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A short guide for staff interested in using technology to enhance employability and employee learning, produced by the Higher Education Academy funded STEEL project: Sharing Technology Enhanced Employability Learning. The project draws together examples of evidence-based practice in technology-enhanced employability and employee learning. This booklet showcases some of examples of effective practice in this area.

## Contact details

For further information on the project contact:

Laura Dean  
Head of Employability  
Leeds Metropolitan University  
G06 Old School Board  
Calverley Street  
Leeds LS1 3ED  
l.a.dean@leedsmet.ac.uk

Professor Janet Finlay  
Co-Director of Technology Enhanced Learning Team  
Leeds Metropolitan University  
109 Old School Board  
Calverley Street  
Leeds LS1 3ED  
j.finlay@leedsmet.ac.uk

To obtain further copies of this booklet contact:

Leeds Met Press  
Leeds Metropolitan University  
Old School Board  
Calverley Street  
Leeds LS1 3ED  
Tel: 0113 812 9257  
publications@leedsmet.ac.uk

[www.leedsmet.ac.uk/publications](http://www.leedsmet.ac.uk/publications)

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# Technology Enhanced Employability and Employee Learning: a staff guide

[www.steeltheshowcase.org.uk](http://www.steeltheshowcase.org.uk)



**STEEL**  
Sharing • Technology • Enhanced • Employability • Learning



**STEEL**  
Sharing • Technology • Enhanced • Employability • Learning

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## Acknowledgments and contributors

With thanks to the individuals and groups who have contributed case studies to this project: we have showcased only a minority in this booklet. All case studies are available to view at the STEEL website: [www.steeltheshowcase.org.uk](http://www.steeltheshowcase.org.uk)

We are grateful to the Higher Education Academy for funding this work and to Sharon Waller and the Academy team for their support in undertaking the project.

### Project team members:

Linzi Anderson, Rebecca Baldaro Booth, Laura Dean, Janet Finlay, Chris Garbett, Colin Mitchell, Shakiya Nisa, Georgina Sinclair and Sue Smith.

Please address all correspondence regarding this project to Laura Dean, [l.a.dean@leedsmet.ac.uk](mailto:l.a.dean@leedsmet.ac.uk) or Janet Finlay, [j.finlay@leedsmet.ac.uk](mailto:j.finlay@leedsmet.ac.uk).

## Project overview and methodology

The STEEL project (Sharing Technology Enhanced Employability Learning) is a project based at Leeds Metropolitan University and funded by the Higher Education Academy. Its aim was to produce a synthesis of evidence-based practice to help educators to make appropriate use of technology to enhance employability and employee learning in higher and further education. The project started in January 2010 and ran until August 2010.

The STEEL team carried out three key activities:

1. We reviewed the literature and databases of funded projects to identify relevant work and to help us to create a template to capture case studies
2. We gathered data on specific practice through an online survey, publicised nationally, and followed these up where necessary by telephone interview
3. We analysed the case studies and other work to identify themes and examples of good practice.

Full details of this together with all the case studies are available on our STEEL wiki at [www.steeltheshowcase.org.uk](http://www.steeltheshowcase.org.uk) but this booklet contains a selection of case studies chosen to illustrate how technology can be used to enhance employability and employee learning.



## Definitions

Establishing working definitions of employability and employee learning was an important step in beginning this work. The links between employability, skills development, work-related learning and the increasingly diverse range of learning environments including work-based learning have been highlighted in recent years (for example, by Dearing, 1997; Leitch, 2006; BIS, 2009). In this work we have taken employee learning to be “employability plus”: that is to say, the skills and approaches that make an individual employable, plus the specific competencies required by their workplace, sector or industry.

We have adopted the definition of employability described by the UK Commission for Employment

and Skills (UKCES, 2009), using their model (Figure 1) to identify the key requirements for employability.

There is a growing demand from students, employers and government for employability learning to be addressed within the curriculum (BIS, 2009; CBI, 2009). Because of this focus, wherever possible we have highlighted work that is embedded within the curriculum and is central to and supported by the workplace. While ‘bolt-on’ projects can provide support to learners, they require a level of extra commitment from students which they are not always able to provide.

