage with a CPS process to manage this.

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### Abertay University

**Title**  
Online badges in relation to employability skills development

**Technologies**  
Mozilla online ‘open badges’ scheme and the e-portfolio, PebblePad

**Description**  
The Law division at Abertay University are undertaking a pilot scheme into the use of open online badges and e-portfolios as a means of recognising and validating student achievement in relation to the development and evidencing of employability skills. It does not form part of the academic assessment of students or students’ work. The Open Badge Scheme may accept evidence of skills which have been acquired while the student is engaged in academic studies, co-curricular and extra-curricular activities. It focuses on resilience (e.g. with clients), communications, leadership and influencing and social responsibility. Each badge strand requires students to successfully undertake specific tasks and evidence approximately 10 hours of student time in doing so. Such evidence in relation to the badges must be recorded in the student’s e-portfolio in the appropriate workbook. These tasks are also linked to enhancing the student’s HEAR.

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<tr>
<th>Institution</th>
<th>Birmingham City University</th>
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<tr>
<td><strong>Title</strong></td>
<td>Creating Futureproof Graduates</td>
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<tr>
<td><strong>Technologies</strong></td>
<td>A range of online information, support and guidance resources e.g. videos.</td>
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<tr>
<td><strong>Description</strong></td>
<td>The Creating Futureproof Graduates toolkit is a series of resources that help students develop a number of key skills demanded by employers. The resources can be embedded by academics in curricula and adapted and contextualised to specific disciplines. The resources were designed and developed in partnership with employers, students and staff, and are aimed at helping students identify and prepare for critical incidents which, according to employers, epitomise the major problems that newly qualified graduates encounter when they start work in the 'real world'.</td>
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<tr>
<td><strong>Contact</strong></td>
<td>Ruth Lawton University Learning &amp; Teaching Fellow for Employability (<a href="mailto:ruth.lawton@bcu.ac.uk">ruth.lawton@bcu.ac.uk</a>)</td>
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<tr>
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<td>E-learning courses in employability skills</td>
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<tr>
<td><strong>Technologies</strong></td>
<td>This includes four online courses, hosted on the University's new VLE – Canvas. The courses are designed to be taken entirely online – delivered asynchronously and with minimal tutor involvement, making use of computer-marked assessment (e.g. quizzes), discussion boards, compulsory self-reflection and self-assessment, and peer assessment. And branching scenarios / video role-play simulations are being developed for skills like teamwork.</td>
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<tr>
<td><strong>Description</strong></td>
<td>A series of e-learning courses in employability skills as part of a well-established extra-curricular skills award (the 'PSA' or 'Personal Skills Award'). The project is currently being piloted in 2014/15, with a suite of four online skills courses available to students:</td>
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<td></td>
<td>» Employability essentials (compulsory for those students completing the PSA (Foundation) pathway).</td>
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<td></td>
<td>» Dealing with conflict in groups and teams</td>
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<td></td>
<td>» Developing commercial awareness</td>
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<td></td>
<td>» Recognising the value of your sport</td>
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<tr>
<td><strong>Contact</strong></td>
<td>Ellen Shobrook, Project Development Officer - Personal Skills Award (<a href="mailto:e.shobrook@bham.ac.uk">e.shobrook@bham.ac.uk</a>)</td>
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<tr>
<td>Institution</td>
<td>Birmingham City University</td>
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<tr>
<td>Title</td>
<td>Learning from extracurricular activities</td>
</tr>
<tr>
<td>Technologies</td>
<td>e-portfolio, multimedia tools</td>
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<tr>
<td>Description</td>
<td>A 15 credit level 6 module in the Faculty of Health, Education and Life Sciences that may be accessed by final year students from any programme. The module is ‘Learning from extracurricular activity’ and the learning outcomes include demonstrating how extracurricular activity adds value to employability, presenting evidence as to how the programme aims have been furthered through extracurricular activity and using relevant resources / media / literature to support a case for articulating extracurricular activity with programme aims. The format of the assessment is negotiable. Some students complete a 3000 word assignment but others use the e-portfolio Mahara to collate different forms of multimedia evidence together and as a reflective diary of events. By reflecting on activities and linking them to professional aims and employability skills, graduates are better able to articulate their experiences and show their Mahara portfolio to potential employers.</td>
</tr>
<tr>
<td>Contact</td>
<td>Nicola Bartholomew, Senior Academic (<a href="mailto:nicola.bartholomew@bcu.ac.uk">nicola.bartholomew@bcu.ac.uk</a>)</td>
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<tr>
<th>Institution</th>
<th>Manchester Metropolitan University</th>
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<tr>
<td>Title</td>
<td>Lynda.com assists with employability</td>
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<tr>
<td>Technologies</td>
<td>Online video resources</td>
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<tr>
<td>Description</td>
<td>Tutors in the School of Computing, Mathematics and Digital Technology have been using Lynda.com, not only for study but also to support students’ employability skills. Lynda.com is an online video training resource available to all MMU staff and students, comprising a large range of high quality professional video tutorials. Lynda.com is a great resource to help with teaching software skills in the School. However, tutors took this a step further to investigate the potential for Lynda.com use in supporting employability skills. These skills go beyond course knowledge and assist students to gain an understanding of the ‘soft’ skills that are so vital in many workplaces. The School worked with the Library to collate reading lists specifically to support their students’ needs in different areas. This Lynda.com content was also used in students’ personal tutor meetings as a directed activity focusing on body language and job interviews. By attending the sessions, rather than working on their own, students benefitted from tutors being on hand to discuss issues and direct learning. Personal tutors given a structured activity on body language and interview techniques to work through with tutees. • Reading list created specifically to address computing students’ personal development in areas such as building confidence, effective communication and resilience. • Skills days organised to help students work through Lynda.com content and answer any questions raised.</td>