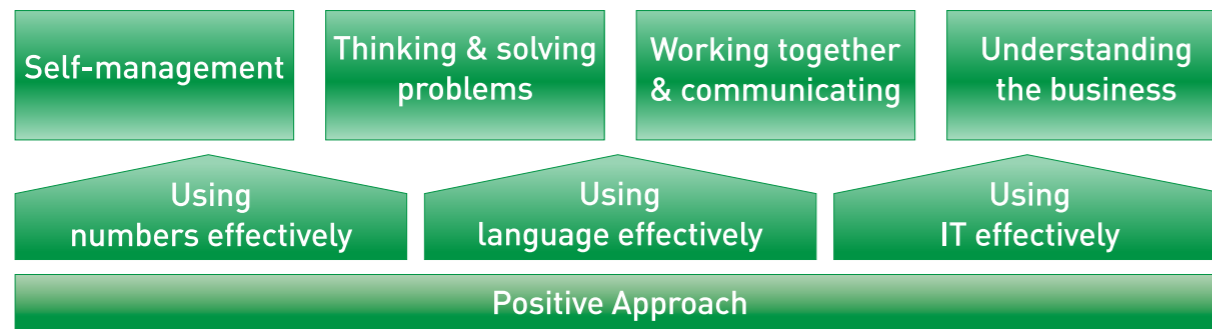


Figure 1: UKCES model of employability skills

## How to use this resource

The STEEL project looked at the themes and issues that arise from examining technology-enhanced employability and employee learning projects. This booklet focuses on one strand of that work – the case studies themselves – and highlights a number of interventions that have been effective and are readily adaptable for use in new environments. The examples here are just a selection of those we considered and are mainly drawn from the case studies submitted in response to the project call. In making this selection we focused more on appropriate interventions that could be adapted by others, than on selecting the most technologically innovative. There are many other examples, some of which are referenced and summarised in the synthesis report. The synthesis report also discusses the wider issues of technology-enhanced employability and employee learning, and can be downloaded from [www.steeltheshowcase.org.uk](http://www.steeltheshowcase.org.uk).

The examples chosen illustrate the use of technology to enhance learning in each of the eight

elements of employability identified by the UKCES (2009), as well as addressing the issues that are specific to employee learners. We have highlighted specific case studies addressing particular skills to help you identify potential examples to use in your own practice to address those skill deficits. However, this does not mean that the case study addresses only that particular skill. Rae (2007) argues that addressing different skills through separate interventions is a weakness of current employability programmes, as students fail to see the skills holistically. The case studies we highlight here do take a holistic approach and each can potentially address several skills; we have placed them in one category for ease of reference, with cross-references to other categories they address.

Figure 2 shows the case studies chosen to illustrate effective technology-enhanced learning interventions for each element of employability.

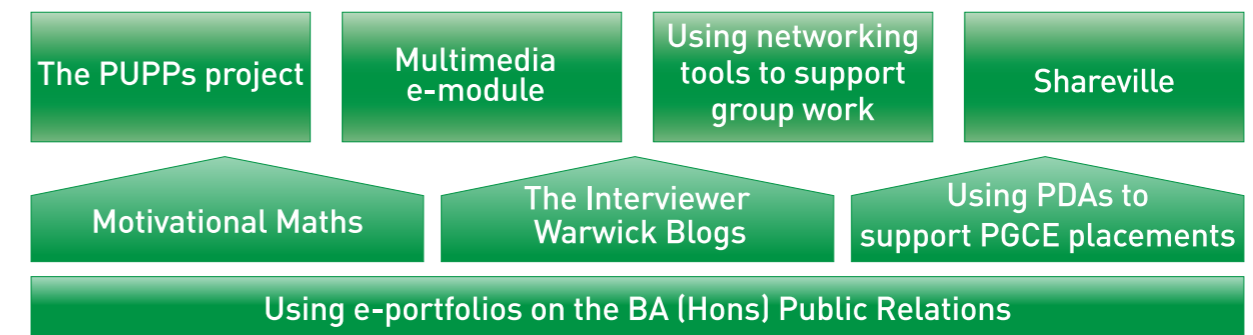


Figure 2

## Developing a positive approach

In 2002, the Organisation for Economic Cooperation and Development noted the relationship between earnings and certain traits such as openness to experience, agreeableness, sociability, self-confidence and initiative. Having a positive approach is often the most problematic employability element to teach. Positivity can be regarded as a trait, rather than an approach, though Vaughan (2000) argues that optimism is mostly a situationally learnt state. Optimism and a positive approach are not entirely synonymous but they are closely related and having a 'can-do' attitude is regarded as highly desirable in the workplace.

The UKCES regard a positive approach as being the foundation on which all other employability skills build, yet in many interventions having a positive approach is regarded as a starting point for engagement rather than a specific learning outcome from the process. For this reason it is vital that employability interventions are curriculum-based, so that those students who most need to work on areas such as their positive approach have the opportunity to do so without being required to engage with additional activities. Students who already have a positive approach are most likely to engage with bolt-on activities.

This case study describes a curriculum-based employability intervention that uses technologies to allow students to engage with practitioners in their field and to learn the value they place on having a positive approach.



## Developing a positive approach to work

### Using eportfolios on the BA (Hons) Public Relations

Public Relations (PR) students at Leeds Met produce a portfolio of real pieces of PR work for real clients at each level of their studies. They are expected to get regular work placements and to demonstrate their experience through a portfolio.

**Tip:** It is useful to provide training for staff in the development of eportfolios, workshops for students on development and to consult with employers on what they want.

In previous years, students submitted a paper portfolio but they now have the option to create an eportfolio, using readily available, familiar tools. Students are given guidelines for production of the eportfolio. They can use PowerPoint to present their evidence with hyperlinks to websites or videos, if necessary, and scan examples of the outputs of their work. Within the notes section of each PowerPoint slide, they can develop a rationale including objectives, tactics and results relating to the material on that slide. Using packages like WordPress students can develop a website populated with real client output, a learning log, a CV and career statements as a minimum requirement. Using web-based facilities students can consult their tutors on the development of the website that contains their work.

The main drivers were to encourage students to develop skills including web development and a better understanding of PowerPoint. Many students went much further and included blogs and Twitter accounts

**Tip:** Be flexible and prepared to mark a variety of different types of presented assignments.

linked to their websites. Many have also joined industry-focused social media discussions as a result. A number of students have been given job interviews as a result of their online activities and engagement. In addition, the eportfolio is more cost-effective for students to produce; a hard copy version requires a considerable investment. The eportfolio format also challenges students to develop new skills.

Feedback from employers is that they value the eportfolio as evidence of students' skills and experience; they also report that it enables them to differentiate between applicants in a meaningful way.

The process is reviewed after each assessment period. Research among employers suggests there is still a preference for a hard copy version of the portfolio in some sectors, so students are able to choose whether to produce a paper portfolio or an eportfolio. Flexibility is the key.

Also relevant to: Understanding the business, Using IT effectively, Using language effectively, Self-management.

For more information contact: Lucy Laville at [l.laville@leedsmet.ac.uk](mailto:l.laville@leedsmet.ac.uk)



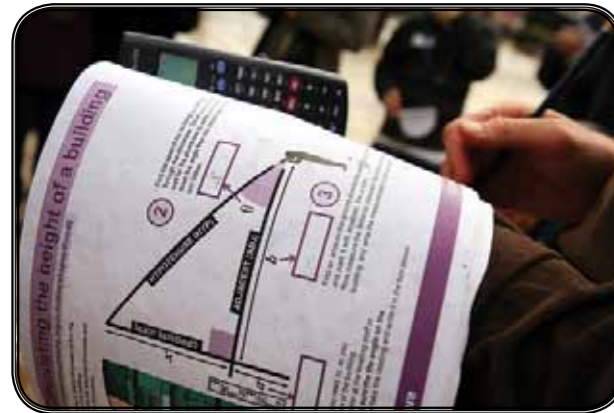
## Using numbers effectively

Numeracy is more than just the ability to perform basic mathematical functions. It is having the confidence to use numbers and statistics to evaluate arguments, to handle budgets and to understand the language of science. Certain graduate-level jobs require high levels of numeracy, yet in all areas basic numeracy is required. Many employers use numerical psychometric tests as part of the recruitment process. Parsons and Bynner (1997) argue that poor numeracy can be harmful to employment chances.



The numbers of students taking maths at levels higher than GCSE drops each year and many students lack confidence in their mathematical skills. The Motivational Maths project aims to make maths more applicable to the everyday workplace, to show students its importance and increase their enthusiasm to learn more.

Motivational Maths is released with a Creative Commons licence so can be freely used by all. The resources are available at [www.virtualmaths.org](http://www.virtualmaths.org).



## Developing skills in using numbers effectively

### The Motivational Maths project (West Yorkshire Lifelong Learning Network)



**Tip:** It is important to gain feedback early and often from user groups of staff and students.

theories, principles and concepts of mathematics to real construction and engineering scenarios, making the maths functional and relevant. However, pure maths tools are also provided to counter concerns that students would not always be able to generalise from the contextualised maths in the scenarios if they needed to use it in a different context.

A formative assessment tool allows us to monitor students' progress throughout the module. Students are taken step by step through a surveying exercise so that complex operations become understandable. They are given tailored feedback for incorrect answers to increase their understanding.

Students have reacted enthusiastically to the resource and have used it successfully with little or no assistance. The interactive flash animations make the resources engaging. Staff are using the resources in teaching as an additional resource and as a revision aid. Students report this is a user-friendly and highly engaging way to deliver maths workshops. Following the success of Motivational Maths in construction, resources for other sectors, such as the health and beauty industries, are being developed.