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<tr>
<td>Contact</td>
<td>Emily Shields</td>
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<tr>
<td>Institution</td>
<td>Staffordshire University</td>
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<tr>
<td>Title</td>
<td>Online Abintegro - a mix of careers and employability skills development</td>
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<tr>
<td>Technologies</td>
<td>The Careers Centre are implementing an employability e-learning package (on licence from Abintegro) and branded this as eCoach. This has many interactive features and activities that can be built into the curriculum and also used ad hoc. It is intended to integrate the use of eCoach with personal careers coaching. When students log on to eCoach they are presented with the offer of a coach and can register for one to be allocated to them. Once this is done the photograph and contact details of their coach will appear on their view every time they log in. This will give them confidence in the use of the resource and access to help if required. eCoach and individual coaching supports students and graduates into work and in particular graduates into graduate-level work. This reflects a move from a guidance model to coaching supported by eCoach at every level of students’ awards.</td>
</tr>
<tr>
<td>Contact</td>
<td>Mark Kent, Head of Graduate Employment, Enterprise &amp; Commercial Development (<a href="mailto:M.Kent@staffs.ac.uk">M.Kent@staffs.ac.uk</a>)</td>
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<tr>
<th>Institution</th>
<th>University of the Highlands and Islands</th>
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<tr>
<td>Title</td>
<td>Geography degree with employability a strong component</td>
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<tr>
<td>Technologies</td>
<td>Online learning resources</td>
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<td>Description</td>
<td>The University has been developing a new Geography degree which will be delivered through a blend of face-to-face tutorials run by onsite tutors, complementing a fully online HTML5 course which students can access flexibly. The degree has a strong employability component and includes two modules: Employability Skills and Collaborative Working for Geographers and Workplace Experience. The first of these introduces employability skills, employability and. The second builds on this module and involves undertaking workplace experience. In both cases the materials are delivered online, complemented by face to face tutorials on-site. This allows the degree to be delivered over a wide geographic area.</td>
</tr>
<tr>
<td>Contact</td>
<td>Rosie Alexander, Careers Manager (<a href="mailto:Rosie.Alexander@uhi.ac.uk">Rosie.Alexander@uhi.ac.uk</a>)</td>
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<tr>
<td>Institution</td>
<td>University of Hertfordshire</td>
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<tr>
<td>Title</td>
<td>INTI-UH Global Classroom Initiative</td>
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<td>Technologies</td>
<td>Communications technologies (asynchronous and synchronous) e.g. Facebook, blogs, Skype</td>
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<td>Description</td>
<td>In a relationship of close to twenty years, UH students at INTI Malaysia (International University and Colleges) have had insufficient opportunity to work with Hatfield colleagues in a meaningful and sustained way. The INTI-UH Global Classroom Initiative is an important step in drawing together the student and lecturer communities of both INTI and UH (spanning the UK and Malaysia). This pilot aimed to create benchmarks for module level co-operation between students and staff at the Hertfordshire Business School and INTI Subang; to identify areas of good practice at both institutions for wider dissemination across Schools and campuses; and to highlight potential areas of academic collaboration into the future.</td>
</tr>
<tr>
<td>Contact</td>
<td>Joel Shahar (<a href="mailto:j.shahar@herts.ac.uk">j.shahar@herts.ac.uk</a>)</td>
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<th>Institution</th>
<th>University of Aberdeen</th>
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<tr>
<td>Title</td>
<td>A careers and employability skills course</td>
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<tr>
<td>Technologies</td>
<td>Blackboard (VLE) and Articulate Storyline (online training software)</td>
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<td>Description</td>
<td>The University has been using technology for a couple of years to deliver a careers and employability skills course through its VLE, Blackboard. Initially this was done using Blackboard itself but more recently using Articulate Storyline, where students can access it via Blackboard. Currently all level 1 students have been given access and the course has been promoted as a ‘non-compulsory but highly recommended course’. It is entirely online and learners work through it at their own pace, taking around 2 hours to complete. Last year, following discussions with the Principal of the university, it was agreed that in order to deliver significant change to the widest possible cohort, the introduction of compulsory online courses covering the following three key professional and employability topics were proposed:</td>
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<tr>
<td></td>
<td>» Careers and Employability</td>
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<td>» Health and Safety</td>
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<td></td>
<td>» Equality and Diversity</td>
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<td>In terms of Careers and Employability, the vision is to deliver 4 courses (developing your graduate attributes, presenting yourself effectively, finding work experience and career planning) to all students across levels 1-3. The courses will be notionally compulsory in that completion will be recognised on the enhanced transcript but no credits will be awarded. All courses will be delivered using Articulate Storyline and Blackboard.</td>
</tr>
<tr>
<td>Contact</td>
<td>Kate Robertson, Employability Projects Officer, Careers Service University of Aberdeen (<a href="mailto:krobertson@abdn.ac.uk">krobertson@abdn.ac.uk</a>)</td>
</tr>
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### Institution: University of Exeter