Also relevant to: Using IT effectively, Thinking and problem-solving, Understanding the business.

For more information contact: Ian Dickinson at [i.dickinson@leedsmet.ac.uk](mailto:i.dickinson@leedsmet.ac.uk)

The West Yorkshire Lifelong Learning Network's Motivational Maths project uses web-based interactive scenarios to contextualise maths in construction environments. The features, activities and equipment found on construction sites make them ideal environments for the study of applied maths. Video, audio and animation are used to aid understanding of the topic. By providing a broad range of teaching aids, resources, individual study tasks and group activities, the project is creating a collection of materials to engage a wide range of students. The construction industry is mathematically demanding and students need to develop their understanding of maths. This also aids the transition between different levels of study.

Web-based practical scenarios, such as measuring the height of a building, are used to connect the

**Tip:** Provide optional closed captioning (audio transcription) for the video for visually impaired learners.

## Using language effectively

The ability to communicate is consistently listed as a key requirement of employees at all levels. It is frequently cited as one of the major deficits in the skill set of new graduates (for example, CBI, 2009). Martin et al (2008) argue that, based on their research with employers, communication skills, along with numeracy and enthusiasm, are the most important employability skills, and the lack of them in a candidate is a 'deal-breaker' for many employers. When communication skills are addressed within the curriculum, the work often focuses on written communication or presentation skills. However, according to employers, the area in which graduates are most deficient is interpersonal communications. Interventions that support one-to-one communication can be resource-intensive. Technology can support this process, as illustrated in the case study below describing the Interviewer software package.

### Interviewer

Interviewer, developed from an idea by Peter Hartley of the University of Bradford, is designed to allow students to practise and reflect on their communication skills, specifically in relation to their employability. It is used in many universities to allow students to practise interview skills in a non-threatening environment and to evaluate their own performance. It has also been built into courses and modules as well as staff development sessions. To use the software, an individual chooses a virtual interviewer and type of interview and then answers questions from that interviewer. A webcam films them and then allows them to watch and reflect on their own performance.

Providing interview practice for students can be too time-consuming to be offered to all, and technology such as Interviewer allows economies in delivering that service. In traditional interview practice the interviewer provides feedback. In this model the students themselves reflect on their performance, thus also developing their ability to self-reflect. The package can also be used by students who are not yet confident to do interview practice with a staff member. Students indicate that it makes them think deeply about the way they answer interview questions and their non-verbal behaviour in interviews. Now a commercial product, Interviewer is available at a discounted educational rate from Gower Publishing, and from [www.brad.ac.uk/lss/tqeg/resources/interviewer/](http://www.brad.ac.uk/lss/tqeg/resources/interviewer/)

Also relevant to: Self-management, Positive approach.



## Developing skills in using language effectively

### Warwick Blogs

The Undergraduate Skills Programme at the University of Warwick offers a series of skills-specific stand-alone workshops that are designed to enable students to develop their personal, academic and career management skills. The blogs are designed to encourage students to reflect in writing on learning following the workshops, to follow up action points and receive timely feedback and motivation from tutors. Students blog in relation to individual workshops, some of which focus on career management.

The blogs were introduced as part of the undergraduate skills programme to give tutors the ability to monitor and support continuing student development beyond the workshop in a non-resource-intensive way.

The blogs are easy for tutors to monitor, provide timely feedback, and give the programme organisers a better indication of engagement with the workshop material and how students implement it. The students engage well with the technology, though there is no requirement to submit work. The technology also allows students to submit selected elements of their blog for employers to view, thus encouraging them to use the blog professionally.

Warwick Blogs are open to all undergraduates but participation is optional. On completing a reflective blog following specific objectives, students gain the Warwick Skills Portfolio Award. The scheme is well used with over 6,500 blogs in use. Some students have got jobs or feel confident to apply for jobs as a result of using the blogs.

Also relevant to: Self-management, Using IT effectively, Positive approach, Thinking and problem-solving

For more information contact: Mary Sage at [ugskills@warwick.ac.uk](mailto:ugskills@warwick.ac.uk)



## Self-management

Self-management is a nebulous concept. In some disciplines it refers to the ability to use specific skills to function effectively, in others it is used to encompass factors such as self-confidence and self-belief. Inkson is critical of the lack of active teaching devoted to self-management, arguing: "We do not teach them [18-year-old undergraduates] self management and we do not teach them career management. We thereby offer guidance to students on how to manage others' lives before they have learned to manage their own" (Inkson, 2010, p. 10). Self-management can also encompass the career management skills that most students identify with employability. These include decision-making, presenting oneself, organising oneself, and, in particular, time management, skills that are often rapidly learnt once in the workplace. Self-confidence and belief are far more difficult to acquire, and it can take a considerable amount of staff time to coax and mentor individuals to develop confidence for the workplace.

Factors such as the state of the labour market can also impact on students' self-belief (Kirschenbaum & Mano-Negrin, 1999) and so it is crucial that teachers are supportive. However, the lack of self-management overall, coupled with the lack of business knowledge, have been identified by BIS (2009) as key factors in the lack of economic progress in the UK. This reflects changing demands on recent graduates from business and industry.

Bandura found that: "The less individuals believe in themselves, the more they need explicit, proximal, and frequent feedback of progress that provides repeated affirmations of their growing capabilities" (Bandura, 1997, p. 217). Being in contact with tutors and peers can support this process. Often students receive limited feedback on their progress while they are out on placement. The following case study illustrates one way in which technology can help to address that issue.



## Developing self-management and reflection

### The PUPPS project

The PUPPS project drew on the experiences of the Assessment and Learning in Practice Settings (ALPS) Centre of Excellence in Teaching and Learning in using mobile devices and eportfolios to encourage reflection in a work setting. In this business-oriented pilot, eight students on placement were provided with a Personal Digital Assistant (PDA) with the PebblePad application installed. The students who took part were Level 5 Business Studies students who were out on placement, and postgraduate students who were studying part-time and working full-time as graduate trainees within the university. The students were encouraged to use their devices to organise their diaries, as a communication device and, primarily, as a mediating tool in both formal and informal learning environments to record their reflections. They used PebblePad on the PDA to produce artefacts to demonstrate self-reflection and to evidence their work, focusing on developing employability skills. These included text, images, video and audio artefacts. The use of the PDA meant that they could reflect on their activity on the placement at any time and anywhere. They also reflected on their experiences of the project itself through periodic blogging on Google Blogger.

**Tip:** Technology support and training for students is imperative.

**Tip:** Be flexible and let students use the technology that works for them.

The main driver for the project was the need to develop students' transferable skills. Using this approach rather than getting students to write fixed assignments allowed staff to discover, from what they included in their eportfolios, what students thought was relevant to evidencing their employability skills.

The students created extensible, flexible eportfolios and also gained experience of using multi-media technologies. Creating and organising an eportfolio uses a range of employability skills and can be used to evidence students' work experience on placement as part of a module assessment. Eportfolios can also be turned into a webpage and showcased to future employers. Although the students were provided with PDA devices for this purpose, many of them preferred to use their own mobile phones to take photos and record videos and then use a laptop or PC to upload files to PebblePad.

Also relevant to: Positive approach, Using IT effectively, Using language effectively, Thinking and problem-solving

For more information contact: Iwi Ugiagbe-Green at [I.Ugiagbe-Green@leedsmet.ac.uk](mailto:I.Ugiagbe-Green@leedsmet.ac.uk)



## Thinking and problem-solving

Thinking and problem-solving are threaded throughout academic programmes so that students have many opportunities to develop these skills in an academic context. Employers require that graduates are able to transfer their skills into

different contexts. This case study shows one method of encouraging students to develop their problem-solving and thinking skills through e-module activities relating to employability and career management.



## Developing thinking and problem-solving skills

### The multimedia e-module

The careers development services at the University of Wales Institute Cardiff (UWIC) developed an e-module consisting of nine e-lessons. The lessons develop employability awareness as well as career management skills. The module is delivered via the BlackBoard Virtual Learning Environment using Wimba Create Software. It has been used across all five Schools, with the School of Sport customising it to meet the specific needs of their assessment process. For example, language skills are assessed via the submission of a CV and/or a presentation on students' future employability. Employer input was sought in developing the module, so that it could be tailored to meet employers' identified needs.

The e-module was developed to address a business need and as part of the university's overall employability strategy. There was a need to provide self-managed and blended learning approaches to

*"I now know my interests and motivations better, and what I want from my career in the future. I can now look into some particular career pathways and plan to get some work experience and build my skills in the most important areas."*

Student

*"I became clearer about my career potential and what I needed to work on to make myself more employable."*

Student

ensure a greater reach of learning opportunities in employability and to fit with UWIC's Learning and Teaching strategy.

The module is available to all staff and students on and off campus. Staff can use the e-module as part of a blended approach and can adapt the module to use as part of assessment. Students can also manage their own learning. Where the e-module is not embedded as part of a course requirement, it is an optional module for students to increase their employability and gain extra skills.