**Title:** Collaborate

**Technologies:** Various

**Description:** Collaborate was a three year, *award winning, Jisc* funded project, that began in December 2011. It aimed to introduce new generation assignments, based around real-world and scenario based activities, designed collaboratively by staff, students and employers. It explored how assessments could be changed to embed employability at the very heart of academic practice, using digital technologies to support that process. Collaborate worked in depth with several modules from across the University, bringing in employers to work with programme teams and students, redesigning assessments according to a new model for Work-Integrated Assessment and introduced technologies to staff and students to support their learning and teaching. The project developed four packages of guidance based around *assessment redesign, integrating technology, digital literacy* and *module evaluation*.

**Contact:** Richard Osborne, Education advisor

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### Institution: University of Leeds

**Title:** Developing reflective practice in level 1 Life Scientists with the use of an e-workbook

**Technologies:** e-workbook

**Description:** A 10 credit, optional, career planning and professional development module available to students within the Faculty of Biological Sciences. It aims to help students consider their future career by introducing them to the range of jobs available to bioscience graduates, the skills employers are looking for and how to achieve them. The module offers students the opportunity to audit their own skill-set, reflect on their own performance and practice and develop a number of professional skills necessary for future career success. An e-workbook was developed for the module, and constitutes one of the assessed elements. The purpose of the workbook is to provide the student with an electronic, interactive document which they complete on a weekly basis, they can record information, input additional resources, audit their skills but they are also required to reflect and discuss on their participation in certain tasks, goal setting and their own development through the module.