The module is being evaluated using surveys and structured interviews and by reviewing the outputs produced by students. Feedback from students has been positive.

Also relevant to: Positive approach, Self-management, Using language effectively

For more information contact: Anita Norcott and Catherine Harrison at [anorcott@uwic.ac.uk](mailto:anorcott@uwic.ac.uk)

## Using information technology

As information technology (IT) becomes increasingly pervasive in the workplace and within many academic programmes, there can be an assumption that structured interventions are not required to support the development of IT skills. In particular, as there can be a perception that students have grown up as 'digital natives', it can be easy to overlook the fear and concern that the use of IT can create. Strivens and Grant (2000) build a strong case for the use of technology in employability and employee learning. Technology is viewed as a facilitator, enabling a process of learning that encompasses diverse elements,

including the recording of experiences, reflecting, self-assessment, research and career development planning, such as we have seen already. However, we should be mindful of comments such as those from one mature work-based learner we interviewed who said of using technology: "I think if I'd been told I would need to do that I would have thought twice about doing the course because I'd spend too much time trying to get my head around how to deal with it."



## Developing skills in using IT effectively

### Using PDAs to support PGCE placements

Personal Digital Assistants (PDAs) were provided to a group of 14 trainee science teachers on the initial teacher training (ITT) programme at the Graduate School of Education at the University of Bristol. All of the volunteers were experienced IT users with a home PC and internet access. Each was provided with a handheld computer with mobile phone connectivity and camera to use throughout their course and to take with them on teaching practice throughout the academic year. The PDAs were used for calendar and diary schedules, spreadsheets or attendance monitoring. The ITT group was targeted as staff wanted to provide context-relevant learning opportunities for students during their teaching practice in schools. Participants were given four hours' worth of training on how to make best use of the PDA and the functions available: collaborating via the virtual learning environment; accessing course documentation; searching for information via the web; organising committees, lesson plans and timetables; photographing displays; and maintaining a reflective blog.

The students could send and receive up to a total of 6MB of data including web pages, emails and texts. Students reported via a weekly online survey and then later by twice-termly survey. Additionally they were encouraged to reflect on their experience via a diary in the form of a blog. There were dedicated discussion areas on Blackboard.

**Tip:** Support students in becoming familiar with key applications.

Students found the calendar and diary most useful in dealing with fluid and rapidly changing placement environments. They were able to use the immediate access to the internet in supporting their pupils and the note-taking facilities to manage their information effectively. Those students who saw the device as personally relevant were more likely to use it regularly in a professional context.

**Tip:** Encourage use of the technology for personal use.

Also relevant to: Understanding the business, Self-management, Thinking and problem-solving, Using language effectively, Working together and communicating

For more information contact: Jocelyn Wishart at [j.m.wishart@bris.ac.uk](mailto:j.m.wishart@bris.ac.uk)

**Tip:** Allow synchronisation with the networks within the workplace.

## Understanding the business

Traditionally students have learnt about business needs and the day-to-day minutiae of working life from work placements and sandwich years. The number of students undertaking such placements is in rapid decline. Smart et al (2009) argue that graduates lack business awareness and self-management and BIS (2009) perceives limited economic progress to be the consequence. Even students undertaking Business Studies degrees are lacking in practical business knowledge: Harmer (2009) asserts that this is a consequence of lack of work experience in appropriate environments.

Practical considerations prevent many students from accessing work placements and the increase in student numbers means it is not always possible for students who desire practical experience to access it. The solution of business simulation games has been in place for many years and more recently video-based and immersive virtual environments such as Second Life have been used to simulate work environments. To ensure that students who do access work experience gain the most from it, technology can be used to encourage reflection and sharing of the experience.



## Understanding business

### Shareville: real-world scenarios in real-world contexts

Students need to be able to make connections between different aspects of their work and understand work contexts and situations. Birmingham City University has created a virtual town, with realistic video-based simulations that allow students to experience a scenario in which they need to interact with clients and make decisions based on this. The town currently includes legal, health, construction and education scenarios, all embedded within the virtual town context.

**Tip:** Support the videos with additional materials to fill in the theory and background to the case.

Shareville has been trialled with groups of students in different professions. They particularly liked the way it allows them to see the client's reaction as well as the facts of a case and that it helps them link theory to practice. Students enjoy using the resources and engage with them.

**Tip:** Use video roleplays to represent work-based scenarios and to capture some of the emotional impact of the real situation.

Also relevant to: Using language effectively, Thinking and problem-solving

For more information visit: [shareville.bcu.ac.uk/](http://shareville.bcu.ac.uk/)



## Working together

While being able to work in a team is of considerable importance in the workplace, it is not a skill that has traditionally been developed in academic courses, particularly in assessment. The difficulties of teasing apart individuals' contributions, squeamishness by staff and students about group marking and the potential for plagiarism are all issues that hinder this type of skill development and assessment. As

more students are already employees, group work projects are becoming more acceptable to them as they recognise the importance of this to the workplace. The following case study demonstrates how technology can support both the development of this skill and the monitoring of the contributions to and engagement with the process by individuals within a group work setting.



## Developing skills in working together

### Using networking tools to support group work

The Integrative Studies module (within the Health subject group at Leeds Metropolitan University) was introduced to develop transferable skills in Level 6 students. This module builds on previous work undertaken at Levels 4 and 5. At Level 6 it helps build confidence and transferable skills, which will enable the students to market themselves accordingly for employment when they graduate.

As part of the module the students were encouraged to use discussion boards within the Virtual Learning Environment (Blackboard) and Facebook to document and log the group meetings. The meetings have to be logged on Blackboard to show that they have occurred weekly and to demonstrate how students are completing a group work task linked to the development of a new product. This enables the lecturer to give feedback directly to students but also serves as proof that the students are actually progressing with the project. Most groups also set up Facebook groups to share ideas, slides, and other work they have produced. One group used Facebook to distribute a questionnaire so they could determine the market for their product.

The use of these technologies enabled students to progress with group activity more effectively than was possible using a paper-based portfolio, and in a more engaging and appealing way. Lecturers found it easy to see which groups were working and how, which gave them the opportunity to intervene where necessary.

Students reported that they liked the flexibility of using Web 2.0 technologies as a tool to communicate and for assessment. Often students also used Facebook for social networking and found combining this with their academic assessment made things easier to manage. They particularly enjoyed the instant interaction.

Also relevant to: Using IT effectively, Using language effectively, Positive approach, Thinking and problem-solving

For more information contact: Pauline Fitzgerald at [P.Fitzgerald@leedsmet.ac.uk](mailto:P.Fitzgerald@leedsmet.ac.uk)

## Employee learning

By definition we would expect employers to support their employees in developing the series of employability skills we have considered so far. When considering technology in enhancing employee learning there are several additional issues to consider. Employee learning is more specific than lifelong learning. It is concerned with specific learning outcomes which are of benefit to the employer and therefore to the economy. These may be specific competencies. In many industries this need has been addressed with the creation of specific Foundation Degrees to develop those competencies. However, rarely are all potential beneficiaries of such a degree located within one workplace or even one geographic area. Technology can support learners from different areas to work towards one common qualification.

An additional complicating factor for employee learning is that learners come from a diverse range of backgrounds and have a mixture of traditional taught course experience and learning on the job, which means they begin formal programmes from a range of starting points. Mature learners can bring a wealth of experience which is of great benefit to their colleagues; indeed, many postgraduate courses require that learners have spent time in the workplace before applying for this reason. Accreditation of prior experiential learning (APEL) is a well-established process for recognising that learning and knowledge brought by part-time students. Technology can also help to support this process.



## Different levels of entrants

Employees who enter higher education learning programmes can bring a wealth of experience and knowledge that has not been measured through examinations or qualifications. Accreditation of prior experiential learning (APEL) has a long

history in lifelong learning programmes and many higher education institutions run specific modules to support this process. The following case study illustrates the benefits that can be gained by using technology to facilitate this process.

## Flexibility in delivery

While it may be argued that as the composition of higher education becomes more diverse, the gap between students and employee learners also narrows, employee learners are more likely to experience time pressures and difficulties in accessing specific time-bound learning opportunities such as lectures, so flexibility is crucial for them.

Academics have long argued that all teachers need to adopt new inclusive teaching methodologies (for example, Hart, 2003; Pillay, 2002; and Weimer, 2002). Our final two case studies offer examples of flexibility for employees in learning at times, in spaces and using methods that are most helpful to them.



## Supporting employees with different entry qualifications

### Electronic Accreditation of Prior Experiential Learning (E-APEL)

The E-APEL system, developed by the University of Derby, facilitates to a significant extent an informal pre-entry estimation of the likely scope for an APEL claim, significantly reducing the investment of time necessary on a one-to-one basis between a tutor and a prospective APEL candidate.