**Contact:** Stephanie McBurney, Faculty of Biological Sciences, School of Molecular and Cellular Biology *(S.J.McBurney@leeds.ac.uk)*
Institution: University of Nottingham

Title: e-portfolio (Mahara)

Technologies: e-portfolio (Mahara)

Description: Exploring how students reflect on their year in industry (industrial placement) and how this gives the students evidence for the Registered Scientist status. Mahara is being used where students tag journal entries with the transferable skills as well as tagging their entries with the requirements for the competences required to be a Registered Scientist in order that they can use this as a way of showing how they meet this. Students are encouraged to plan, record, reflect and showcase and are also exposed to wider information about the employment sector, types of employers and placement/employment opportunities. See article Practical ePortfolios: embedding placement reflection and personal development processes (Kirstie Coolin and Judith Wayte) – Centre for Recording Achievement journal (Issue 25).

Contact: Judith Wayte, Bioenergy and Brewing Science Building, School of Biosciences (Judith.Wayte@nottingham.ac.uk)

Institution: Duale Hochschule Baden-Württemberg-Ravensburg (DHBW-R), Germany and Oregon State University (OSU)

Title: Global Formula Racing

Technologies: A range of synchronous and asynchronous communications technologies together with Cloud-based information management and collaboration tools.

Description: Global Formula Racing! GFR is an international collaboration between the BA Racing Team from the Duale Hochschule Baden-Württemberg-Ravensburg (DHBW-R), Germany, and the Beaver Racing Team from Oregon State University (OSU) – linked to the Formula Student scheme in the UK, run by the Institute of Mechanical Engineers. It is an educational motorsport competition which aims to inspire and develop enterprising and innovative young engineers. It now operates globally and universities are challenged to design and build a racing car and compete in a range of events which demonstrate their understanding, skills and test the vehicle performance. Universities across the UK (e.g. Hertfordshire and Coventry) integrate the competition typically within a third-year year-long project for students working in a large team and it develops almost every aspect of discipline and employability related skills that students will need to prepare themselves for the workplace. Duale Hochschule Baden-Württemberg-Ravensburg (DHBW-R), Germany and Oregon State University (OSU) have taken this a step further by collaborating internationally to jointly enter the competition, thus bringing a new global dimension to student working and learning.

Contact: Global Formula Racing web-site
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<tr>
<th>Institution</th>
<th>Edinburgh Napier University and Edinburgh Telford College</th>
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<tr>
<td>Title</td>
<td>BA in Youth Work</td>
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<tr>
<td>Technologies</td>
<td>A range of technologies to support work-based learning e.g. Blackboard Collaborate and social media</td>
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<tr>
<td>Description</td>
<td>The BA in Youth Work was developed by Edinburgh Napier University, Edinburgh Telford College and the City of Edinburgh's Community and Learning Development Partnership (ECLDP - the employer). The employer provided a full-time member of staff to work with the FE/HE team on curriculum design, ensuring that employability skills were fully embedded into the programmes. In addition, the employer provides work-based mentors who are members of staff and these are trained and the mentoring processes quality-assured by the University (though the staff members have already-established mentoring skills as part of their youth work activities).</td>
</tr>
<tr>
<td>Contact</td>
<td>Janis Deane, Programme Leader, Edinburgh Napier University</td>
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<tr>
<th>Institution</th>
<th>University of Bolton</th>
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<tr>
<td>Title</td>
<td>Digital storytelling for employability</td>
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<tr>
<td>Technologies</td>
<td>Multimedia tools</td>
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<tr>
<td>Description</td>
<td>Students are being encouraged to use digital storytelling in assessment and to produce digital artefacts that can support their case with potential employers. This has involved students blogging on their work placements and producing videos for a case-based final assessment: the preparation and presentation of a mock trial in a Moot court. Following up on this last example, law students have produced personal videos summarising their studies and what they feel they can contribute to the world of law. These video logs were reviewed by the Head of Recruitment at a local law firm who felt that they communicated students’ potential more effectively than a written CV. According to the course leader: ‘The ‘2 Minute Me’ videos enable the students to display their academic and personal attributes to prospective employers, in a dynamic and accessible way. It’s a pioneering and truly cutting-edge method of recruitment, made for the digital age.’</td>
</tr>
<tr>
<td>Contact</td>
<td>Jamie Coles (<a href="mailto:J.Coles@bolton.ac.uk">J.Coles@bolton.ac.uk</a>)</td>
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