The E-APEL estimate can be developed into a formal claim for academic credit using the system. A prototype was developed with JISC funding which was used only for pre-entry guidance and based on generic work-based learning level indicators. This was replaced by a production system which was customisable with programme or module learning outcomes and enhanced to provide iterative feedback to facilitate the production of a formal claim. The system is web-based, allowing it to be used anywhere across the internet or within an intranet. All help text and learning outcomes can be changed by the institution using a content management system without recourse to technical staff. The move from generic level indicators to customisable outcomes at programme level has overcome resistance to its implementation.

Using the system has significantly reduced the staff time required to deal with an APEL claim. In addition, since the introduction of the technology the quality of APEL claims has improved. Students are empowered. They are introduced to academic language and are able to begin discussion about their claim from an informed position, which has proved very beneficial.

Also relevant to: Using language effectively, Understanding the business

For more information contact: Ann Minton at [a.m.minton@derby.ac.uk](mailto:a.m.minton@derby.ac.uk)

**Tip:** Employee learners already have documentation such as CVs: use what's already available so the process is facilitative and empowering, not process-driven.

The original E-APEL tool is available for free download from <https://sourceforge.net/projects/e-apel>

## Flexibility in delivery for employee learners

### Using a Virtual Learning Environment (VLE) to support Foundation Degree learners

The FdSc Podiatry course at New College Durham is unique in that it is the only training programme that is mapped against every competency outlined by the Chiropody and Podiatry professional body and the relevant Sector Skills Council, Skills for Health. The course requirements are different from those of other Foundation Degrees at New College Durham: it has to be delivered flexibly online using the BlackBoard Virtual Learning Environment, which is used for communication, presentations, assessments, feedback and as a location in which to build an eportfolio. The Work-based Learning module maps onto the competencies, which are checked every week. Each student has a clinical director who gives the student feedback which goes into the eportfolio, the student reflects upon it.

The course was developed for employers to train existing and new employees, as a skills gap had been identified. The programme is tailored to meet the needs of employers and the course is mapped against the professional competencies. It is also accredited by the Society of Chiropody and Podiatry. The programme of reflective practice mapped against professional competencies enables students to identify their strengths and weaknesses and clinical educators note that the students undertaking the course are able to make connections between college work and clinical caseload.

Also relevant to: Understanding the business, Thinking and problem-solving

For more information contact:  
Vanessa Szucs-Hussain on 0191 375 4231

## Flexibility in delivery for employee learners

### Use of an eportfolio as a Virtual Learning Environment

The University of Wolverhampton provided work-based learners within small- to medium-sized enterprises with an eportfolio (PebblePad) to customise for use as a Virtual Learning Environment (VLE). The eportfolio was used rather than a VLE because there was a need to enable learners to bring in other learning experiences, to build the course over a period of time and to personalise their own specific learning needs. However, some VLE functionality needed to be built into the eportfolio to allow learners to access learning content and activities that might be housed in a VLE. Initial feedback from learners identified a need to access the learning easily and quickly, to do what needed to be done and then be able to get back to their employment.

**Tip:** Include sufficient time and opportunities to evaluate throughout and to make any amendments needed.

The learners were all in full-time employment and were mature students. They were unfamiliar with the process of higher education and lacked confidence in their own academic abilities and information technology skills. In addition they had limited time in which to engage with the learning. The solution has been the development of a PebblePad webfolio to house the learning content and provide opportunities for personal reflection, to raise questions with tutors and peers, to respond to individual and group activities and for formative and summative assessment. The webfolio looks and operates like a webpage and includes three blog-type functions.

First, there are weekly activity blogs that the student responds to by clicking in a pre-set form onto which

the tutor can post feedback and comments. Second, there is a personal blog into which the student can post questions, observations, thoughts and ideas. Third, there is a collaborative or group blog including tutor-determined group activities as well as space for peer-to-peer interactions. Each individual entry the learners make within their own webfolio format is used for all units of study; the blogs are used for the first unit that learners study to make them familiar with the eportfolio environment, HE level study, assessment and reflection on practice. Subsequent units access additional functionality within the eportfolio, via the webfolio format, to build a richer learning experience and a wider source for future learning and summative assessment.

In developing the eportfolio, five pilots were created, running consecutively to enable learning from one to feed into subsequent designs. A series of three 'design retreats' brought the project team and designers together to share practice and develop pilots with additional workshops looking at aspects of assessment and implementation. A benefit to students is that learning, reflection, assessment, feedback and evaluation are all combined in one delivery environment.

Also relevant to: Using IT effectively, Using language effectively, Working together and communicating

For more information contact: Alison Felce at [a.e.felce@wlv.ac.uk](mailto:a.e.felce@wlv.ac.uk)

**Tip:** Identify the enthusiasts and work with them to introduce the technology. Build your community of practice using your 'converts'.

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